# Final report:

Evaluation of support to continuous professional development of health workers in Tanzania

7<sup>th</sup> August 2014

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## Glossary

ANC – Ante-natal Care

BEMONC – Basic Emergency Obstetric and Newborn Care

CCHP – Council Comprehensive Health Plan

CPD – Continuous Professional Development

CTC – Confidential Testing and Counselling

DHS – Demographic Health Survey

HMT – Hospital Management Team

HR – Human Resources

HRH – Human Resources for Health

HS – Hospital Strengthening

KI – key informant

M&E – Monitoring and Evaluation

MNCH – Maternal Neonatal and Child Health

MOHSW – Ministry of Health and Social Welfare

NBLO – No Baby Left Out

NICU – Neonatal Intensive Care Unit

NTC – Newborn Triage Checklist

PEER – Participatory Ethnographic Evaluation and Research

PMLT – Partnership Management and Learning Tool

RCH – Reproductive and Child Health

RHMT – Regional Health Management Team

SOP – Standard Operating Procedures

ToRs – Terms of Reference

TWG – Technical Working Group

## **Executive summary**

## 1. Background

VSO commissioned an evaluation of its programme of support to continuous professional development (CPD) of health workers in Tanzania, in order to learn about CPD inputs in Tanzania, to test assumptions and to identify best practice in the delivery of support to CPD of health workers. The key assumptions tested in this review were that VSO's CPD programme: (i) is welcomed and valued by partner organizations and the health workers in Tanzania; (ii) directly contributes toward improving the health outcomes of service users; (iii) is sustainable in terms of longer term impact; (iv) is worthy of replication and scale up as a health systems strengthening approach.

The evaluation, undertaken by a team of international and national consultants, focused on two initiatives implemented with VSO's own resources, namely the No Baby Left Out (NBLO) project in Lindi region and the Hospital Strengthening (HS) initiative in Kagera region, and targeted 5 health facilities in total. The evaluation involved a literature review, a review of project documents and secondary data, and primary data collection through in-depth interviews with key informants and participatory ethnographic evaluation and research (PEER) sessions with community members. Key informants were mostly purposely selected, and included health workers, health managers, regional health management teams, community representatives, VSO volunteers and VSO staff in Tanzania and Head Office. Community members included both service users of target health facilities and non-service users. In total, 90 respondents were reached in June-July 2014.

## 2. VSO CPD programme in Tanzania

VSO Health programme in Tanzania aims to improve accessibility and quality of mother, neonatal and child health services, and of sexual and reproductive health and HIV/AIDS services. It works towards three focus areas:

- 1. *Health System Management*. Delivery of health services is improved through effective administration (human resources/financial management) and clear operating procedures.
- 2. *Health Services Training*. Standard of health care services is improved through access to quality pre-service and in-service training.
- 3. *Community engagement and education*. Increased awareness among local community of available health services and healthy sexual, reproductive and nutritional practices.

VSO's CPD programme in Tanzania is evidence-based. Several studies in low-income settings describe the value of CPD. CPD enhances productivity and provides a mechanism for successful task shifting. CPD improves motivation, job satisfaction and retention of staff, particularly in rural environments where access to other forms of training is challenging. It also improves patient care by updating skills and maintaining the delivery of health tasks under changing conditions. Highly localized training can quickly improve performance of a large numbers of front-line health workers.

VSO CPD programme is also highly compatible with relevant strategies of the Government of Tanzania. The programme is consistent with the Human Resources for Health (HRH) Strategic Plan 2008-2013, and specifically with its aim to improve and harmonize continuous professional development. It contributes to the Health Sector Strategic Plan III by supporting the development of health managers within facilities and at regional level. It is aligned with the One Plan for the Reduction of Maternal and Neonatal Mortality by contributing to greater

competence levels and effectiveness of health workers engaged in primary service delivery.

## 3. The NBLO project: achievements and challenges

NBLO is an innovative project and the first to focus specifically on neonatal health. In Lindi, VSO has been implementing the NBLO project since 2010, in partnership with GIZ and the Regional Health Management Team. The project is implemented in Sokoine Regional Hospital, Masasi District Hospital, St Walburg's Nyangao District Hospital, and the respective catchment areas of these facilities through outreach services. NBLO is a comprehensive health systems strengthening approach aiming to increase the number of neonates accessing health services in health facilities; to improve quality of care for the neonates in health facilities; to improve efficiency of health workers, and to increase community participation in the health system.

VSO volunteers provided mentoring and on-the job training on key topics of relevance to neonatal care, including: newborn care and observations from birth to discharge, implementation of Kangaroo Mother Care; identification and management of neonatal complications; emergency neonatal care procedures e.g. newborn resuscitation; relevant lab procedures; and nutrition. VSO also supported partner health facilities to improve clinical guidelines, financial planning and procurement processes, and provided opportunities for further education of health workers. Furthermore, VSO supported community outreach to promote facility use and raise awareness of care available and deliver basic health education messages on maternal and neonatal care. Most notably, the programme also provided equipment, drugs, and significant infrastructure support to build a unique Neonatal Intensive Care Unit (NICU).

The evaluation documented significant achievements of the NBLO project:

- NBLO generated commitment for care of newborns as patients in their own right, and helped challenge the fatalism surrounding neonatal deaths
- Clinical skills of health workers improved significantly. The hands-on nature of VSO's support specifically helped to translate theoretical knowledge acquired in pre-service training into practical skills, and expanded the range of competences required for effective newborn care
- The CPD support opened new career development opportunities for health workers, and improved communication and collaboration among health teams
- Important changes in clinical practice were realised, namely: effective screening of newborn through a newly introduced Newborn Triage Checklist; prompt identification and management of complications according to new guidelines for newborn monitoring and care; timely referral of patients to NICU and a successful process of task-shifting (e.g. nurses feeling more empowered to perform procedures in their own area of expertise).
- A near- complete level of newborn screening using the NTC system was achieved (as high as 97% in one target facility).
- Service users' perceptions of quality of care improved, particularly in relation to maternal, newborn and child health services.
- Demand for service increased, as a result of the good reputation of services (particularly NICU) and outreach: between 2011 2013, the number of admissions in the three target hospitals increased on average by 179%.
- Babies' lives are being saved the ratio of deaths to admissions has decreased on average by 17% across the target facilities.
- A decrease in neonatal mortality rate from 35 deaths per 1,000 live births in 2011, to 22 deaths per 1000 live births in 2013 was reported, a significantly lower rate than the national average.

Furthermore, NBLO was found to be welcomed by local stakeholders and highly relevant to the regional Comprehensive Council Health Plan. There was a high level of ownership over the changes achieved.

Some challenges were documented:

- Health workers' communication style and attitudes towards patients remain a key area of concern for service users, as are frequent stock-outs of drugs and the resulting requests for unofficial charges.
- Community engagement in health care and management was limited
- CPD support to health workers did not significantly impact on staff motivation, although motivation levels were reported to be high. This indicates that continuous investment in other determinants of health workers' motivation and performance (e.g. housing, financial incentives, an enabling working environment) is a priority.
- The NBLO M&E system was found to have improved significantly, but data availability and quality was limited
- Key informants would have preferred longer placements of senior/specialist volunteers, which they deem more conducive to sustainable changes in health management systems.

## 4. Hospital Strengthening initiative: achievements and challenges

The Hospital Strengthening (HS) initiative is an example of a traditional VSO approach. Working in partnership with Mugana District Hospital and Nursing School, and St Joseph's Kagondo District Hospital, as well as other partners, VSO places skilled international health volunteers in the health facilities in response to partners' requests. Placements vary in length, with short-term placements designed to build on one another. Objectives are placement-specific, as are activities. Broadly speaking, VSO volunteers deliver capacity building and on-the-job training in their area of expertise, which in the target locations has included HR management; M&E; maternal health; nurse training; and laboratory services.

Volunteer placements achieved important changes in the health facilities they were placed:

- Health workers reported improvements in clinical skills, for example the use of vacuum for delivery, C-sections and basic procedures such as measuring temperatures and taking vital signs. A range of procedures were introduced or built upon.
- The quality and efficiency of laboratory services improved
- Charting of medical records was standardized and enforced.
- HR management systems improved job descriptions and standard administrative procedures were developed; feedback loops between management and staff improved; regular departmental meetings were introduced. Team cohesion improved.
- Some infrastructural improvements were documented e.g. the construction of a Confidential Testing and Counselling room providing greater privacy for patients.

The target facilities were found to have a high reputation in the community, attracting patients from a wider area. Demand for services was reported to be increasing, and important reductions in maternal mortality were reported, making the target health facilities a regional example of good practice.

Some challenges were also observed:

- The HS initiative did not provide a framework for holistic and coordinated organizational change in response to a specific population need. The intervention appeared fragmented, so it is not possible to attribute positive health outcomes to it.
- Increases in demand in target health facilities may not necessarily be conducive to building a sustainable regional referral system, or equitable for vulnerable groups.

- Limited community engagement in health care and management was observed
- VSO volunteers were welcomed for their contribution but also perceived as filling gaps in service delivery, which presents a challenge for sustainability
- Placements were perceived to be too short to have significant impact, particularly at the level of health management systems
- There was limited ownership by health managers of changes reported by volunteers, and limited alignment with regional health system strengthening plans.
- Availability of quantitative data was limited, preventing a solid outcome analysis.

## 5. Conclusions and recommendations

VSO model is a valuable contribution to Tanzania's health system strengthening efforts. The provision of CPD embedded at facility level is unique, as it enables the design of context-specific CPD packages. VSO volunteers are welcomed and well received. They provide an appropriate mix of training and hands-on support to service delivery. VSO volunteers catalyse important changes at the level of health workers and health facilities, which promote improved perceptions of quality of care, and increase demand for services, thus improving health outcomes. Evidence for this pathway of change is stronger for NBLO in Lindi than for the HS initiative in Kagera.

The NBLO model appears more worthy of replication than the HS approach, because the focus on a specific issue provides a more coherent approach for CPD and fits more consistently with local health needs and priorities. The explicit promotion of standards and adoption of clinical protocols promotes transformative change in management systems and organization of care. The adoption of a systemic approach provides the springboard for holistic strengthening of the regional health system. It is therefore recommended that VSO shifts to a "projectised" NBLO-type approach, while continuing to build on its unique implementation method (e.g. the use of volunteers), its partnerships with health facilities, and the responsiveness of its approach.

VSO has also recently begun to use evidence gathered from its projects for advocacy in the health sector, for example documenting the challenges faced by frontline health workers because of delays in disbursements of Health Basket Funds. Using research and evidence for advocacy in support of health goals is a key pillar of VSO strategy globally, and there is scope to expand on this area of work, given VSO's strategic position and its expertise in supporting policy development processes in other similar settings.

Specific recommendations for improvement are as follows:

- 1. Improve placement design: ensure all placements are demand-driven and clearly understood by partner organizations; recruit experienced/senior professionals, and engage them in long-term placements; improve its support and in-country volunteer training, including language training
- 2. Strengthen project design and implementation: make available relevant policies, protocols, procedures and competency frameworks to inform design of context-relevant CPD training and approaches; invest more in improving health workers' "soft" skills (e.g. interpersonal skills, attitudes towards patients); consider direct initiatives or the development of strategic partnerships to promote greater community engagement in target health management structures and greater accountability from service providers
- 3. Invest in the development of a solid monitoring and evaluation framework, establish clear baselines, and strengthen routine reporting and analysis.
- 4. Develop a coherent advocacy strategy to strategically use evidence gathered from projects (particularly NBLO)

5. Strengthen partnership with MOHSW at national level to contribute to shaping the HRH context in Tanzania.

# **1. Introduction**

This report outlines the findings and recommendations emerging from the evaluation of the continued professional development (CPD) of health workers in Tanzania, which has been undertaken over May-July 2014 by a team of consultants. Specifically, the report summarises the fieldwork undertaken, and provides answers to the evaluation questions agreed with VSO Steering Committee during the inception phase (Annex 1).

# 2. Evaluation aim and objectives

The evaluation aimed to inform VSO's health programming in the future by learning about CPD inputs in Tanzania, testing assumptions and identifying best practice in the delivery of support to CPD of health workers.

They key assumptions underpinning the CPD programme were that the programme:

- is welcomed and valued by partner organizations and the health workers in Tanzania
- directly contributes toward improving the health outcomes of service users
- is sustainable in terms of longer term impact
- is worthy of replication and scale up as a health systems strengthening approach

The evaluation's specific objectives were:

- To systematize VSO's CPD model in Tanzania, and capture the differences in CPD implementation between the No Baby Left Out project and the Health System Strengthening initiative.
- To evaluate the relevance of this CPD model to the national context of CPD in Tanzania
- To gauge outcomes and impacts on health workers and managers; health service users; and the partner organisations
- To explore the relationship between CPD and selected health outcomes
- To explore the extent to which approach is welcomed and sustainable
- To identify strengths and weaknesses of the current CPD model
- To make recommendations to inform programme design and scale-up

# 3. Study location and remit of the evaluation

The evaluation took place in Lindi and Kagera regions and targeted five health facilities in total.

- In Lindi, the evaluation team engaged the three partner hospitals of St Walburg's (Nyangao District Hospital), Sokoine Hospital (a government regional referral hospital) and Masasi Hospital (Mkomaindo Hospital, a Designated District Hospital).
- In Kagera, the two sample hospitals were Kagondo and Mugana Hospitals (both of which Designated District Hospitals).

The evaluation was also undertaken in Dar es Salaam, where the VSO Country Progarmme team was interviewed.

The study location was determined based on the original ToRs for the evaluation, and finalized in discussion with VSO during the inception phase. The evaluation reviewed two specific models / approaches to CPD implementation:

- No Baby Left Out (NBLO) programme a health system strengthening project implemented in Lindi region in partnership with GIZ and the above mentioned health facilities
- The Hospital Strengthening (HS) project implemented in Kagera region, in partnership with target health facilities.

The NBLO and HS projects were selected for review, as these are the two models currently being funded by VSO's own resources. These two models were specifically reviewed against one another to determine the relative appropriateness, effectiveness and sustainability. The broader health programme context was also reviewed, although it is understood that experiences from other projects also contribute to broader health programme goals, and therefore the conclusions of this review are not necessarily informative of VSO CPD model as a whole.

## 4. Methods

## 4.1 Literature review

Two search engines were used to access journal databases. Ovid Medline and Google Scholar were used to explore available literature using key search terms. Searches were included for Tanzania's regional neighbours as well as Africa more generally to explore experiences with Continuous Professional Development (CPD) in geographically comparable locations and contexts. A detailed search strategy is provided in Annex 2.

In addition to this, VSO additionally provided a sample of papers and reports to include in the review. They included evaluation documents from other countries where VSO works, research and advocacy papers pertaining to CPD and health workers. They also included documents related specifically to the health policy context in Tanzania.

## 4.2 Secondary data review

Secondary documentary sources and data pertaining to the two approaches were provided by VSO to the Evaluation Team.

## 4.2.1. Hospital Strengthening documents

The evaluation team undertook a qualitative analysis of HS project, using (i) VSO Tanzania Health Log Frame (October 2013); (ii) placement and partnership objectives; (iii) Parternship Management and Learning Tools (PMLT) documents for Kagondo and Mugana; (iv) and other relevant documentation (volunteer reports, project reports, quarterly status updates, monthly status update reports).

PMLT documents provided important quantitative data concerned with 'ultimate beneficiary' and 'intermediate beneficiary' numbers. PMLTs present key information captured by VSO staff about the key activities, achievements and evaluative comments pertaining to the program. PMLT documents were analysed for years 2013 and 2014 for both Kagondo and Mugana. PMLT documents are organized in a standardized and structured report format and require that VSO staff capture evaluative comments in a systematic fashion at multiple levels (activity, output, outcome, impact).

In discussion with the VSO Project Manager, it was agreed that the evaluation would look specifically at changes resulting from 4 placements for which more than one documentary source was available. These are outlined in table 1 below.

Medical doctor

Lab Technician

Nurse Tutor

Ex-volunteer

Ex-volunteer

Ex-volunteer

_				
	Volunteer	Location	Role	Status
1.	Jodie Bamforth	St. Joseph Kagondo	Lab Technician	Current volunteer

St. Joseph Kagondo

Mugana District Hospital

Mugana Nursing school

#### Table 1 - Volunteer placements reviewed in detail

#### 4.2.2 NBLO documents

Neil Hubiera

Luz Delipillar

2. 3.

4.

Kirsten Van Noord

VSO provided the evaluation team with:

- a NBLO first year report (October 2012 to August 2013).
- with a NBLO case study (July 2012 February 2014)
- NBLO project logframe
- NBLO monitoring plan, which articulates targets at activity and output level for April 2014/ March 2015 (broken down by quarter). The monitoring plan does not cover years prior to 2014.
- A spreadsheet including monthly quantitative monitoring data from Jan Dec 2013 for St Walburg's Hospital.
- Two spreadsheets containing quantitative monitoring data along the same set of indicators from Jan – May 2014 for two health facilities (St Walburg's and Mkomaindo).

As for quantitative analysis – secondary data gathered by VSO in the NBLO Case study was reviewed for accuracy and quality. A comparison of data against the key indicators for which monitoring data is available from Jan 2013 to April 2014 was possible for one facility for which data was available (see section 5.3.2).

# 4.3 Primary data collection

Primary data was collected through in-depth interviews with key informants (KIs) and participatory ethnographic evaluation and research (PEER) in Lindi and Kagera regions, and through in-depth interviews with VSO in Dar es Salaam and via skype. Fieldwork in the regions involved the Field Researcher and two VSO team members, who supported the logistic arrangements and introduced the Field Researcher to partners. The Team Leader undertook skype interviews and interviews in Dar es Salaam.

Data collection was undertaken in three phases, as planned:

## Phase 1 – Lindi region – $26^{th}$ May – $4^{th}$ June 2014

In addition to the three project locations (see section 3 above), health workers from Kitomanga Health Centre were also interviewed, as this facility had received substantial training. Three PEER exercises were undertaken, each involving 3 community members, of which 2 were users and 1 was a non-user of health services.

# Phase 2 – Kagera region – $5^{th}$ – $12^{th}$ June 2014

Two project locations were visited: Kagondo District Hospital, and Mugana District Hospital. Interviews were also held in Bukoba (e.g. with RHMT). Two PEER exercises were undertaken, each involving 3 community members, of which 2 were users and 1 was a non-user of health services.

# Phase 3 – Dar es Salaam – $15^{th}$ – $21^{st}$ July 2014

Interviews were held with VSO Global Health Adviser and VSO Country Programme team.

Debrief meetings of the Evaluation Team were held at the end of each phase.

The sample for interviews was defined in discussion with the VSO Steering Committee and VSO Country Programme team in Tanzania. Interviewees were mostly purposely selected for their role, with the exception of health workers and health management team representatives, who were selected based on their availability on the day interviews took place.

Selection and engagement of peer researchers and community informants reached through PEER was implemented in line with the approach and inclusion/exclusion criteria detailed in the revised inception report (Annex 3). Active collaboration with the VSO Country Programme staff was crucial in ensuring wide participation from target stakeholders, and the smooth implementation of fieldwork.

Most scheduled interviews and PEER sessions were completed as planned, with the exception of:

- an interview with health workers in Mugana District Hospital, due to the extremely busy schedule in the hospital on the day the interview was scheduled.
- An interview with a community representative in Lindi region, due to limited time for meaningful engagement
- The interview with a representative of the Ministry of Health and Social Welfare, which proved challenging to secure in the timeframe agreed. However, in discussion with VSO Tanzania and with the evaluation Project Manager in London, it was concluded that significant information on the policy context had already been gathered.

In addition to the sample originally outlined in the inception report, two contributions were secured by the Evaluation Team from ex-volunteers in Kagera region (out of the 3 who were contacted). One of them was interviewed via skype, and the other responded to key questions via email (due to not having reliable internet access).

Interviews were held in small groups to maximize the reach of the evaluation in the timeframe available. In total, 27 interviews were completed (13 in Lindi, 12 in Kagera and 2 with VSO), and 5 PEER sessions (3 in Lindi and 2 in Kagera region). 90 respondents were reached in total. The final sample is outlined in Annex 4.

Interviews were undertaken using 4 discussion guides drafted during the inception phase:

- Guide 1 Partners and beneficiaries of the VSO programme (Health workers, health managers, health training institutions, community health representatives, GIZ)
- Guide 2 VSO volunteers
- Guide 3 VSO Managers
- Guide 4 strategic partners (RHMT and VSO Global Health representative)

The use of four guides allowed the exploration of the same themes in ways that were relevant to the interviewees. They were used flexibly by the Field Researcher / Team Leader. Guide 4 was split into two specific guides: one for RHMT, developed at the end of phase 1 (to make the guide more relevant to the regional context), and one for the VSO Global Health Adviser, developed at the end of phase 2 (to help validation of preliminary insights). Guide 3 was also adapted at the end of fieldwork in the regions for the same purpose. Annex 5 details the approach used for quality assurance, data management and analysis.

# 5. Findings

# Task 1: Outlining the context

# 5.1.1 Conceptualisation of Continuous Professional Development<sup>1</sup>

## CPD definition

The term Continuous Professional Development (CPD) is often ill defined and conflated with related concepts in in-service training and on the job learning (Muijs et al., 2008; Peck, 2000). It is also often used interchangeably with the term Continuous Medical Education (CME), although CME tends to focus on clinical updates, while CPD acknowledges the need for a wide ranging set of competencies but also the multidisciplinary context of patient care. CPD's focus is on continuing professional development including medical, managerial, social and personal skills. Continuing Professional Development is considered to be a process of lifelong learning in practice (Peck, 2000). CPD is primarily related to practitioners' professional identities and roles and the goals of the organisation for which they are working.

Continuing Professional Development (CPD) is defined by VSO as the process by which individual healthcare professionals maintain and improve standards of healthcare practice, through development of knowledge, skills, attitudes and behaviour. The above definition, provided by VSO in its position paper on CPD for health workers (VSO, 2013) is consistent with the understanding of VSO staff interviewed in this review, both at global and local level. CPD is understood and described as being essential for updating skills and the development of a professional ethos for all staff cadres, including volunteers.

# Benefits of CPD

CPD enhances productivity. It provides a mechanism for successful task-shifting. CPD improves motivation and retention of staff. It supports professional development. CPD improves patient care by updating skills and maintaining the delivery of health tasks under changing conditions (VSO, 2013).

CPD can be important for health workers to feel adequately prepared to perform their role. A UK study on clinical nurse managers found that that CPD is an important factor in maintaining job satisfaction and reducing wasteful staff turnover. The study additionally found that CPD plays an important role in increasing confidence around: human resource management, managing budgets, deputizing for senior colleagues, using information technology in everyday practice (Gould et al., 2000). In line with these findings, professional knowledge was reported as the prime motivator to seek CPD among nurses in UK (Ryan, 2003). Other motivators, which featured in the top four most important factors among nurses in the UK included

<sup>&</sup>lt;sup>1</sup> References are provided in Annex 6

updating existing qualifications, increasing the status of the profession as a whole and demonstrating that an individual is professionally competent. Indeed, Richards et al. (2010) identify continuing formal education in nursing to be a key element in the maintenance of quality in health care delivery in South Africa. In this study, most registered nurses perceive continuing formal education as beneficial to their personal and professional growth and which can lead to improving quality of patient client care. However, barriers exist which prevent/deter nurses from undertaking continuing formal education programmes. The main structural barriers to undertaking formal education programmes include lack of funding and lack of coherent staff development planning and physical barriers including job and family responsibilities.

In South Africa, participation of health workers in relevant learning activities was found to improve their competence, increase their levels of job satisfaction, increase their willingness to stay in a rural environment and impact positively on the quality of services provided (Marais et al, 2007). However, the success of educational strategies was found to be heavily dependent on the local environment (context) as well as the practical applicability and clinical relevance of the activities (process). A key challenge documented was the provision of protected time for relevant learning activities in contexts affected by huge personnel shortages. Consistently, a study in Uganda found that the provision of hands on training that allows for skills building with minimum work disruption enhanced continuity and sustainability. The modular, work-based training model was observed to strengthen the capacity of the health workforce through hands-on, real-life experiences in the work-setting and improved institutional capacity (Matovu et al., 2013)

VSO/Ethiopia's (2013) program evaluation of CPD found multi-dimensional benefits and effects of CPD. CPD was found to promote capacity building, knowledge and skill transfer. It provides opportunities for cultivating commitment, conscientiousness and perseverance among local staff. CPD was associated with innovation, valuing research and improved documentation of key health outcome data. Positive effects on the motivation of community health workers exposed to a CPD proramme was also documented by VSO in Mongolia. Specifically, Community Health Volunteers reported feeling more motivated due to a sense of recognition of their work, and to the fact they feel empowered through training and development to do broader and more effective work (VSO/Mongolia, 2014). Positive impact on staff motivation is particularly important. Indeed, a systematic literature review o of factors impacting on health workers' performance in low-resource settings found that motivation and job satisfaction (e.g., salaries, prestige, work conditions) are key determinants of improved performance and quality (Rowe et al., 2005)

## CPD activities and evidence of effectiveness

The assortment of activities that fall under the rubric of CPD is broad. Siddiqui et al. (2003) refer to the following activities in a meta-review of the CPD literature: professional meetings aimed at building skills, knowledge and capacities; small group activities; learning projects; self-assessment packages and programs; practice related activities (formal lectures; review articles, presentations etc.); presentations (i.e. presentation of papers); teaching; publications; active Q&A; passive Q&A; physicians' assessment.

Since the publication of the Siddiqui paper the role of IT, internet and innovative technological solutions has been explored in the domain of CME and CPD (particularly in developing countries, where health professionals working outside capital cities often do not have access to CPD or CME opportunities or to didactic material adapted to their needs. This

limits the interest of such professionals to remain active in the periphery where they are most needed to implement effective strategies for prevention and first-line healthcare Telemedicine and access to online learning opportunities or a digital libraries enable communication and sharing of medical information in electronic form and facilitate access to remote expertise. However, technical and bandwidth limitations constitute considerable challenges for rolling out this innovation beyond a piloting project (Bediang et al., 2011; Geissbuhler et al. 2007).

The limited access to formal continuous professional education opportunities for health workers calls for the need for flexible CPD opportunities, which minimise disruption of service provisions where staff shortages are a key constraint to the effectiveness and quality of care. The relative effectiveness of non-formal CPD activities on health workers' performance has been reviewed in developing country contexts. Their review found that the dissemination of written guidelines is often ineffective, while training complemented by supervision and audit with feedback is generally effective. Supervision was found by randomised trials to improve performance, at least in the short term, and to be a mechanism for providing professional development, improving health workers' job satisfaction, and increasing motivation (Rowe et al.2005). The provision of on-the-job training, a key activity of the VSO CPD approach, was not isolated as a variable for review but Rowe et al.'s findings support the assumption that sharing of skills will achieve positive effects on service quality and health workers' performance, which is a cornerstone of VSO approach to CPD.

Rowe et al's review also found that multifaceted interventions (for instance including training plus supervision) may be more effective than single interventions, because multifaceted interventions address multiple determinants of performance. Moreover, in the context of Tanzania, they found that low cost interventions aimed at strengthening decentralized health management teams and supervisors (e.g. locally available training in administration and management, team building, delegation, and community negotiation) can quickly improve performance of much larger numbers of front- line health workers. When accompanied by practical managerial tools that assisted priority setting, resource allocation and supervision, the quality of health-worker performance and delivery of health care improved. All these activities are a core part of VSO/Tanzania's CPD approach, and are observed empirically to be a core part of improving health care delivery.

## VSO approach to CPD at a global level

In line with international good practice, globally, VSO approach to CPD of health workers uses a variety of approaches – traditionally, VSO places international volunteers (though some countries have also implemented national volunteering schemes in health) in partner health facilities, where they undertake a combination of on the job training of colleagues (through direct service delivery on the wards) and classroom based teaching to complement the skills sharing. They may also use the visual dissemination of tools and processes. Volunteers are encouraged to use their initiative to gauge needs and identify the best mix of activities to meet them. The dissemination of specific knowledge or practices is seldom included in their objectives. Volunteers provide intensive support to their colleagues, implementing locally relevant CPD packages, and providing real hands on mentoring, supervision and support.

This approach has recently been evolving in response to changing needs and the challenges of recruiting experienced long-term health workers. VSO has been intervening in health at a more systemic level. Placements focused on building management capacities of partner organization (e.g. finance, HR management, admin systems) are increasing; in some countries, VSO is engaged in supporting the development of pre-service training curriculum for nurses and midwives, as in the case of Malawi. VSO has also piloted innovative methods of

CPD delivery, such as the development of online learning opportunities for nurses in Zanzibar, which are described as cost-effective and less disruptive to services (IDI Global Health Adviser).

VSO CPD position paper (2013) also assumes key requirements for effective CPD of health worker. CPD needs to be guided by the health needs of the community, with specific reference to primary care and the more remote areas of the country. CPD requires that employers support the standards promoted by actors involved in implementing CPD programmes. CPD should be supported and championed by professional leadership, and embedded in local partnership and equivalent institutions/associations. CPD needs to be carried out within a national framework, which addresses issues such as licensing and accreditation. CPD should have a well-articulated and clear position within national policy, and should be a key element within a National Human Resources plan. CPD should have sustained and strategic financial support.

Evidence in support of these assumptions was not explicitly gathered through the literature review, but this could be due to non-systematic nature of our review. The assumptions appear highly plausible from a sustainability point of view. Therefore, advocacy for improved policies that value health workers and address their needs, particularly those of rural health workers, is also central to VSO CPD approach.

VSO CPD empiric approach also assumes that a multitude of other factors affect health workers' performance, which is well grounded (Rowe et al., 2005). Factors such as drugs availability, state of premises, availability of incentives and accommodation, all contribute to creating an enabling environment for health workers' good performance. VSO is gradually contextualizing CPD provision within broader health system strengthening interventions such as the upgrade of a Neonatal Intensive Care Unit in Ethiopia and the No Baby Left Out project in Lindi region in Tanzania (reviewed here).

# 5.1.2 National context of CPD in Tanzania

The key policy reference document for VSO CPD programme in health in Tanzania is the Government of Tanzania Human Resources for Health (HRH) Strategic Plan 2008-2013. Improving Education, Training and Development for Human Resource is one of the key strategic objectives of this plan, and CPD is an explicit priority. In particular, the Government of Tanzania aims:

- To improve expand and utilize capacity in delivering and managing the training by the year 2013 at all levels for both public and private sector, through capacity development of the training institutions and scaling up enrolment and training of health workers
- To improve quality assurance in training institutions by 2013
- To improve and harmonize continuous professional development
- To strengthen quality assurance system in all health facilities by 2013

Other priority objectives in the HRH Strategic Plan 2008-2013 broadly relate to human resource planning and policy development capacity. The HRH Plan outlines the development of a Master Training Plan as a key priority. Improvements and innovation in decentralized HRH training provision are also key objectives, for example improving zonal training centers to support regions, districts and training institutions in delivering quality health care and training; and developing innovative distance learning programmes. The Government of Tanzania is also committed to building and strengthening partnerships in HRH; to strengthening HRH research and development; and to promoting adequate financing for the

HRH Strategic Plan.

The Government of Tanzania Health Sector Strategic Plan 2008 – 2013 also stresses HRH development as a key priority. Key aims are to maximise effective utilisation of HRH and to increase production and improve quality of training (pre-service, in-service and continuous education). Activities mentioned in the Health Sector Strategic Plan that have a clear linkage with CPD, include:

- Innovative financing methods will be introduced, e.g. basket financing, project funding, external sponsoring.
- Human resources management in management teams in the districts and health facilities will improve, with better trained HR managers, who can improve working conditions and productivity of the workforce.
- Follow-up and coaching will become integrated part of on-the-job training.
- Staff in the field require CPD to meet training needs and to help the HRH system deal with the problematic structure of capacity building and vertical/inappropriate targeting of cadres for training.

Finally, the National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania report, known as 'The One Plan' gives a detailed overview of the Tanzanian Government's plan from 2008-2015 to reduce maternal, neonatal and child mortality. Key priorities in relation of work force development are:

- Advocacy and resource mobilization for improved production, employment, deployment and retention of a skilled health work force at all levels
- Capacity development to increase the number of skilled health work force required, as well as the knowledge and skills of existing service providers and supervisors so that quality care is provided.
- Development/review of user-friendly protocols for MNCH

# 5.1.3 VSO Tanzania CPD programme in context

VSO's health programme in Tanzania has the following goals (Health Programme Management Workshop, October 2013):

- Improve accessibility and quality of sexual and reproductive health and HIV/AIDS services
- Improve accessibility and quality of mother, neonatal and child health services

It works towards three focus areas:

- 1. *Health System Management*. Delivery of health services is improved through effective administration (human resources/financial management) and clear operating procedures.
- 2. *Health Services Training*. Standard of health care services is improved through access to quality pre-service and in-service training.
- 3. *Community engagement and education*. Increased awareness among local community of available health services and healthy sexual, reproductive and nutritional practices.

This Log-Frame is a significant improvement on the previous Log-Frame. Several improvements are noteworthy. The number of high-level focal areas has been streamlined, simplified and reduced leading to greater strategic focus. The role of advocacy and research is

conceptualized as a cross-cutting function rather than an individual outcome in its own right. This ensures that research and advocacy are embedded in all VSO programmatic activities rather than as a standalone vertical activity. The Log-Frame is better integrated with other VSO health sector initiatives. The improvement of HR and management systems is conceptualized as being an integral part of Health System Strengthening rather than a standalone objective. This provides scope for a more holistic and integrated implementation of HR and management system strategic change.

The new Log-Frame areas of focus are highly compatible with the HRH Strategic Plan 2008-2013. In particular the new Log-Frame is harmonious and contributes to the following aspects of the Strategic Plan:

- To improve expand and utilize capacity in delivering and managing the training by the year 2013 at all levels for both public and private sector, through capacity development of the training institutions and scaling up enrolment and training of health workers.
- To Improve quality assurance in training institutions by 2013.
- To improve and harmonize continuous professional development.
- To strengthen quality assurance system in all health facilities by 2013,
- Human resource planning.
- Improvements and innovation in decentralized HRH training provision.
- Increase production and improve quality of training (pre-service, in-service and continuous education).
- Improvement in Human resources management in management teams.
- Follow-up and coaching becoming an integrated part of on-the-job training.

VSO health programme directly contributes to the broader Health Sector Strategic Plan by supporting the development of health managers within facilities and at regional level. It is aligned with the One Plan for the Reduction of Maternal and Neonatal Mortality by contributing to greater competence levels and effectiveness of health workers engaged in primary service delivery.

# 5.1.4 CPD initiatives reviewed in this study – methods for CPD in Tanzania

Two initiatives are reviewed in this evaluation:

- The No Baby Left Out project in Lindi region
- The Hospital Strengthening project in Kagera region

# 5.1.4.1 No Baby Left Out

No Baby Left Out (NBLO) aims to reduce Neonatal Mortality rate in Southern Zone of Tanzania (Lindi and Mtwara regions). It has the following specific objectives:

- To effectively integrate the care of newborns in dispensaries, health centres and referral centres in the project area.
- To improve the decision making process in the lower health facilities for referral of sick infants.

Begun in 2009, but active since October 2010, NBLO has the following expected outcomes:

- 1. Increased number of neonates accessing health services in health facilities.
- 2. Improved quality of care for the neonates in health facilities.
- 3. Improved efficiency of health workers.
- 4. Increased community participation in health systems.

Implemented by VSO in partnership with GIZ and the RHMT, the CPD component of NBLO mainly implemented capacity building for health workers and management through on-thejob training. VSO and GIZ split project delivery on the basis of location rather than activity, with GIZ taking the lead for implementation in Sokoine, and VSO leading implementation in Mkomaindo and Nyangao.

The capacity building approaches used varied. VSO volunteers and GIZ staff provided mentoring, facilitation of discussion at staff meetings, and introduced a programme of presentations /classroom-style teaching on key topics. They also provided supervision and hands-on support for their colleagues (performing specific procedures and demonstrating the use of different techniques/equipment). Experts provided included specialists, general practitioners, quality improvement/management advisors (e.g. a Human Resource Advisor) Training was targeted at clinical officers and nurses. Topics included lab procedures and blood transfusions; malnutrition; newborn care, from birth to discharge, including regular observations required at key stages, implementation of Kangaroo mother care; management of neonatal complications; emergency neonatal care procedures e.g. identification of complications and babies at risk; newborn resuscitation

"She [the VSO volunteer] started a program of presentation in neonates complications including sepsis, birth asphyxia, prematurity, when we had our meetings she would always discuss with us neonates complications and management." NBLO\_NYN\_IDI 4 (health workers)

GIZ/VSO developed guidelines for newborn monitoring and care management (developed by GIZ and further adapted by a VSO volunteer), and supported the Sokoine Hospital Advisory Board on financial matter and planning processes.

The programme also provided scholarships and opportunities for further education and qualification of health workers, and funded community outreach to promote facility use and raise awareness of care available and deliver basic health education messages on maternal and neonatal care.

The project adopted a holistic approach to health systems strengthening, intervening on other pillars of health care provision, which also indirectly affect health workers' performance and quality of service provision. For example, the programme provided equipment and significant infrastructure support to build a unique Neonatal Intensive Care Unit (NICU) and a malnutrition treatment room and to renovate some rooms in the target facilities. VSO funds were used for procurement of equipment, consumables and drugs. Capital investments were also made by VSO to strengthen laboratory services.

There is a consistent understanding of project activities and approach in the target locations, and a close fit between the activities reported in progress reports and those highlighted by health workers and health management teams in interviews, which suggests that all project components were implemented as planned.

## 5.1.4.2 Hospital Strengthening project

The Hospital Strengthening (HS) project is an example of a traditional VSO approach. VSO develops partnerships with health facilities. Within the remit of this partnership, VSO places international skilled health volunteers in the health facilities, to achieve placement specific objectives, which are defined in discussion with the health facility, and outlined to the volunteer in pre-placement documents and in-country briefings. Placements vary in length. Given the challenges of recruiting long-term volunteers, short-term placements are used to complement the work of long-term volunteers. Placements are designed to build on one another to achieve sustainability for partner organisations. Progress towards achieving placement objectives is regularly reviewed through volunteer and partner reports. Annual partnership reviews also take place.

An overview of current and previous volunteer placements falling under the HS initiative in the target health facilities is provided in Annex 7.

In comparison to the NBLO model, there is a lack of overall strategic direction in the HS project. Objectives are developed in relationship to needs and gaps at partners' level, as opposed to addressing specific health problems or needs in the community. Some of the objectives outlined in placement documents were found not to be very specific.

A wide range of placement-specific activities were implemented. These included capacity building activities in the area of HR; M&E; clinical skills enhancement; development of processes and standards in health facilities; outreach; nurse training; and laboratory services. A complete list of activities drawn from placement objectives is included in Annex 8.

Interviews with key informants confirmed the intervention is fragmented. Interviewees often referred to the presence of volunteers as supporting service provision, helping to fill gaps in service delivery and address staff shortages. Activities mentioned ranged from the provision of on-the-job training, the development of visual learning aids (e.g. flipchart with process flows on labour complication management), the implementation of a staff appraisal system and the development of a HR database, the development of an administrative manual containing standard operating procedures, the dissemination of international good practice on clinical management of labour complications and on the job training on the use of newly introduced (by the volunteers) equipment (e.g. a fetal heart monitor), the development of standards for hygiene and health and safety in laboratory. Compared to NBLO, the model targeted general hospital management or clinical skills as opposed to a specific set of skills/procedures. Where activities were implemented to promote a specific procedure or clinical approach over another, this was mainly due to the volunteer's initiative (e.g. the provision of training to perform vacuum aspiration) rather than being a purposively selected activity for a specific health outcome (e.g. training provision on Kangaroo Mother Care in NBLO, which is an evidence-based practice for improved neonatal survival).

## Task 2: Gauging outcomes and impact

This section reports on the outcomes/changes that have occurred as a result of the CPD support at the level of (i) health workers and managers; (ii) partner organizations; and (iii) service users of partner organisations. To enable a comparison of the two models, findings are reported by project. Overall considerations on impact and effectiveness are provided under task 3 and 4 respectively.

# 5.2.1 Outcomes of the NBLO project

It is also difficult to isolate the changes occurred as a result of VSO's intervention, because:

- NBLO is a partnership project. VSO is closely working with GIZ and the RHMT. In many respects, VSO is helping to operationalise government guidelines e.g. on appropriate referrals. In Sokoine and Mknomaindo, key informants often did not refer to changes observed as a result of VSO. They mainly referred to GIZ. This is a testimony of the strong partnership and the collaborative dynamic of implementation, yet it would be flawed to attribute the changes observed exclusively to VSO.
- NBLO as a whole intervenes in a region that has been targeted concurrently or previously by several other initiatives/development partners. Some interventions mentioned by key informants shared similar objectives (e.g. JHPIEGO's quality improvement approaches aimed at strengthening supportive supervision of health workers; Save the Children's intervention focused on training of health workers) or approaches (JICA's placement of health experts in health facilities).

Nevertheless, significant changes were documented through NBLO.

## 5.2.1.1 Changes in clinical skills

In NBLO project areas overall, there was a general alignment between changes reported by health workers and managers through IDIs and those reported by community respondents gathered from PEER.

178 health workers were trained by NBLO in the first project year (NBLO progress report, August 2013). Health workers reported developing or consolidating their clinical skills for newborn care thanks to the ongoing interaction with GIZ and VSO volunteers. The improvement in skills and knowledge of health workers was also reported by a Community representative. Key skills developed as a result of NBLO training are: resuscitation of newborns, correct feeding procedures for newborns in case of maternal deaths, importance of breastfeeding for nutrition, Kangaroo Mother Care, identification of symptoms and signs of neonatal illness, correct referral procedures, maternity triage procedures, monitoring of vital signs and reminders on how to put in IV lines. Health workers at Sokoine also mentioned learning about correct and timely referrals.

Junior health workers were particularly welcoming of the training and support provided by the VSO volunteers, as it helped them obtain practical skills after completing their formal training.

"GIZ has helped us a lot through the No Baby Left Out campaign. When I arrived here in 2012 as my first appointment, it is when they came to train us. I did not know how to manage pediatrics cases apart from giving what the doctor has prescribed. But now I know that, when a child comes with fever, it could be sepsis I know the medications to give together with when I should refer the child. That is the knowledge that we still use." (NBLO\_SOK\_IDI006, health workers)

It is worth noting that 2 out of 3 of the health facilities targeted by this review were government facilities, where numbers of staff have recently increased as a result of junior health workers being posted there.

These changes are consistent with the project activities delivered, and therefore appear a direct outcome of NBLO activity implementation. The ability of volunteer doctors to provide hands-on assistance to health workers was highlighted as a key success factor.

## 5.2.1.2 Changes in health workers' perceptions and motivation

As well as supporting the development of specific competencies/skills (e.g. neonatal resuscitation), the training helped health workers challenge their perception that a neonate cannot be sick. Neonates are now valued as patients in their own right.

"Now the mother feels that the newborns are valued because they are checked regularly if they have any problem they get admitted and treated; we are now detecting more newborns problems". VSO Volunteer, Nyangao.

NBLO contributed to give priority to a vulnerable group (the newborns), which was previously overlooked in the provision of care. In the past newborns were not treated as a special category of patient requiring particular and focused attention. Thanks to NBLO this has changed and newborns receive the attention they require based on minimum standards. In the past, many newborns were not checked properly and were taken home and subsequently died because they were not screened or treated correctly. Affecting health providers' attitudes towards care of a specific vulnerable group is a significant achievement of VSO, GIZ and partners, as it has the potential to impact on quality of care improvements in the long run.

Key informants reported good levels of motivation among health workers. In Nyangao, the community informants commented positively about the commitment of health workers. Whether this constituted an improvement on previous levels of motivation did not emerge clearly from the primary data. Good levels of motivation were said to have been enabled by the provision of accommodation (particularly for doctors), uniforms, tea allowances and allowances for specific duties (such as outreach, duty allowances for maternity staff) as well as improved infrastructure. Since there has been a significant improvement in all these dimensions, it can be assumed that motivation has also improved. However, the main determinant of high motivation was the presence of conducive working environment for staff motivation, as opposed to the provision of training (which was linked to improved confidence, skills and clinical practice).

# 5.2.1.3 Changes in health workers' career development opportunities

Opportunities to attend further education and studies were attributed particular significance for staff professional development, particularly by HMTs and Medical in charge. GIZ has provided scholarships for further studies abroad, and other staff have been supported by Council Education Departments. The fact that now health workers are supported to undertake further studies, and take up long and short professional development courses was mentioned as a major change compared to the past. Further education has enabled staff to complete their qualification and becoming registered, particularly nurses. It has also enabled career progression (from clinical officers to Assistant Medical Officers)

Attendance of seminars, short courses and adult learning opportunities was perceived more as an improvement of clinical knowledge and skills, and as an opportunity for others to learn through debriefing and sharing of learning, as opposed to a career development opportunity. On the other hand, KIs reported that more regular morning presentations and interdepartmental meetings, which have been promoted by VSO and GIZ as a complement to on-the-job training to discuss particular clinical procedures or cases, have improved communication and team work. Health workers reported better communication and improved sharing of lessons, sharing of competencies learnt, better teamwork to achieve successful outcomes for the patients. As well as being linked to opportunities for team discussion and group training, this appeared to be the result of targeted efforts by a HR Volunteer, who in her needs assessment detected that internal communication was a major challenge for service quality, and recommended to management they hold regular staff meetings and meetings between management and staff.

# 5.2.1.4 Changes in clinical practice and organisation of care

Improvements in clinical skills were perceived to have improved clinical practice and quality of care. There was wide consensus that service provision has improved, particularly RCH services. Key informants directly and explicitly attributed this change to the training they have received.

"Due to the levels of trainings, our educational level and the updates that we are given, these have really helped improving the services especially in maternal and child care." NBLO\_SOK\_IDI 6 (health workers)

Before NBLO was established neonatal care consisted of one ward round run once a day by a pediatrician on the postnatal ward with no further reviews of patients throughout the day. There were no dedicated nurses or treatment given to the babies by gynecological or obstetric nurses. Often if a mother's health was satisfactory, she and her baby would simply be discharged from the hospital. A basic neonatal triage card was used, that required one single examination of each newborn. This card did not cover the first 24 hours of each baby's life and was only completed correctly in about 25% of the cases. Sick newborns, up to 8 of them together with their mothers, were allocated to a room that should cater to 3 patients. All other sick newborns were scattered across the postnatal ward. Equipment consisted of one oxygen concentrator, no functioning heating lamps for premature babies and no resuscitation equipment. There was no monitoring of feeding and observations were basic to non-existing.

Since NBLO has started the following changes in clinical practice have happened:

- An improved Newborn Triage Checklist (NTC) has been introduced in all three partner hospitals, providing guidelines on monitoring and screening of newborns in the first day of life. This checklist has been produced in Swahilli to ensure use is straightforward for health workers.
- At St Walburg's Hospital a pediatrician or other health worker sees the baby at least three times in the first 24 hours before they are discharged (NBLO Case Study, 2013. Page 11).
- Dedicated nurses are now looking after babies as their main patients. This is the first time this has happened in a Tanzania context and is a clear innovation. This has created the enabling conditions for asphyxia and anaemia to be treated among

babies. Thermal care is provided by Kangaroo Mother Care. Babies are routinely provided with vitamin K treatment which stops haemorrhagic diseases.

- New processes initiated by NLBO have increased coordination and efficiency of health workers. For instance in St Walburg's delivery room staff score a baby and then health workers are able to prioritise and provide appropriate treatment (NBLO Case Study, 2013. Page 14).
- The quality of screening practices has reached impressive levels. Between November 2012 and July 2013 the screening rate of neonates has increased to 89% across all partner hospitals (NBLO Case Study, 2013. Page 9) and 1400 newborns are reported to have been screened (NBLO progress report, August 2013)

The referral system was also mentioned by KIs as a significant improvement. Health workers reported feeling more confident about when and how to refer a sick neonate, and placing importance of the timeliness of referral. Neonates are now being referred with the correct NTC cards filled out, whereas before they would have been referred without any record of patient observation. Improved communication systems among target health centres and dispensaries also enable appropriate referrals. 85% of referred babies were reported to have traveled by ambulance (NBLO progress report, August 2013).

Laboratory services were also found to be more systematic, which emerged clearly as a result of VSO's dedicated support through a volunteer Lab Technician. Health workers narrated experiences of learning how to conduct new much needed laboratory tests from VSO volunteer Lab Technician. However, community respondents reported having to pay bribes at the laboratory in one of the health facilities (Nyangao District Hospital) to speed up the service.

VSO also documented an increasing integration of NBLO with other relevant departments within the hospital. For instance, there has been a growing integration between NBLO and Basic Emergency Obstetric and Newborn Care (BEMONC) in the maternity department. This did not emerge strongly as an area of improvement according to respondents engaged in this evaluation, and there was limited mention of the continuum of care for mother and babies.

Furthermore, a successful process of task-shifting was documented, consistently with reports included in the NBLO Case Study. In the past doctors were often responsible for basic clinical oversight of newborns. Now, as a result of the institutionalization of the NTC and change in job roles and responsibilities nurses have been able to initiate and conduct treatment on newborns if the doctor is not available (NBLO Case Study, 2013. Page 7). Nurses reported feeling confident in initiating care and treatment for newborns because of the skills and competencies they have learned from VSO and GIZ. Nurses stated that they feel more empowered, and doctors are better at delegating than in the past. This is particularly significant since shortage of doctors is still a challenge to NBLO and health care provision in Lindi, and that, according to the NBLO Case Study, the majority of providers are medical attendants with only one year of formal education.

## 5.2.1.5 Changes in newborn monitoring

Health workers have improved the way they document key information about patients in observation charts. This has led to greater coordination and better care and treatment.

The NBLO case study also highlights complete levels of reporting on neonatal deaths, although this could not be triangulated due to the lack of quantitative data across facilities over time. However, it is noteworthy that newborn deaths are no longer hidden (in the past, neonatal death was conflated with fresh still birth and macerated still birth), because it indicates greater commitment to reducing neonatal mortality. Improvements in newborn deaths monitoring were not mentioned as a significant change in IDIs with KIs, but possibly because it is not a tangible improvement for health workers and managers.

## 5.2.1.6 Changes in health management and administration

At the level of the heath facilities targeted by NBLO, important improvements were also documented, but it is more challenging to attribute these directly to VSO's intervention.

Overall, compared to changes in clinical skills, key informants outlined fewer examples of changes at management level, or in hospital administration, and they were less able to describe the process or factors that drove this change. For example, in HR, the fact that the HR Volunteer also helped develop job descriptions for staff to improve team cooperation and task-sharing was not acknowledged by counterparts in health management teams, or by health workers themselves. It was also reported that some suggestions made by volunteers were not implemented because they were not realistic (e.g. incentives for completion of specific tasks in Nyangao). The challenge of affecting change at the level of health facility management was acknowledged by a few respondents. Management was described as generally supportive, but less open to being influenced than health workers, including due to financial constraints.

In relation to financial management, VSO was found to have assisted one District Hospital to implement a simple payroll system. VSO also helped establish financial procedures that streamlined requesting, certifying and authorizing processes. This was welcomed because of its simple and user-friendliness.

# "Financial management initially wasn't clear but now the whole process in known, decision making shouldn't be a one man show-this is VSO contribution" NBLO NYA IDI1

VSO/GIZ helped develop guidelines on nutrition and newborn monitoring and care, which are now part of Standard Operating Procedures in Mkomaindo and Sokoine. These guidelines formed the basis of on the job training and skills sharing through support on the wards by GIZ staff and VSO volunteers. VSO/GIZ also contributed to a marked improvement in the dissemination of existing guidelines, e.g. guidelines on referral procedures and health and safety guidelines. APGAR scores were affixed on walls in labour ward for early newborn monitoring; a checklist for management of obstetric complications were developed and affixed on walls; and processes for monitoring children and maintenance of accurate notes were improved.

## 5.2.1.7 Other systemic changes

Other important changes were mentioned by both health professionals and community respondents as having directly contributed to quality of care improvements. These include:

- an improvement of availability of drugs for free. However, stock-outs are still very frequent and patients are still asked to pay for drugs to which they are entitled for free, which constitutes a barrier to their access to care.

- Improvements in physical infrastructure In Sokoine Regional Hospital, the Pediatrics ward has been renovated and it is better equipped Equipment has been provided for resuscitation. The malnutrition room has been renovated. The state of facilities was still criticized by a minority of community respondents (for example, having to share a bed or to deliver on the floor, due to the lack of beds), through overall it was perceived to have improved dramatically in the last few years. In particular, the quality of NICU was mentioned as a pulling factor attracting patients from the whole of Lindi region and beyond.
- Increased availability of specialist equipment which formed part of the set up of NICU
- Availability of a free ambulance which enabled the improvements in referrals

Overall, NBLO was seen by the RHMT as complementing their efforts to strengthen the regional health system and they supported its expansion.

"I ask them again to consider this [posting of specialists] in Lindi region. Even if they bring us one, he could do outreach programs and bring his clients here for surgeries as it used to be when Dr Hellen was here. This was planned through GIZ work plan and through regional CCHP [Comprehensive Council Health Plan] in RHMT and they could go around through RHMT and CCHP". (NBLO\_SOK\_IDI\_005; Lindi RHMT representative)

# 5.2.1.8 Service users' perceptions of care

Community members who have used the services of the facilities observed that in general maternal, child and newborn services have improved significantly. A few respondents described this change being catalysed by the government's renewed and focused attention to improve services.

Community members who used the services of the facilities typically felt that the quality of services and quality of care met their expectations. The majority of women coming in for deliveries described being admitted in a prompt fashion and being given a proper level of attention and care. Community members with sick children (CU5) described receiving professional and helpful care and treatment for fevers, diarrhoea, malaria and pneumonia. A few community respondents explicitly mentioned that a big improvement in the quality of the services related to the creation of a special unit (c.f. NICU) for premature babies.

A large minority of community members described receiving sub-standard quality of treatment and care. Key factors underlying this perception by patients were:

- Unsatisfactory interaction with health workers (detailed below in 5.2.9)
- Lack of drugs and basic equipment Women wanting to deliver at the hospital were turned away until they purchased commodities required by the hospital for the delivery (gloves, bucket etc). In some cases parents accessed drugs/treatment through drug-shops without consulting health workers as would be recommended. This led to a minority of community members receiving sub-standard care from drugshops who may be poorly trained or untrained.
- Patients being asked by health workers to pay unofficial fee commonly these charges were referred to as 'registration fees'. This often occurred in relation to parents accessing services for children. Patients either felt that it was not appropriate for fees to be paid or they did not have sufficient money to pay fees. In some cases parents paid the fee. In other cases, this turned them away from services.

• Long and unacceptable waiting times (highlighted by the community representative in Mkomaindo).

# 5.2.1.9 Patient- staff interaction

Patient-staff interaction emerged as an area for improvement. Service users reported health workers' attitudes and communication as an important area of dissatisfaction with the service provided (albeit within an overall improved service). A large minority of community members described being treated in a disrespectful, unprofessional and rude fashion. Many respondents described being berated by health workers if they had waited long periods of time for service and had given feedback to health workers. A large minority of community members described being mistreated, abused and ignored at crucial points in treatment/health-seeking processes. Women respondents often felt that they were not treated in a respectful or thoughtful manner given the fact that they were imminently expecting to deliver and needed the support and assistance of health workers.

There is also some evidence that improvements may gradually be occurring. The NBLO Case study refers that communication with parents of sick children is now being practiced more effectively, resulting in closer parent/health staff relationships. Nurses in Sokoine reported that their increased competence in dealing successfully with complications during birth for mothers and babies (and saving their lives) has resulted in increased ability to explain the procedures to the community, and this is helping to build trust and avoid suspicion. On the other hand, health workers also described being overworked and confided to being occasionally bad-tempered with patients who were uneducated and did not understand the system, or the complex and pressurised working lives of health workers.

# 5.2.1.10 Engagement of patients in health care and management

Engagement of patients in health care and management emerged as another area for improvement.

Some health workers observed that patients are increasingly confident and encouraged to provide feedback to health workers and make requests for more prompt service. As a result of the outreach, patients now understand better their role in contributing to health care (cost-recovery), which creates fewer conflicts in the interaction with health workers. This was not confirmed by community members. In fact, community respondents engaged through PEER generally reported limited involvement in their own care management. Patients reported being told what to do, and being blamed for not doing it. The patient-provider relationship is such that it is still not easy for patients to rate/judge health care professionals. Community respondents found it difficult to articulate their care experiences, even when prompted extensively. Their feedback tended to focus on positive visible changes (e.g. new infrastructure) or on negative experiences. Low expectations of care as well as low educational levels may explain this.

In relation to engagement of community members in health management, the Community Representatives were relatively unaware of what was happening in the target health facilities. Despite significant probing, their level of articulation of changes occurring was minimal, and they generally referred to broad-level visible changes (e.g the existence of a NICU) as opposed to specific examples of changes in quality of care. In one project location, the Community Representative, a member of the Hospital Board, was extremely critical of the

current management's treatment of the board. He felt that the board was not consulted, informed or engaged.

# 5.2.1.11 Changes in demand and service uptake

Demand and service uptake appears to be on the increase. The number of admissions in the NBLO target locations is steadily increasing as shown in figure 1 below. On average, across the three

target health



facilities, the number of admissions has increased by 179% between 2011 and 2013.

Figure 1 – Neonatal admissions in NBLO project sites – 2010 - 2013

Key informants within the hospitals believe that their facilities are attracting greater numbers of patients because their newborn and maternal service provision is considered superior to other facilities in the area. According to them, the presence of a Neonatal Intensive Care Unit with qualified staff is highly regarded, and the community perceives the pediatrics care provided to be effective. Health providers feel that having European specialist doctors makes their facilities more desirable to community members and this is responsible for increase demand and service uptake. According to health workers and managers, post-treatment follow up rates after discharge of neonates are also reported to have increased. In Lindi, the NBLO Case Study reported that 90-95% of mothers' babies received treatment at NICU returned for follow-up appointments (NBLO Case Study, 2013). This data could not be verified, but health workers reported that parents are happy to come back for follow-up because they are satisfied with the care received and value the service.

Community representatives report that awareness of the pediatrics service is increasing - the community is being educated through outreach about the value of using the services. Awareness of the importance for expectant mothers to stay nearby health facilities in maternity waiting homes is also increasing, so complications can be detected and treated in a timely fashion.

However, barriers to access to services remain. Poor households or households with low willingness to pay tend to either not access the services of facilities or initiate treatment seeking and then drop out when they find out what costs are required. Access to health facilities is seasonal – higher during the harvest season when households have money. A barrier to accessing facilities is in some cases the gendered process of decision-making within poor households. In some cases, wives are encouraged to deliver at home with a TBA rather than go to hospital to save expense. Some respondents described delivery at home as being the tradition in their area and the norm among their community. Some respondents referred to distance between homes and facilities being a barrier to accessing services.

The reported increase can not be solely attributed to VSO because:

- VSO's engagement in delivery or design of communication messages of outreach awareness raising sessions did not appear as a strong component of project delivery
- recent changes in government policy, e.g. the introduction of exemptions and national health insurance scheme, were referred across KIs as having played a critical role in increasing demand. Without a comparison site, it is not possible to appraise the relative weight of improved quality of care in raising service utilization.
- health worker patient interactions still appear an area of weakness, so provision of CPD can not be said to have directly affected improved attitudes towards patients and patients' improved perceptions of care.
- The project design does not address structural determinants of health seeking behaviour (such as cost, traditional beliefs, role of informal community health providers, gendered decision-making processes), through neither promotion of community engagement or strategic communication for behaviour change.

Nevertheless, VSO is playing an important part in contributing to these changes.

# 5.2.2 Outcomes in HS sites

## 5.2.2.1 Changes in clinical skills and clinical practice

In HS areas there was much less coherence and fewer discernible patterns with regard to changes in clinical practice in comparison to NBLO program areas. For instance, VSO Volunteer in Kagondo felt that she was not provided with a concrete set of objectives to work with. She felt that she made up her work as she went along (HSS\_KAG\_IDI002).

Changes were reported to be happening, but at a slow pace. Improvement in skills was overall reported, but examples were not corroborated by multiple interviews.

Health workers reported learning what was a recommended clinical practice and what should be avoided through observation of volunteers (HSS\_KAG\_IDI002, Health Workers). VSO volunteers were effective (through capacity building and on the job training and supervision) in reminding health workers about clinical skills and knowledge they had learned in medical school and training colleges (HSS\_MUG\_IDI002, Nursing School Representative), for example the importance of using sterile equipment, or use of a partograph. VSO Volunteer Nursing Trainers were reported by the Nursing School Representative of Mugana to improve the quality of clinical practice of nurses. The Nursing School Representative attributed this to the fact that Volunteers not only knew about nursing but also were well versed in pedagogy and advanced methods of training and capacity building. VSO Volunteers were described as being actively engaged in supporting and supervising health workers and student nurses. For example VSO Volunteers ensured that vital signs were taken before and during surgery (HSS\_MUG\_IDI001, Health management team).

Health Workers in Kagondo referred to VSO catalysing radical changes in clinical practice through the donation and introduction of equipment. For instance, VSO purchased a digital thermometer at Kagondo Hospital. Previously, Health Workers had issues measuring temperature and charting records. Now they are motivated to measure patients' temperature. Recording patient temperatures has also become a standard practice among all health workers, (HSS\_KAG\_IDI005, Health Workers.) A VSO Volunteer encouraged Mugana Hospital to get a oxygen tank which can operate when there is no electricity (HSS\_MUG\_IDI004, Ex VSO volunteer). Previously the oxygen tank could not operate when there were power outages. A VSO volunteer introduced equipment to listen to fetal heart and provided training to nurses on how to use it.

VSO was reported to have taught Health Workers how to fill out an observation chart. This ensured much greater transparency about the progress of patients and provided an accessible information source to track patients (HSS\_KAG\_IDI005, Health Workers.) In Kagondo, VSO was reported to have introduced procedures more in line with international good practice. For example, vacuum delivery was initially opposed by doctors, whereas now it is regularly used. VSO volunteers reported discussing with colleagues the introduction of similar changes, e.g. the shift from vacuum extraction to c-sections and the use of misoprostol for induction of labour.

Adherence to international guidelines on blood transfusion was also promoted, e.g. training staff on when blood transfusion may not be appropriate. According to the volunteers interviewed, VSO's work has resulted in improvement in implementation of quality procedures in the laboratory and of the laboratory health and safety. This has resulted in more accurate diagnosis and improved sensitivity of testing processes (for example, unveiling sickle cells patients, which were previously being missed), as well as earlier availability of test results. According to the volunteer, it is not possible to tell how this translates in improvements of care and treatment, as this is beyond the volunteer's remit. The VSO

Volunteer Lab Technician felt that the tools, methodologies, techniques that were introduced would continue to be used because they made the lives of lab technicians much easier.

Several changes in clinical skills and practice were documented within the laboratory, which benefited from a number of short-term volunteer placements. For example, an accurate test for sickle cell was introduced, which helped unveil several cases. The team working in the laboratory at St Joseph Kagondo Hospital were reported by the volunteer and health managers to have improved their knowledge of tests that were not performed routinely in the past. The team are now aware of the urgency and priority of tests.

One of the VSO Volunteer Lab Technicians in Kagondo emphasised that the Lab Technicians and Hospital staff appreciated the volunteer's contributions. However, whilst the Volunteer felt appreciated it was sometimes difficult to achieve a voice to promote change because some changes challenged the way health workers are used to working or require further efforts or resources. Due to resistance from senior health workers, in several cases changes were not put into action (HSS\_KAG\_IDI002, VSO Lab Technician Volunteer).

## 5.2.2.2 Changes in health workers' motivation

VSO Volunteers also inspired health workers to change their approach to work and be more motivated. VSO Volunteers encouraged nurses to be more compassionate to patients (Cousellor Misenge Ward, Mugana. HSS\_MUG\_IDI003). In addition to this, a VSO Volunteer was described as encouraging Health Workers to do everything to keep patients alive whereas in the past there was a prevailing fatalist view (HSS\_MUG\_IDI004, Ex VSO volunteer).

Motivation levels were reported to be high by both health professionals and health managers. The increased level of staffing enables health workers to work under manageable pressure (HSS\_KAG\_IDI005, Health workers; HSS\_MUG\_IDI002, Health management team). A VSO Volunteer working at Kagondo also confirmed the high level of motivation at the hospital (HSS\_KAG\_IDI004, VSO volunteer).

Motivation was generally linked to the availability of financial incentives (e.g. extra pay for night shifts), provision of housing (which according to health workers and HMTs has helped attract and retain doctors and nurses), and only marginally to the inherent satisfaction arising from a successful relationship with patients. Further opportunities for formal education and training were seen as a key motivational factor, and were identified as a gap by health workers interviewed. As in NBLO, respondents did not directly attribute the high level of motivation to the availability of CPD, but the very presence of VSO was seen as setting an example, in that volunteers demonstrate that one can be motivated for their work even when doing it for free. VSO were perceived by health workers to be hard working, focused on completion of their work as opposed to clock-watching.

In Mugana, active investment in fostering a team spirit was achieved with regular team meetings as well as employee contests (e.g. awards for best employee are given to employees after a review of nominations put forward by each department). Events and parties where management provides presents to health workers were also frequently mentioned motivational factors.

## 5.2.2.3 Changes in health management systems

Various changes were documented which relate to health management:

In HR management:

- a VSO volunteer undertook an appraisal of staff in Kagondo, which revealed that the lack of structured communication helped spread rumour and negatively affected staff morale, and also that staff perceived a general lack of communication from management. In response to this, feedback loops were strengthened and supervisors in the wards were empowered to interact more effectively with staff and with management, and to ease the communication flow. Regular departmental meetings were also introduced.
- The assessment also revealed that staff lacked job descriptions, so the volunteer worked closely with management to develop these. Timekeeping by staff was also an issue, and a clock-in system to monitor timekeeping according to job descriptions was introduced.
- The appraisal also resulted in recommendations to management about the allocation of resources to address factors impacting on workers' morale, for example supply of disposable equipment, drugs, which emerged strongly as a key factor in enabling a positive environment for workers. Management have been responsive to these requests.
- The HR volunteer introduced a simple HR database allowing administrative personnel to address HR-related queries.
- She took the initiative to write down an administration manual when observing that this was not available, to ensure queries were dealt with consistently.
- She introduced a leave tracking system to prevent disruption of services.

These changes (which were reported by VSO volunteers) did not emerge in interviews with health workers and the health management team in the hospital. However, St Joseph's Kagondo Hospital reported that changes in admin and HR systems have improved staff welfare and increased staff motivation and retention (PMLT Kagondo, 2013-2014).

In relation to quality control of laboratory services:

- There has been an institutionalization of quality control for laboratory tests in St Joseph Hospital (Kagondo) from August 2012 to present (HSS\_KAG\_IDI\_002). This quality control includes an external component of monitoring and scrutiny, which strengthens the transparency of the testing and quality control process. All members of staff whose work relates to the laboratory were reported to be aware of these changes in quality control (PMLT, 2012-2013). The Laboratory of St Joseph Hospital Kagondo has established simple visual tools to monitor and track the quality control results of biochemistry results/tests. This has increased the awareness of the team working in the lab with regard to test quality (PMLT, 2012-2013).
- The quality of service in the laboratory has improved in St Joseph Hospital Kagondo in the period 2013-14. This has been a result of the introduction of relevant SOPs promoted by VSO's Lab Technician. The introduction of relevant SOPs has lead to laboratory procedures and guidelines being followed. This has resulted in reduced traffic and reduced waiting times.
- The results generated by St Joseph's Kagondo Hospital laboratory have increasingly been perceived by users of the laboratory as reliable. Doctors for instance perceive lab results to be more reliable. This is largely a result of the introduction of quality control of test results. (PMLT, 2013-14).
- The laboratory at St Joseph Hospital has adopted a drug tool, promoted by the VSO Lab Technician, which captures store stock and expiry of drugs. This has lead to much

less expiry and a constant supply of drugs, in other words a more efficient and effective procurement system (PMLT 2012-2013).

- Volunteers helped Mugana District Hospital laboratory to introduce a laboratory work plan. This has resulted in the improvement of laboratory test performance and has reduced turnaround time. (PMLT, 2012-2013).
- A laboratory equipment maintenance schedule tool has been developed in Mugana, which has ensured improved maintenance of tools. These innovations have been supported and lead by the VSO Volunteer Lab Technician.
- Standards and processes related to lab health and hygiene have improved. For example hand washing is now a formalized part of the laboratory team's routine activities. The storage of stools is now implemented using standard plastic containers (which is considered best practice) rather than empty match boxes. A specimen collection manual has been developed. These changes were catalyzed by the VSO Lab Technician during the period August 2012 onwards (Volunteer Progress Report).

Other changes in health management were reported through volunteer reports or PMLTs but were not triangulated through IDIs. These include:

- changes in M&E within the laboratory: the introduction of a patient satisfaction survey for lab customers and improved monitoring of patients.
- The introduction of a new payroll system and simple accounting package (Partnership and Learning Tool, 2013-2014).

## 5.2.2.4 Changes in infrastructure and service provision

Key informants emphasised VSO's positive role in supporting the expansion of services. For instance CTC is now offered at Mugana Hospital thanks to VSO's support and resources (HSS\_MUG\_IDI002, Nursing School Representative). A counseling and treatment centre has constructed (at St Joseph's Hospital, Kagondo) away from hospital as a result of VSO's suggestion. VSO funding contribution to this development was also reported. This has increased confidentiality. Many community members are now coming for testing. Over the period of a month the number of people coming for testing increased from 60 to 136(PMLT 2012-2013). This result could not be verified.

The labour ward has been renovated in St Joseph Hospital (Kagondo). The labour ward now offers patient-friendly care in a warm and friendly environment. Patients are now provided a much larger degree of privacy. The change in design of the labour ward, which has involved moving the nursing office to a location and providing windows to key areas (early labour and labour room) allows for continuous observation. Tile floors and shiny paint allow for greater hygiene. Lighting has been improved through structural changes allowing for better use of natural light. The placement review of VSO's Medical Doctor suggested that the redesign of the labour ward and these changes were promoted and supervised by the volunteer, although this was not corroborated by KIIs.

# 5.2.2.5 Service users' perceptions of care

Overall, the service provided at Kagondo and Mugana Hospitals was perceived to be of good quality.

In Kagondo, improvements were related to care provided in the CTC ward. In the past the CTC ward used to be very small with no privacy. Now People Living With HIV/AIDS can obtain confidential services at the CTC (HSS\_KAG\_IDI003). Community Members like the service because the CTC is now a standalone building far from the main hospital buildings. This encourages patients to feel a greater sense of confidence that their HIV status will not be disclosed, or assumed, by other clients. The quality of the service in CTC was described as excellent (HSS\_KAG\_IDI005, Health workers).

Community members were described as being attracted to come to Kagondo hospital because they associated increases in quality with having European practitioners working in the hospital (HSS\_KAG\_IDI005). The narratives of community members supported the perception of other KIs. For example, a community member who was sick and went to Kagondo hospital reported getting "good health care particularly from the European doctor" (HSS\_KAG\_PEER1(i)). Whilst this is somewhat problematic from a sustainability perspective having VSO Volunteers in a hospital does increase the community perception of quality of services provided.

Community members described receiving what they considered to be an efficient, wellorganised and high quality service in Kagondo Hospital. Experiencing a polite, respectful and speedy encounter with hospital reception was a key dimension of community member's notion of a quality service. Several respondents stressed the efficient and polite service at Kagondo Hospital's reception (HSS\_KAG\_PEER1(iii)).

Community member respondents that described visiting Kagondo hospital valued the short wait between being registered and seeing a doctor for a consultation (HSS\_KAG\_PEER1(iii)).

Community member respondents particularly valued being talked to in a polite and respectful fashion (HSS\_KAG\_PEER2(i)). Several respondents also referred to appreciating having a good and comprehensive explanation of the health issue and treatment process, which was provided at Kagondo hospital. A pregnant woman who accessed ANC at Kagondo hospital described all patients being well looked after and she stressed that she did not observe any discrimination by health workers towards patients (HSS\_KAG\_Peer2(iv)).

The perceptions of community members in Kagondo Hospital resonate consistently with experiences in Mugana District Hospital, which was reported to be the hospital of choice for a number of services, including labour and delivery and childhood illness. Respondents travelled a distance or accepted the cost willingly because they perceived Mugana DH to be comparatively better than other options. Mugana DH is seen to provide a greater range of diagnostic services (HSS\_MUG\_PEER2(i)), and to be staffed with competent doctors and nurses. Several positive experiences of care were recounted. For instance a woman weighting 150KGs who was pregnant needed a C-section. Her Gynaecologist in Mwanza encouraged her to go to Mugana hospital because of the quality of the services there (HSS\_MUG\_IDI001. Health Management Team).

Service users articulated positive experiences of care, stressing in particular a welcoming reception, and being attended promptly. The community representative at Mugana Hospital stated that community members are appreciative of the streamlined queuing system established relatively recently. When patients come to the hospital they are given a coupon with their queue number. The Counsellor described this system as being perceived by community members as not only being efficient (saving considerable amounts of time) but

also avoiding favouritism. In the past, individuals that paid or who knew staff members would be placed at the front of the queue (HSS\_MUG\_IDI003).

Community members also reported receiving appropriate and timely care. For example, a woman experiencing a prolonged labour was offered a c-Section promptly when featal heart monitoring revealed that the baby was in distress. Both mother and baby survived, and she was well attended throughout her post-natal recovery, which went well (HSS\_MUG\_PEER 2(ii)).

There were however also criticisms in relation to experiences of care at both hospitals.

At Kagondo Hospital, one patient with a sick child (HSS\_KAG\_PEER1(iii)) commented that some health workers were not caring and ignored the requests of patients for assistance. Another respondent mentioned that test results were delayed although her general experience at Kagondo Hospital was positive.

In Mugana, community members lamented overcrowding of maternal and children ward. One woman reported that she was left to wait on a mattress on the floor as all beds were occupied (HSS\_MUG\_PEER1(ii)). Women in the maternity ward had to share bed.

Another key criticism at Mugana related to staffing levels. The lack of doctors meant that patients were attended only by nurses or nurse students, or wait a long time before being seen, particularly as Triage was implemented effectively and urgent cases received a priority. A woman in her first pregnancy was left to labour alone. She perceived student nurses to be ineffective, but then nurses were involved and she was well attended. The patient would have preferred seeing a doctor, as this was why she chose to travel to Mugana to deliver (HSS\_MUG\_PEER1(ii)). If placed in context, this example highlights that although communication between health workers and the patient could have been managed the patient's expectations more effectively, the emergency system appears to be working well (urgent cases being given priorities) and straight forward cases are being dealt with effectively and consistently with task-shifting (e.g. midwifery-led care for normal deliveries).

## 5.2.2.6 Patient-staff interaction

Health workers were perceived by community representatives to be attentive, motivated and respectful of patients.

The VSO Volunteer at Kagondo described how health workers explain more to patients and communicate more effectively than Health Workers in other African countries (where she had worked) (HSS\_KAG\_IDI004, VSO volunteer). The Health Management Team in Mugana stressed that patients are well served and politely talked to by Health Workers (HSS\_MUG\_IDI003. Health Management Team). The Health Workers are considered to be flexible and willing to change if change is required. In Mugana the Nursing School Representative (HSS\_MUG\_IDI002) emphasised that community members make positive remarks about the language and behaviour of Health Workers.

Community engagement is described as being facilitated because nurses typically learn, or already know, Haya (the local language). This puts many patients (particularly older patients who do not speak good Swahilli) at ease and promotes confidence and trust.

As well as a polite interaction with patients, systems are available for patients to express their feedback and concerns to staff. A suggestion box is available in Kagondo hospital, though it is not regularly used Patients are also reported to be confident in reporting mispractice or even abuse from health workers to sisters on the ward or to management. These allegations are reported to be taken seriously by management and result in a meeting with the health worker responsible straight after (HSS\_KAG\_IDI001).

# 5.2.2.7 Changes in demand and service uptake

A broad array of key Informants reported increases in demand and uptake of services. This included a VSO Volunteer Laboratory Technician in Kagondo Hospital (HSS\_KAG\_IDI002); Community Representatives of Kagondo Hospital (HSS\_KAG\_IDI003, Community Representative (Councillor of Mhutwe Ward)); A VSO Volunteer Medical Doctor working in Kagondo (HSS\_KAG\_IDI004); and Mugana's Nursing School Representative (HSS\_MUG\_IDI002).

The hospitals were reported to be attracting patients from beyond their own catchment area. The main factor driving up demand is a positive patient-health worker dynamic (described above).

Outreach services are also helping increase demand: Mugana District Hospital has a mobile clinic, which allows public health nurses to go for clinics where community members live (HSS\_MUG\_IDI002, Nursing School Representative). This is allowing awareness raising activities and the prevention of patient delays causing maternal deaths. Women are advised to come early to the facility when in labour, and to wait in birth waiting homes near the facility if they live far. Similarly the CT has an outreach function now. Nurses go out into the community to do sensitisation (HIV and CTC) and home-based care (HSS\_MUG\_IDI002).

Other factors explaining the increase in demand are:

- Hospitals are well organised. Services are typically free.
- The two hospitals offer services not available elsewhere (e.g. specific lab tests) PMLT Kagondo 2013-2014; PMLT Mugana 2012-2013).
- Services are responsive to clients (appointments can be fixed to see specialists, if a patient gets hold of a doctor's phone; patients can choose which doctor to see (HSS\_MUG\_PEER 1(i)).
- Quality specialist services (e.g. surgical procedures) are available

Overall, reports from volunteers and KIs demonstrated a non-strategic understanding of coherent Health System Strengtening on a zonal or regional basis. Volunteers and KIs believe that high, or increasing, attendance is necessarily a good phenomenon. However, increased attendance at one facility is not necessarily additive from a systemic perspective. It may simply mean that instead of patients attending a facility close to where they live they undertake long journeys to obtain services in a facility that is perceived as providing a better service. This does not create an upward dynamic of upward accountability for facilities that are providing a comparatively worse service to improve. It may also mean that high functioning facilities are unable to cope with increased uptake of services.

Barriers to access to care in the target two hospitals still exist and were reported as follows: According to both health workers and community representatives, the service in these hospitals is more costly than in other hospitals but people are willing to pay it, because of the perception of good quality of services. A Community Health Fund scheme initiated by the government was mentioned by one KI as a response to promote greater access cost, but membership is still low and community members are being sensitised to join (HSS\_MUG\_IDI\_003). The Mugana HMT reported using Basket Fund resources to fund the cost of emergency transportation from communities in cases of labour and delivery complications (HSS\_MUG\_IDI\_001). Neither of these examples were triangulated with evidence from other sources, and there appears to be no coherent strategy to address financial barriers to access to care.

Distance from the facilities is another barrier preventing access of women to labour and delivery care (HSS\_KAG\_PEER3(i)), as is the preference for traditional medicine, which is comparatively cheaper and easier to access (HSS\_KAG\_PEER3(ii)).

# Task 3 – Assessing the value of VSO's CPD model / testing VSO assumptions

In order to assess the value of VSO CPD model in Tanzania, four specific assumptions underpinning the Theory of Change (as outlined by VSO Evaluation ToRs) were tested through KIIs and PEER. The evidence gathered is reported in relation to each of the assumptions, and observations are made in relation to the strength of the evidence supporting each assumption.

# 5.3.1 Assumption 1 – the programme is welcomed and valued by partner organizations and the health workers in Tanzania

As outlined above, VSO CPD model is highly relevant and consistent with national and regional strategies. The provision on CPD is explicitly articulated in the HRH Strategic Plan 2008 – 2013, and consistent with broader objectives of the Health Sector Strategic Plan III as well as the "One Plan" for the reduction of maternal and child mortality. Regional Health Management Teams in both Kagera and Lindi welcome VSO support, and stressed its important contribution in improving regional health systems.

Specific lessons and suggestions on the CPD implementation model have emerged from key informants' feedback:

1. Perceptions of VSO volunteers as filling gaps - In both Lindi and Kagera, there was a perception that VSO volunteers are being used to "fill gaps" and to provide service delivery, although this theme emerged more strongly in Kagera. Partner organizations accept VSO Volunteers on the basis that the volunteer would allow for a high level of quality of service delivery whilst saving financial resources. Rather than hiring a local with accompanying salary the Volunteer was provided for free. Health workers, health management teams and Regional Health Management Team respondents made similar comments about this theme. Partner organisations were described by one VSO ex-volunteer as being complacent as a result of having successive VSO volunteers in their hospital. This is an unsustainable and inefficient use of resources. VSO volunteers and ex-VSO volunteers also reported this perception as a key challenge for them to achieve broader capacity building objectives (VSO Volunteer, HSS MUG IDI005). In Lindi, a few health workers and managers also referred to the benefit of VSO' volunteers filling gaps in service delivery – given the shortage of staff, having foreign volunteers who provide services in facilities on a voluntary services saves costs and eases the pressure of existing staff. But they also highlighted significant improvements in clinical skills resulting from the presence of volunteers.

2. Volunteer placement design – In Kagera, there was a perception that the VSO volunteer system is supply rather than demand-driven (HSS\_MUG\_IDI001). In Lindi, some health workers articulated a lack of comprehension about how VSO articulates its criteria for the selection of facilities, departments, functions and volunteer profiles. Some health workers felt that volunteers could have been more successfully placed if they filled an articulated need identified by the partner organisation. It is understood that VSO places volunteers on the basis of partners' requests. This evidence suggests that facilitation of broader participation by health workers and managers in the design of placements could be of added value.

In Lindi, a small minority of KIs felt that VSO volunteers were junior, less experienced, clinicians. This limited their ability to affect change. Other doctors would not necessarily listen to their advice or be open to learning from them. They would have faced fewer challenges in introducing new practices and less resistance to change if they had been more senior or specialists. In a very small minority of cases KIs felt that the VSO/GIZ volunteers in Sokoine did not have the requisite skills to perform their roles. The HR Advisor in Nyangao was felt not to have sufficient influence on senior management to catalyse change.

*3. Length of placements* - A repetitious theme among KI narratives in both regions was that VSO volunteer placements should be longer than they are (in Kagera, health workers suggested they should be at least 2 years not a year (HSS\_KAG\_IDI005, Health Workers). As one VSO ex-volunteer stated (HSS\_MUG\_IDI—4) this would provide time for a holistic and comprehensive cycle of assessments, creation of a plan, implementation of changes and evaluation (HSS\_MUG\_IDI004, VSO ex-volunteer). Having long-term volunteer placements emerged as particularly important factor in Kagera because, although English is one of Tanzania's official languages, all volunteers and many KI respondents described language as being a key barrier to VSO Volunteers realising their full potential within the context of their placements (HSS\_MUG\_IDI004. VSO ex-volunteer), because patients expect care to be provided in Swahili or in other local languages. In Lindi, a number of KIs felt that GIZ/VSO volunteers need a long bedding in time to get used to the environment before they can begin to influence change, and therefore short-term placements are not very effective. Frequent handover between volunteers also creates some degree of disruption or lack of continuity when volunteers left (in some cases without a hand-over to another volunteer).

4. Volunteer briefing and support - In Kagera, several VSO Volunteers felt that they were thrown into their placement. For instance the VSO Volunteer Lab Technician described being the first VSO Volunteer in the laboratory. She was not sure what tasks she could legitimately take responsibility. She described a sense of bewilderment because it was difficult to obtain information and couldn't build on what other volunteers had done in the past. Other subsequent volunteers described not being provided with adequate briefing on the changes that had been introduced or attempted by the previous volunteer, in order to build on previous experiences and bring continuity. Volunteers reported facing resistance to change, particularly when trying to introduce change at a managerial level (HSS\_KAG\_IDI007). While they acknowledged the need to take things slower at the beginning of their placement, to be realistic with regard to their expectations for change and to invest in relationship building to promote change (as instructed by VSO during their in-country training), they felt that a more programmatic approach overall, and greater clarity about the changes expected and their contribution in relation to previous and subsequent placements would have helped them be more effective. A similar theme did not emerge in Lindi.

5. Partnerships - One VSO ex-Volunteer in Kagera, suggested that VSO should extend the kind of partnerships it cultivates. This KI suggested partnering with research centres; training

schools; colleges for laboratory services; and creating a network of hospitals (HSS\_MUG\_IDI004. VSO ex-volunteer). This seems to be a pertinent suggestion given that HSS Program placements appear to be fragmented and isolated without a coherent Health System Strengthening strategy underpinning these efforts. In Lindi, the strength of the partnership between VSO and GIZ was described as a factor for change.

6. Opportunities for further education - Finally, in Kagera, many KIs referred to further education not being offered to them in their work. In Lindi, this is included in the model of CPD delivery, particularly thanks to the GIZ partnership. VSO Tanzania may wish to consider offering further education in a strategic fashion to further enrol and engage partners in Kagera.

# 5.3.2 Assumption 2 – the programme directly contributes toward improving the health outcomes of service users

Considerations on impact are presented by project, since the model design is so different in each region.

## 5.3.2.1 Impact through NBLO

Positive improvements in health outcomes were reported.

An increased proportion of babies are being saved in the target health facilities. According to data reported in the NBLO Case Study, the ratio of deaths to admissions has decreased by 14% in St Walburg's Nyangao Hospital from 2010 – 2013, by 8% in Masasi Mkomaindo Hospita from 2011 – 2013, and by 28% in Sokoine Hospital from 2011-2013, (an average decrease of 17% between 2011 and 2013), as illustrated in table 2 below.

	St \	Walburg's			Masasi			Sokoine	
								<b>_</b>	<b>_</b>
Year	Admissions	Deaths	Ratio	Admissions	Deaths	Ratio	Admissions	Deaths	Ratio
2010	79	17	22%	84	n/a	n/a	n/a	n/a	n/a
2011	202	33	16%	616	120	19%	173	65	38%
2012	302	45	15%	1044	159	15%	436	38	9%
2013	542	43	8%	1183	128	11%	653	63	10%
Overal	l improveme	ent	14%			8%			28%

Table 2 – Admissions and deaths by target hospitals in NBLO areas (2010 – 2013)

n/a = not available

NBLO has also contributed to achieving a near-complete level of screening of babies using the NTC system. Data available from one facility (Nyangao) indicates that the proportion of babies screened increased from 80% in January 2013 to 97% in April 2014, and has seen consistent increases (no statistical significant test was undertaken).

The NBLO case study also reports a decrease in neonatal mortality rate from 35 deaths per 1,000 live births in 2011, to 22 deaths per 1000 live births in 2013, although this represents an increase from the 2012 level (20 deaths per 22 live births). This rate is lower than the average national neonatal mortality rate reported in the Demographic Health Survey in 2010 (41 deaths per 1000).

Evidence from key informant interviews and community perceptions supports the assumption that neonatal mortality is decreasing. Key informants reported decreases in mortality rates (both maternal and neonatal), and believe that neonatal deaths (especially those born prematurely and those born term with complications) have reduced because of and since the establishment of the NICU.

It is also worth noting that important concurrent and systemic changes have also been reported on by KIs, which are reported as playing a significant part in achieving the health outcomes. These include: increased levels of staff, particularly doctors and specialists; improvements of health facilities and dedicated services (e.g. CTC); outreach and extension services at community level; improvements of emergency referral systems; changes in health financing policies removing or minimizing financial barriers to access to health facilities from vulnerable community members. This demonstrates that VSO's contribution and potential impact is best understood in the broader health system context. In Lindi, VSO adopted a holistic model in health systems strengthening. The investment In CPD of health workers was part of a broader package of support, which also included support in operationalisation of existing policies and guidelines, investment in upgrade of premises and hospital facilities, set up of a specialist unit (NICU), outreach in lower level health facilities (dispensaries) in the catchment area of target hospitals, procurement of drugs and supplies and investment in strengthening procurement systems. Although there is no means of evaluating whether there is an association or causal relationship between VSO's programs and the change in mortality. the changes appear to be plausibly linked to NBLO.

Furthermore, the findings need to be treated with caution because of issues of data availability, quality and accuracy, which prevent validation of quantitative data reported in the NBLO case study. It is noteworthy that VSO has now got a new M&E framework in place, which was established in 2013. A new project logframe was developed, and monitoring systems introduced. Important progress has been made in improving routine data collection from target health facilities to enable better estimates of neonatal mortality. Some observations emerging from the analysis of data quality and accuracy are put forward with a view to contribute to further improvements in M&E:

- The reported neonatal mortality rate is the average neonatal mortality rate for Lindi region as a whole, but it was not possible to determine where these data originate from. No raw/disaggregated data has been provided, therefore it is not possible to validate the quality and internal consistency of this data, which reduces the credibility of the results.
- Using Demographic Health Surveys as the comparison data can be misleading, because DHS are undertaken only on a ten-year basis, and because they do not take into account the significant regional/zonal variations. A more useful comparison would be regional level data.
- There are inaccuracies in the data reported. For example, the number of (neonatal) deaths reported in the case study for 2013 in Nyangao is 43. The total number reported as the total in the NICU monthly monitoring dataset (e.g. the 2013 spreadsheet shared by VSO) is 53. Similarly, the number of admissions in 2013 reported through the NICU data for Nyangao is 526, and the one reported in the case study is 542.
- Because of these inconsistencies, it is not possible to determine how well the target health facilities are faring in comparison to the regional average (e.g. that they are comparatively better than the regional average, or indeed than other health facilities).

- The current routine monitoring system does not allow for a consistent analysis over time. For example, some indicators that were monitored in 2013, are no longer monitored in 2014. Some indicators are ambiguous (e.g. no. of babies saved), have no available data (e.g. referrals), or are not monitored consistently. In order to provide more reliable data for ongoing monitoring of performance, it is important that consistent and feasible monitoring systems are rolled out in all target facilities.
- The current monitoring system is not entirely aligned to the NBLO logframe (e.g. the indicators monitored through routine data collection do not mirror all indicators in the logframe), and therefore there are outcomes that are not being monitored.
- No baselines were provided at start or prior to the project, which prevents monitoring of performance over time.

## 5.3.2.2 Impact through HS

In the HS project in Kagera, objectives were placement specific and there is no overall clarity about which health outcomes at the level of the community the project is designed to improve.

In Kagera, partners' reports assert that there have been reductions in maternal and neonatal mortality rates (PMLT, 2013-2014). Key Informants also stated that maternal and general population mortality rates had improved. They included: a Nursing School Representative of Mugana Hospital (HSS\_MUG\_IDI002) and a VSO Volunteer Doctor. The Nursing School Representative proudly emphasised that Mugana had come first in the Lake Zone. There was only one maternal death in that year (HSS\_MUG\_IDI002, Nursing School Representative). Almost all community member respondents who accessed the services of Kagondo Hospital emphasised that maternal and neonatal deaths were reducing overtime. Improved mortality rates were thought to promote greater demand (HSS\_MUG\_IDI002, Nursing School Representative of Mugana Hospital).

Deliveries at Kagondo hospital were reported by health workers to have increased from 30 to 120 monthly in the last 3 years (HSS\_KAG\_IDI005). While this positive trend is plausible, it is not possible to verify the data. Nonetheless, Mugana's Health Management Team stated that maternal deaths are still high because people travel from far away to the hospital and arrive at the health facility late, which often results in maternal deaths (HSS\_MUG\_IDI001, Health Management Team).

The Regional Medical Officer confirmed that Mugana District Hospital has achieved significant reductions in maternal mortality, and reported receiving several requests from other hospitals to learn from doctors at Mugana. (HSS\_MUG\_IDI001, Health Management team).

Given the lack of quantitative data and fragmentation of the Hospital Strengthening intervention and the lack of a coherent set of objectives and intended outcomes, it is not possible to validate these claims, or plausibly attribute these changes to VSO.

# 5.3.3 Assumption 3 – the programme is sustainable in terms of longer-term impact

The evaluation defined sustainability in a broad sense. As well as intending "sustainable" changes as changes that are owned by programme partners, which is the dimension that was mostly highlighted by the VSO Tanzania team, the evaluation explored the extent to which and modalities by which VSO is contributing to advancing the implementation or the

development of relevant policies. This is consistent both with VSO Health Logframe in Tanzania and with VSO's CPD position paper and Theory of Change.

## 5.3.3.1 Sustainability of NBLO

In Lindi, health workers emphasised that many standards that were introduced by VSO remain after the departure of the VSO volunteer. For instance, hygiene practices, such as wearing gloves are now a routine component of health workers practice. Health workers reported regularly using and sharing with colleagues the lessons they learnt through VSO training. Health management teams reported adopting strategies to ensure learning is disseminated across a wide section of health workers, such as rotation of doctors trained, dissemination of guidance and learning materials (books), rotation of staff going for training; weekly sessions to share learning facilitated by local staff; involving district health workers responsible for supervision in training.

In a very small minority of cases, KIs felt that insufficient efforts were made to ensure a smooth handover between volunteers. These KIs felt that in some cases when the volunteer left his/her placement that the knowledge s/he had disappeared with him. For instance, KIs in Sokoine mentioned that equipment that was introduced by volunteers required restocking, and they had not been informed by the volunteer on how to order/replenish this equipment.

Overall, however, a high level of ownership of the changes introduced was found. For example, the systems and processes to monitor neonates and to identify cases for referrals, and the standard operating procedures to deal with emergencies were understood by a cross-section of respondents within health facilities. The fact that Standard Operating Procedures were developed with significant technical contributions from VSO and GIZ, adapting relevant guidelines from WHO, and are used as the framework for good practice in neonatal care, is a significant achievement in itself, as well as supporting the argument for sustainability.

Feedback from regional government was positive, and RHMT confirmed that this type of support is welcomed. According to VSO and its partner GIZ, the programme is working with the regional government to complement their plans and it intends to provide an example of best practice that can be taken up at national level. A Steering Committee for NBLO includes regional and district level authorities, and it is helping raise government officials' ownership of the innovations and changes introduced. VSO is currently in discussion with RHMT to replicate the approach in all other referral and district hospitals in Lindi. RHMT is guiding selection of next facilities to benefit from this approach, in line with the Comprehensive Council health Plan. For example, RHMT has requested that NBLO is implemented in Kilwa and Tandaimba hospitals, where indicators on neonatal mortality show limited progress. VSO is advocating at regional level, through attendance to regular quarterly meetings of health implementing partners in the region, that the Neonatal Triage tool is introduced to all health facilities, given that it is a simple and user-friendly tool, and that it has proved to be highly effective in triggering timely interventions to save newborn's lives. VSO is also engaged in regional level advocacy on the need for a more comprehensive support to neonatal care, stressing the continuum of care required between maternal and neonatal care; to this end, it is currently in discussion with other partners involved in provision of maternal care services to develop joint programmes and approaches.

## 5.3.3.2 Sustainability of Hospital Strengthening initiative

In Kagera, only one example was provided of how VSO has triggered a sustainable change: the Mugana Nursing School Representative stated that in Mugana skills taught to laboratory technicians by the VSO Volunteer Laboratory Technician lead to an increase in the number of investigations in lab which increased income and which allowed for an increase in investment in equipment which has increased the quality of lab services (Nursing school representative, HSS\_MUG\_IDI002).

However, in Kagera there was very little ownership of the changes - changes reported by volunteers were not validated by partners' narratives, which suggests limited ownership over those changes. On the contrary, KI narratives emphasised that the HS model encourages and promotes an unsustainable approach. Two VSO ex Volunteer indicated that partner organisations were operating with an important misconception. They accepted a VSO Volunteer on the basis that the volunteer would allow for a high level of quality of service delivery whilst saving financial resources. Rather than hiring a local with accompanying salary the Volunteer was provided for free. The same ex-Volunteer stressed that in some senses the placement of a volunteer encouraged a complacency among Health Workers and Hospital Managers that an outsider would maintain the quality of services indefinitely. This ex-Volunteer described a perverse promotion of mediocrity and reliance on VSO Volunteers. One ex VSO Volunteer Nurse Trainer (HSS\_MUG\_IDI004) described a frustration that she was so often asked to participate in service-provision making it difficult to invest sufficient time in training nurses (HSS MUG IDI004). Several respondents described a situation whereby a health facility becomes more popular and services uptake occurs because the medical specialist in the hospital is a white man who is considered to be a better practitioner.

In several cases the private assistance provided by VSO volunteers was conflated and confused with the work of VSO. For instance a doctor in Kagondo used to give money to patients who could not afford the service and honey and milk to children's parents if the child is malnourished (HSS\_KAG\_IDI005). In Kagondo, another volunteer was reported to have bought a sewing machine for a mother of a child who was HIV(+). In both cases, their generous and helpful act was conflated with VSO's program. This communicated to KIs and community members that VSO was on an ad hoc basis providing humanitarian assistance to vulnerable individuals. This perception might generate an expectation within the community that further acts of generosity will be forthcoming in an unplanned and ad hoc fashion, which is a less than sustainable fashion of programming.

Although the RHMT in Kagera welcomes VSO support, this is primarily constructed as gap filling in his narrative. The VSO Tanzania team also confirms that the HS project builds on historic partnerships for VSO, and there is relatively less involvement in strategic discussions with RHMT than there is in Lindi region.

There is also little evidence that VSO is helping improve a specific policy framework or helping implement policy, as is the case for NBLO. Efforts by volunteers to introduce international good practice on specific health procedures are not necessarily in line with national policy, and volunteers in Kagera largely saw national guidelines as a constraint to their work (because they are not up to date with the international good practice they would have wanted to embed in the partner hospitals). For example, a volunteer reported that the VIDAL test for typhoid, although not the recommended international standard, is still practiced widely because it is part of the national policy. Arguing against it, or advocating for a more effective test in these circumstances is not possible. (HSS\_KAG\_IDI\_002).

VSO volunteers advocate with health management teams and health workers to promote international best practice (e.g. use of vacuum delivery - now established practice-, c-Sections and use of misoprostol to induce labour – mentioned by one volunteer). This appears to be happening out of the volunteers' own initiative (they observe elements of care that can be improved, and act upon them), and not because of a coherent framework of action. With the exception of the volunteer discussing the VIDAL test, VSO volunteers did not refer to the policy context surrounding their advocacy at hospital level (e.g. whether the changes they were proposing were consistent with national policy, as well as being informed by international guidelines).

## 5.3.3.3 Advocacy efforts at regional and national level

VSO has recently begun implementing advocacy activities at national level, to complement the implementation of NBLO and HS project. For example, VSO/Tanzania (2012) generated a paper that captures the challenge for health providers in reference to funding delays associated with the "Health Basket Funds" (VSO/Tanzania, 2013). The "Health Basket Funds" are a financing mechanism utilised within the Tanzanian public health system. The need for this paper stemmed from an observation that partner health facilities faced significant challenges in drug supply, equipment maintenance and procurement, staff retention, outreach services and more. These challenges constrained the working environment of health workers, and affected quality of care and staff motivation. Several of these challenges were attributed by partner health facilities to delays in disbursement of Health Basket Funds (which for the faith-based partner hospitals is the only source of funds from the Tanzania health system).

Therefore, VSO undertook a small-scale qualitative review and documented the implications and reasons for funding delays. All hospitals that were interviewed as part of this assessment stressed that they ultimately received all funds earmarked for them but often the money was received 6 months after they were expecting the money. Given the unpredictable flow of funds to health providers there was a tendency to bunch activities in health facilities in the second half of they year which caused considerable strain on staff in facilities. The unpredictable funding created knock-on effects in the arena of medical supply chains and procurements systems. The report stresses that it is challenging to promote many healthseeking behaviours in the context of rural Tanzania including: HIV testing, vaccination, prenatal monitoring etc. When community members do present (often after very long journeys) and the hospital does not have required supplies for testing and treatment this tends to act as a very significant barrier to members of the community returning. This may lead to a lack of credibility by community members in the health facility or the patient choosing an alternative option (perhaps visiting a traditional healer). Staff members who are working in this environment describe feeling humiliated because they were not able to perform their role in a professional fashion according to the needs and expectations of community members.

According to the VSO Tanzania team, there was no clear advocacy strategy at that stage – however, the key recommendation emerging from the research (i.e. that the forms for partner health facilities to request and report on Health Basket Funds are simplified to allow for a smoother process) was discussed with key individuals in the Ministry of Health. VSO also attempted taking the issue to the donor group managing the Basket Fund, and liaised with another local NGO engaged in advocacy. Success is having the recommendation implemented has been constrained by changes in the Health Basket Fund management mechanism (the fund itself is currently being rediscussed by donors), lack of coordination in the donor group,

a relatively dismissive attitude from the Ministry of Health (e.g. VSO was told to go ahead and implement the recommendation, which would have been impossible given that the change required was at a level beyond the individual health facilities), and different perceptions of advocacy between VSO and other potential partners (e.g. the local NGO arguing for a more confrontational approach than what VSO would have proposed).

VSO is also currently considering its advocacy role and objectives at national level. There is potential to use Technical Working Groups (TWG) within the Ministry of Health and Social Welfare (MoHSW) – e.g. the Safe Motherhood Group – to advocate for a full scale up of NBLO. The HRH Strategic Plan is also currently under review, and VSO is in the process of building relationships to be able to participate in the HRH TWG, which is leading on its review. Although VSO experience of advocacy at national level is limited, this is considered to be a major improvement since the last 3 years. According to the VSO Team, VSO is now much more strategically focused, and as the example of Health basket fund research demonstrates, is beginning to use learning from project implementation to inform regional and national level policy. There appears to be potential to expand this area of work.

# 5.3.4 Assumption 4 – the programme is worthy of replication and scale up as a health systems strengthening approach

VSO contribution is particularly welcomed by Regional and District Health Authorities. For example, in Lindi VSO is being asked to scale up the NBLO approach to other priority facilities, and to step in to ensure continuation of support in Sokoine Regional Hospital when GIZ pulls out next year. The NBLO project is clearly perceived as a good contribution to health systems strengthening. While VSO took the lead in designing it, it worked closely with Regional and District Health Authorities, and was responsive for their requests for the project to tackle a range of health systems factors as well as CPD of health workers, for example procurement, community awareness raising, and capital upgrades to health facilities. This made the project more relevant to local needs and enabled significant impacts.

As for Kagera, while VSO contribution is also welcomed there, the perception that VSO helps to fill gaps and saves financial resources to the local health systems raises questions about the sustainability of scaling up and replicating the approach there. From an effectiveness point of view, and partly due to a lack of a clear project design and goals for activities in Kagera, it is not possible to conclude that VSO makes significant health systems contributions through the HS project.

The model of using volunteers to deliver CPD appears unique. When recruited in response to expressed needs, and supported and trained to implement specific objectives and changes, including implementing and developing standard operating procedures, as in the NBLO model, volunteers have been found to contribute greatly to improvements of clinical skills and clinical practice, changes in health management procedures which in turn helps raise quality of care, and boost demand for services, and ultimately improving health outcomes. In this respect, VSO CPD programme is comparable to other technical assistance programmes. The added value of using volunteers to deliver technical assistance is the long-term nature of the support (and KIs in both regions felt strongly that the appropriate length of placements should be longer than one year) and the fact that it is embedded in health facilities, and as such it provides locally relevant CPD packages. As articulated by VSO and confirmed by KIs, this approach exposes health workers to hands-on practical skills, which have often never been part of pre-service training and complement CPD offered by other partners, which generally entails one-off workshops. According to VSO, in comparison to these, the

embedded technical assistance of VSO volunteers does not disrupt service provision, as health workers are not taken away from their place of service, and enables the building and consolidation of skills over time. The model of using volunteers was also found to have a positive motivational role for health workers – not so much because the access to new skills is perceived by health workers as a motivating factor, but because VSO volunteers are perceived to be hard-working, dedicated, committed and not driven only by financial incentives (in striking contrast with the perceptions that KIs had of some of their colleagues). The NBLO model suggests that a combination of multiple approaches to skills development, including both on-the-job training/mentoring and classroom-style training appears more effective than an approach only focused on service delivery. It also suggests that CPD is particularly effective when framed in a specific set of skills and competences, which are driven by the implementation (and refinement) of specific and evidence-informed clinical guidelines (such as those related to management of neonatal complication or malnutrition).

Other technical assistance programmes also use embedded technical assistance through longterm consultants, but this is generally at the level of Ministry of Health or at best decentralized health authorities, not at the level of health facilities, where most of the challenges in policy implementation and service delivery are experienced. Other programmes in Tanzania also use long-term health volunteers, e.g. GIZ. Their terms and conditions (for example, the fact that GIZ volunteers postings are accompanied or family postings) were described by GIZ as more favourable and more conducive to long-term retention of volunteers. However, from discussion with VSO it is understood that GIZ are withdrawing their support in health in Tanzania.

Notwithstanding the merit of using volunteers for CPD, the analysis also suggests that CPD on its own is of limited value at the level of health facilities. Health workers and health management teams described several challenges and constraints in their work, which are summarised in the table below.

Health system	Challenge	Lindi	Kagera
factor			
Human Resources for	High levels of attrition	$\checkmark$	
Health	Difficult to recruit health workers to come to rural	$\checkmark$	
	locations		
	Understaffing resulting in overworked staff that	$\checkmark$	
	find it difficult to cope with patient volumes.		
	Limited staff available at weekends or evening		✓
	Lack of specialists	$\checkmark$	
	Health workers salaries not paid on a timely basis	$\checkmark$	✓
	which reduces morale.		
	No housing provided for health workers		✓
	Low levels of salary		✓
Drugs and supplies	Stockout of drugs	$\checkmark$	
	Inadequate replenishment of supplies		✓
	Stockout of reagents for lab		✓
Equipment and	Shortage of equipment	$\checkmark$	
premises	Overcrowing and cross-infection due to lack of	$\checkmark$	
	facilities		
Health financing	Facilities have insufficient funds.	$\checkmark$	✓
Governance and	Health workers and laboratory staff requesting	$\checkmark$	$\checkmark$

Table 3 – Health system challenges reported by health workers and managers

accountability / equity	payment for services ("corruption/bribery").		
	Mismanagement of hospital funds / theft	✓	$\checkmark$
	Patients reported to be receiving different		$\checkmark$
	standards of care depending on their willingness		
	to pay		

These challenges were also evidenced in other evaluations undertaken by VSO (in Ethiopia and Mongolia (VSO/Mongolia (2004); VSO/Ethiopia (2003)). In order to complement and promote the sustainability of VSO CPD approach, investing in addressing some of the structural and systemic factors affecting health outcomes appears important. The NBLO model has already done so effectively, while a rethink is required from this point of view for the Hospital Strengthening project.

A significant number of challenges relate to HRH more broadly. Given the window of opportunity presented by ongoing negotiations on the revised Human Resources for Health strategic plan, there appears to be scope for VSO to play a role in the redefinition of policies and decisions that will directly impact on its partner health facilities in the long run.

# Task 4 – Consolidating lessons learned and recommendations

# 5.4.1 Appropriateness of VSO CPD model

# 5.4.1.1 General remarks

Overall, the key **strengths** of the VSO model appear to be:

- Provision of CPD is embedded at facility level, enabling the design of context-specific CPD packages
- The support is hands-on. Embedded CPD also health workers to develop and consolidate clinical skills by practicing them (as opposed them in theory)
- VSO volunteers set a motivational example for colleagues
- VSO volunteers are welcomed and overall well received
- VSO volunteers catalyse important change (details in the conclusions on effectiveness)

The **weaknesses** observed are:

- VSO volunteers may be perceived as filling gaps in service delivery
- VSO volunteers have limited opportunities to influence sustainable change if placements are too short (less than 2 years)
- VSO volunteers that are not specialists or are too junior/inexperienced have limited chances to affect meaningful change
- Language is an important barrier to affecting change
- Placements can be perceived as supply- rather than demand-driven, unless there is ownership over the broader changes which VSO is contributing towards (as in the NBLO model)
- Handover from one placement to another can be challenging, resulting in fragmented and piecemeal intervention (especially in Kagera).
- The presence of volunteers can create perverse incentives (e.g. complacency of health workers for mediocrity; the presence of foreign doctors attracting more users, which could be detrimental to valuing national health workers)

- Professional isolation can be a barrier to volunteers' effectiveness unless they have an active counterpart and a support network of other volunteers

## 5.4.1.2 Appropriateness of VSO model to the national/regional policy context

VSO CPD approach is very relevant to regional health plans, namely the Council Comprehensive Health Plan in Lindi region. High ownership and participation of the RHMT in the design and oversight of the NBLO project is ensuring a close strategic fit with regional priorities, both in terms of issues targeted as well as geographic locations. The comprehensive package of support and the focus on referral system strengthening provided by NBLO is relevant to RHMT's goals of regional health system strengthening.

There is no evidence of a close strategic alignment of the HS project with RHMT plans in Kagera. There may also be unintended detrimental effects on the health system, e.g. the presence of foreign doctors driving up demand for services in private hospitals in a way that is not conducive to building a sustainable regional referral system or equitable for vulnerable groups).

At national level, VSO CPD model is highly relevant to the national policy framework regulating HRH development. It is consistent with key national level strategies including the Health Sector Strategic Plan, the "One Plan" and the HRH Strategic Plan 2008 – 2013, currently under review. So far, there has been limited involvement of VSO at the national level, although VSO profile has grown and its strategic positioning has improved in the last 3 years. There are significant opportunities for VSO to add value to national policy and decision-making processes using its experience and learning from the ground. Specifically, the national HRH policy framework is under review, which means that VSO has a opportunity to influence decisions that are:

- immediately related to CPD e.g. desired competency framework for different cadres of health workers, modalities and content of ongoing CPD provision
- related to HRH training and development more broadly, e.g. evidence-informed preservice training
- related to HRH management and planning e.g. ideal staffing levels for facilities at different levels of the health systems, packages and strategies to reduce staff attrition and promote deployment and retention in rural areas.

In Tanzania, the HRH policy framework is explicit about the need to address all three of these levels and the Government of Tanzania acknowledges its need to strengthen capacities for HRH management and planning. Historically, this is not an area that VSO Tanzania has focused on and relationships at central level are in their infancy stage. However, VSO has worked successfully at a national level in other countries, e.g. in Malawi, where it has worked with the Nurses and Midwives Council to develop the CPD curriculum, or in Sierra Leone, where it has helped define the competency framework for nurses to implement the Basic Package of Essential Health Care and is providing CPD accordingly. VSO may consider building on its advocacy experience globally to take advantage of the opportunities available in Tanzania to affect change at a systemic level.

## 5.4.1.3 Appropriateness of VSO CPD model to VSO strategic objectives in Health in Tanzania

NBLO is highly consistent with VSO Health goal of improving accessibility and quality of mother, neonatal and child health services. It has already proven its contribution to improving

neonatal health, and with a broader design to focus on a continuum of care from ante-natal through to child health, it has the potential to address VSO's aim in its entirety.

NBLO includes an emphasis on all three focus areas of VSO's programme, namely (i) health system management; (ii) health services training and (iii) community engagement and education. NBLO achieves this through: up-scaling and improvement of infrastructure within which health care and treatment are provided for neonates and mothers; ensuring more reliable replenishment and supply of essential drugs for neonates and mothers; improvement of clinical quality among health workers focused on neonates and delivering mothers; awareness raising among health workers that neonates are a target group requiring particular attention with special needs; engagement with mothers through promotion of correct and consistent ante-natal checkups for neonates born prematurely. VSO may want to consider a broader definition of community engagement, spanning beyond awareness raising to increased community participation in health care and management, which was identified as a relatively less effective area of the NBLO project.

Overall, the HS project in comparison to the NBLO project is exclusively focused at facility level. It is designed primarily to focus on strengthening health system management and Health Services Training. The HS project contributes to these achievements through: strengthening training of nurse students in nursing training schools; improving the quality of laboratory services; capacity building and quality improvements in the domain of clinical practices among health workers. The contribution to a specific goal area of the broader health programme is more tenuous.

# 5.4.1.4 Appropriateness of the VSO model in Tanzania to VSO global CPD approach and Theory of Change

The strategies employed by VSO Tanzania in the two projects under review are broadly in line with key pillars identified by VSO global position paper as essential for sustainable CPD. While it is understood that no country programme or even project will contribute entirely to VSO position and approach to CPD globally (as the global approach is the synthesis of various context-specific experiences), the following observations can be made to promote further alignment:

*Invest in professional associations and training institutions.* VSO has provided support to Mugana Designated District Hospital and Nursing School in Kagera, but so far there has been at no coherent investment in professional associations or training institutions, which the programme may want to consider.

*Provide evidence of effectiveness* –evidence on NBLO effectiveness in Lindi is beginning to be used to advocate for a scale up of this approach in the region and nationally, but the M&E framework deployed to measure change within NLBO is not sufficiently robust to provide solid evidence of effectiveness. There is no scope to measure effectiveness given the dearth of data relating to HS project. The VSO team highlighted the need to do more to systematize and strategically disseminate learning and successes.

*Support localization of training* - Training within the VSO/Tanzania program is highly localized. Training takes the form of 'on-the-job' guided supervision, collaborative approaches to learning during ward-rounds and routine action and supervision feedback loops. This is a strength.

Supporting multi-disciplinary approaches - both NBLO and HS projects are highly multi-

disciplinary. Volunteers have worked in the following domains: supporting the establishment of neonatal focused NICU unit and standards; improving clinical quality of MNCH services; establishing new services within the arena of pediatric malnutrition; supporting reform of HR, finance and management systems; improving the quality of training for nurses; improving the quality and functionality of laboratories. In NBLO, the multi-disciplinary approach clearly targets specific health outcomes, while in HS project multi-disciplinary inputs are fragmented in both design and implementation.

Supporting innovation – the NBLO model has inspired partners to conceptualise newborns as a target group that require special attention, care and treatment. Evidence-based innovations in the treatment and management of newborn conditions have been promoted. VSO and GIZ have jointly established NICUs in three partner facilities in NBLO program areas and have promoted and supported the rolling out of the Newborn Triage Checklist (NTC) in NBLO program areas. This was not in existence in these facilities before and constitutes an effective framework/set of standards to achieve better care and treatment. In HS areas, VSO Tanzania has established a multitude of standards, processes, quality assurance measures and visual monitoring methods to improve quality and reliability of laboratory tests; it has also promoted simple yet effective payroll and finance management systems.

Other aspects that are considered essential to the effective development and maintenance of CPD at national level are not operationalised by the current model (e.g. building HR capacity in human resource planning; promoting job descriptions - one placement contributed to job descriptions, but as a one-off endeavour; supporting Human Resource Information System; supporting the development of a CPD policy). However there are clear opportunities for VSO to expand its scope and operationalise further elements of its CPD approach and Theory of Change (which is in itself a strongly evidence-based position), particularly through regional and national level advocacy, which is theorized to be a key component in the trajectory to sustainable changes. (A matrix documenting the alignment between the reviewed approaches and the Theory of change is in Annex 9).

# 5.4.2 Effectiveness of the VSO model

# 5.4.2.1 Effect on health workers' clinical skills

In NBLO project area there was a significant focus on improving clinical skills that relate to the core strategic emphasis of NBLO-Neonates. The key improvement of health workers clinical skills in NBLO program areas relates to the radical reorientation among health workers that neonates are a group that require special attention and have specific needs and vulnerabilities that require particular clinical skills and approaches.

In the HS project, respondents referred to learning, improving and building upon existing clinical skills, for example the use of vacuum for delivery, C-sections and basic procedures such as measuring temperatures and taking vital signs. Significant clinical improvements occurred in laboratories where VSO volunteers worked, for example testing of lab specimens was subjected to quality assurance and controls.

There is no significant difference in the quantity or breadth of clinical skills developed in HSS and NBLO areas. The key difference lies in the thematic focus and strategic coherence of the clinical skills developed within those programmatic frameworks. HSS is essentially a set of interventions to improve clinical skills that have no thematic orientation. Lab and medical clinical skills that are developed are not focused on one specific target group. Skills developed

are beneficial within the MNCH domain but also for the general population. It is difficult to argue that they would benefit vulnerable groups within a given population. Interventions on HIV/AIDS care, for example the improvement of confidentiality of the CTC unit, appear a one-off. Conversely, the NBLO project has a very clear strategic emphasis on newborns and mothers. Clinical skills developed in NBLO are a constellation of skills, which speak to objectives that focus particularly on newborns and delivering mothers.

# 5.4.2.2 Effect on other dimensions related to health workers' performance (e.g. morale, motivation, attitudes towards patients)

In both projects VSO volunteers are perceived to have been a motivational presence for colleagues because of the example they set. Motivation levels were found to be generally high, but not improved as a result of the improvement of skills and clinical capacities did not translate in increased staff motivation for health workers. Other factors, such as levels of staffing, remuneration, housing and financial incentives, played a more critical role for health workers' motivation.

In both projects areas, there is a pervasive attitude of lack of respect and chronically bad health worker-patient rapport in many instances. Many patients describe being shouted at, abused and generally ignored by health workers. This has not changed dramatically as a result of VSO presence.

In both program areas, VSO volunteers are thought to be a key catalyst for increase service uptake and demand, primarily because they are perceived to have sophisticated skills that constitute global best-practice.

However, only in NBLO transformative processes were observed. Health workers in NBLO project areas described significantly greater levels of confidence in patient management as a result of the NBLO project intervention than was discernible in HSS areas. Significantly, nurses and junior health workers felt more empowered to initiate care and treatment with newborns (within the parameters of their job responsibilities) in the event that overstretched doctors were not available to commence consultation, diagnosis and treatment. Task-shifting was effectively promoted, and the regional referral systems was strengthened as a result. In HS project areas, improvements in specific skills are reported about specific individuals, but are not observable across a broad selection of health workers and do not appear to have triggered changes in the organization of care.

# 5.4.2.3 Effect on health care management systems (e.g. financial/HR systems, standards and processes)

Improvement of standards and processes was a consistent emphasis of VSO Volunteers activities in both program areas. In NBLO areas, the rolling out and institutionalization of the NTC provided a guideline for newborn monitoring, supervision and care and treatment. VSO initiated and generated ownership over SOPs which provided guidance and protocols for care of newborn. Forms were introduced in OPD form to document data of relevance to children. Staff HR filing systems were improved. Laboratory quality assurance guidelines standards were formulated, rolled-out and enforced. Standards for the targeting of poor people were introduced. A payroll system was automated and streamlined.

In HS areas, a range of standards and procedures were introduced or built upon. Charting of medical records was standardized and enforced. There were improvements in lab protocols

and standards in the domain of quality assurance, testing consistence and testing procedures. The project was responsive to partners' priorities. However, the HS project did not provide a framework for holistic and coordinated organizational change in response to a specific population need.

# 5.4.3.4 Effect on patient satisfaction and service utilization

In both project areas patients are dissatisfied with similar facets of the health service, namely health workers' attitudes and communication style; being asked to pay "fees"; hospital waiting times and overcrowding. Positive aspects of their interaction with care providers were also emphasized:

- In many hospitals receptions processed patients efficiently and politely.
- In many care seeking incidents patients felt that the step from registration to consultation to treatment was rapid and efficient.
- In many incidents health workers were polite, respectful, helpful.
- In the majority of cases patients received the medical attention they required and reported their health problems/issues being solved.

In all cases community respondents described marked increases in the quality of maternal and newborn services, and the concomitant increases in uptake among newborns and mothers. KI's particularly emphasized the improvement in newborn care and service uptake in NBLO areas. In NBLO areas qualitative narrative echo the quantitative data concerning mortality, morbidity and attendance provided by partners to VSO (secondary data). However, VSO was not able to share raw data pertaining to these indicators with the evaluation team, so these data could not be quality assured.

In both project areas, health workers' attitudes towards patients remain a concern of community members, and should be addressed more explicitly by the project design.

## 5.4.2.5 Effect on community engagement and accountability

Across NBLO and HSS program areas this is a weak component of the VSO approach. VSO volunteers focused very little time in implementing initiatives, which promoted greater levels of voice, agency and engagement by community members. VSO played a part in outreach services in NBLO areas, both this was mainly focused on awareness raising and health education to promote service uptake, rather than to increase community engagement in health management. The main focus of VSO appeared to be on changes (HR, Admin, Management) at the level of health facilities, and only indirectly on communities. VSO does not undertake substantial behavior change communications, or community mobilisation and advocacy activities to promote community engagement.

Many community representatives described a tense relationship with health workers in which health workers typically instruct patients what to do. If patients ask questions, provide providers with feedback or in anyway criticize the health system the response of health workers is either to ignore patients or to abuse them. Many community representatives interviewed felt that community engagement governance structures were essentially ignored and sidelined by hospital management. Issues of governance and accountability (e.g. corruption) continue to represent a major barrier for community engagement in health.

## 5.4.2.6 Impact on health outcomes

In Lindi, there is an indication that NBLO may be contributing to reductions in neonatal mortality. The lack of robust quantitative data and the lack of a comparison framework limit the strengths of evidence.

In Kagera, there is a perception that maternal mortality rates are improving, but it is not possible to associate these changes to the Hospital Strengthening initiative.

## 6.4.3 Sustainability of the VSO model

In both project areas the emphasis has been on improving quality, improving clinical skills and knowledge, implementing and rolling out changes in standards and processes and improving quality assurance in laboratories. There has been less emphasis on HR, transformations in management, finance and broader policy-level change. Furthermore, there has been no emphasis on transformation at the governance level (i.e. promoting accountability).

The changes in quality, quality assurance and clinical skills have been observed to have improved the quality of services. This has catalyzed significant increases in service uptake, referrals to the hospital and reductions in mortality. This has been motivating for health workers and management and may reinforce a continued trajectory of change, which will be sustainable without the interventions of VSO volunteers.

Overall, NBLO appears a more sustainable approach.

In HS areas, many initiatives are focused at the functional or departmental level. They are not focused at the hospital or broader health system unit level. This approach to change does not promote change at a facility or broader health system level. Whilst individual functions or departments may improve and perform better if there is staff turn-over or changes are not implemented on a routine basis because of unsupportive management, poor supervision, lack of funds it is evident that the sustainability of project activities may be compromised.

On the contrary, NBLO endeavours to identify a theme or a population group in particular need (newborns) and orient interventions (skills development, clinical training, equipment inputs, infrastructural improvements) around this particular orienting theme. Whilst NBLO has required the assistance and interventions of GIZ and VSO to be established, it is evident that there is considerable momentum within the NBLO program area. Nurses and junior health workers are motivated and enjoy the experience of task-shifting. Community members have responded well to the new project focus and are reporting higher attendance. The NBLO program comes with a coherent set of procedures, standards and clinical approaches which work in concert with one another and provide a sense of coherence to the clinical practices and activities of health workers. Health workers in NBLO program areas have a clear idea what the objectives of their newborn activities are. They have a common understanding of the rationale of standards, protocols, tools and how to implement clinical activities using these standards, equipment within the improved infrastructure provided within the NBLO program. The level of ownership generated by NBLO among health workers, health management teams and the RHMT and the ongoing efforts to advocate for replication of NBLO approach in other health facilities in Lindi are all conducive to sustainability. NBLO also addresses a more holistic set of health systems factors impacting on health workers' performance and service delivery.

## 6. Conclusions and recommendations

In summary, against all the key dimensions reviewed (appropriateness, effectiveness and sustainability), the NBLO model appears more worthy of replication and scale up than the HS project. This is due to three key factors:

- the focus on a specific issue provides a more coherent approach for CPD and fits more consistently with local health needs and priorities;
- the explicit promotion of standards and adoption of clinical protocols domesticates international best practice and promotes transformative change in management systems and organization of care.
- the adoption of a systemic approach provides the springboard for holistic strengthening of the regional health system.

It is therefore recommended that VSO gradually shifts to a "projectised" NBLO-type approach in the implementation of activities funded by its own resources. As it does so it is recommended that VSO retains key features of its traditional approach:

- the use of volunteers, which is at the core of its business operations, but also valued for its tangible and intangible contributions;
- the partnership approach at facility level, which is often overlooked by other technical assistance or health system strengthening programmes
- the flexibility, responsiveness and innovation that come from volunteers being enabled to take the initiative to identify and respond to needs as they emerge.

It is also recommended that VSO improves on the NBLO model as follows:

In placement design

- ensure all placements are demand-driven and clearly understood by partner organizations
- ensure that health volunteers are highly qualified, experienced / senior professionals and are engaged in long-term placements
- invest more in language skills development in country
- promote further networking and coordination among health volunteers working towards the same project goals

In project design and implementation

- make available relevant policies, protocols, procedures and competency frameworks to inform design of context-relevant CPD training and approaches
- invest more in improving health workers' "soft" skills (e.g. interpersonal skills, attitudes towards patients)
- consider direct initiatives or the development of strategic partnerships to promote greater community engagement in target health management structures and greater accountability from service providers

In project monitoring and evaluation

- significantly invest in the development of a more solid and outcome focused M&E framework to allow ongoing monitoring and mapping of outcomes and impact:
  - streamline the existing NBLO monitoring system, to align indicators against which routine monitoring data is collected to NBLO outcomes
  - o define consistent and unambiguous indicators

- improve routine health monitoring data gathering from counterparts in target health facilities to prevent delays and to allow for accurate computation of neonatal mortality rates
- $\circ$  develop and establish a project baseline against which progress will be monitored
- allocate sufficient staff time and resources to M&E, and build on the existing capacities for M&E in the team.
- consider population-based surveys to capture trends among population members who do not use facility services.

At programmatic level

- develop a clear advocacy strategy to promote the scale up of NBLO in Lindi and at national level (and review the extent to which advocacy on health financing fits this purpose)
- invest in partnership building within the Ministry of Health, health professional institutions and other civil society partners to shape the HRH context in Tanzania in line with the explicit focus of the CPD global position paper.
- consider using evidence gathered from projects (particularly NBLO) for more coherent advocacy efforts at regional and national level, in line with VSO global CPD approach and Theory of Change.

## Annex 1 - Evaluation questions agreed at inception phase

The evaluation questions agreed with VSO were as follows:

#### Task 1: Outlining the context

- What is the national context/landscape on CPD in Tanzania?
- What CPD is being delivered within the initiatives identified for this study and what methods are being used to deliver CPD?
- What are the common approaches and key differences in delivery of CPD between the project approach to CPD used in Lindi with the No Baby Left Out (NBLO) project and the more traditional VSO Hospital Strengthening Programme, implemented in Kagera region?

## Task 2: Gauging outcomes and impact

Note: This will be mostly understood through retrospective accounts generated through qualitative approaches.

## a) Health workers and managers within the selected partner organization

- What (positive or negative, intended or unintended) changes have occurred at the level of Health workers and managers within the selected partner organizations as a result of the CPD support received, according to recipients and providers of the CPD support?
- Have any (positive or negative, intended or unintended) changes occurred in: clinical skills; management of health facilities; attitudes towards service users; morale and motivation, as a result of the CPD support? What examples can be provided?

## b) Health service users of the selected partner organization

- Has the CPD support improved patient satisfaction and service utilisation?
- What are the key changes in health services and health status perceived by service users?
- How is VSO perceived to have contributed to these changes?

## c) Selected partner organization

- What are the most significant changes brought about by the CPD support to the partner organization?
- To what extent has the CPD support helped the partner organization to:
  be more responsive to need?
  - widen the range of services offered?
  - provide a more accessible and quality service to its service users?
  - improve its reputation regionally and nationally?

## Task 3 – Assessing the value of VSO's CPD model / testing VSO assumptions

Specific evaluation questions were developed under each of the assumptions, as follows:

Assumption 1 – the programme is welcomed and valued by partner organizations and the health workers in Tanzania

- Does the model of placing skilled health volunteers within the selected health facilities to build the capacity of health workers fit with relevant national and regional strategies?
- How has the VSO CPD model been understood by partner organizations, health workers and target beneficiaries?

• Do partner organizations, health workers, target beneficiaries and policy makers welcome and value the programme? Why/why not?

Assumption 2 – the programme directly contributes toward improving the health outcomes of service users

- To what extent does the No Baby Left Out Initiative contribute to improving health outcomes in Lindi?
- To what extent have the volunteer placements met their intended outcomes in the Health Systems Strengthening programme?
- o How are these placements perceived to have had an impact on health outcomes?
- What conclusions and assumptions can be made on the pathways that led to such changes?

Assumption 3 – the programme is sustainable in terms of longer-term impact

- Where advocacy and policy processes have been influenced as a result of the programme, how was this achieved?
- What challenges were encountered in sustaining changes introduced by VSO beyond the volunteer placement at the level of health facilities?
- To what extent has learning from the CPD intervention helped inform advocacy and policy processes at the hospital level or at regional/national level?

Assumption 4 – the programme is worthy of replication and scale up as a health systems strengthening approach

- How does the programme contribute to health system strengthening?
- How do policy makers and development partners view VSO's contribution to health system strengthening in Tanzania?
- What key elements of the programme are worth scaling up?
- $\circ$   $\;$  How does VSO's approach compare to other models for CPD delivery?
- How does the implemented CPD approach operationalise VSO's global position paper on CPD?

#### Task 4 – Consolidating lessons learned and recommendations

- What conclusions can be drawn about the strengths of the VSO CPD model? What are its perceived weaknesses/areas for improvement?
- If transformative processes were set in motion, what made them possible? What challenges were encountered and how were they overcome? What lessons can be learnt for replication and scale up?
- How does the project model of NBLO compare to the Health System Strengthening programme in relation to appropriateness, effectiveness, sustainability and replication potential?
- What do the findings from the evaluation indicate about the relevance and effectiveness of the CPD for health outcome improvements, as described in the theory of change?
- What lessons can be learned about the way VSO monitors its success in Tanzania?

## Annex 2 – Literature review search strategy

Two search engines were used to access journal databases. Ovid Medline and Google Scholar were used to explore available literature using key search terms. Six keyword combination searches were employed. They include:

- "Continuous Professional Development Health".
- "Continuous Professional Development Health Africa".
- "Continuous Professional Development Health Volunteer".
- "Continuous Professional Development Health Tanzania".
- "Continuous Professional Development Health Kenya".
- "Continuous Professional Development Health Uganda".

Searches were included for Tanzania's regional neighbours as well as Africa more generally to explore experiences with Continuous Professional Development (CPD) in geographically comparable locations and contexts.

The table below presents the number of references generated by the searches and the number of journal papers selected for detailed literature review.

Search keywor	Search keywords					Number	of	papers
				references		selected	for	detailed
				generated		review		
"Continuous P	rofessional Dev	elopment Health	".	955		16		
"Continuous P	rofessional Dev	elopment Health	Africa".	18		6		
"Continuous	Professional	Development	Health	10		0		
Volunteer".								
"Continuous	Professional	Development	Health	1		0		
Tanzania".								
"Continuous P	0		0					
"Continuous	Professional	Development	Health	2		1		
Uganda".								

In addition to this, VSO additionally provided a sample of papers and reports to include in the review. They included evaluation documents from other countries where VSO works, research and advocacy papers pertaining to CPD and health workers. They also included documents related specifically to the health policy context in Tanzania.

The literature review was implemented within a limited timeframe and is therefore neither systematic nor complete. Moreover, the evaluation team found that the vast majority of literature concerned with CPD available through search engines had a largely 'western' and developed country-focus. There was very limited literature available for Africa, with the exception of the South Africa context.

# Annex 3 – PEER selection and engagement strategy Excerpts from relevant parts of the inception report (21<sup>st</sup> May 2014)

## Principles and criteria for selection of Peer Researchers and Peers

An evaluation team that is doing an evaluation of VSOs program would like to recruit two kinds of people to support in the study.

First, we would like to recruit Peer Researchers. Peer Researchers will attend a short training course provided by VSO, have a few conversations with people like themselves who are their friends or acquaintances, and then have a conversation with someobody in the VSO team about what was discussed. The focus of the conversation will be experience of using health services supported by VSO or experiences of not being able to access those services and choosing other solutions.

We would like that people who approach VSO's evaluation team to play this role are:

- Interested in helping VSO improve its support to <health facility> by having better information.
- Like speaking to people in their community about their problems and how they solve these problems.
- Are willing to come to a short two hour training course.
- Are willing to have an informal conversation with a friend or acquaintance.
- Are willing to come and talk to a VSO evaluation team researcher about this conversation.

The Peer Researcher will be provided the following:

- Travel expenses.
- Refreshments.
- A small stipend.

Second, we would like the Peer Researchers to recruit Peers. Peers are normal people in the community who are friends or acquaintances of the Peer Researchers. Peers must be:

- Willing to speak to a Peer Researcher about this issue.
- Given their oral consent to participate.
- Inhabitants of the area of study.

Peer Researchers will not receive any incentive for participation in the study.

## **Engagement strategy**

One of the major risks in the conduct of this evaluation is that interviewees will not be adequately engaged in the process, and not available for the interviews. Therefore, the Evaluation Team proposes to begin engagement of interviewees as soon as possible. It is assumed that VSO will facilitate engagement of interviewees. An information sheet and peer recruitment sheet have been drafted (annex 6 and 7) to aid engagement of partners and communities, and feedback is recommended to be provided well before

In engaging respondents, it is proposed that VSO Tanzania supports the process as follows:

In relation to PEER:

1. In addition to the information sheet, VSO disseminates to community health representatives receive a handout with the key criteria for PEER recruitment evaluation (Annex 7).

2. the VSO team (volunteer or Managers) work with the community health representatives to select peer researchers based on the criteria. Other relevant groups to tap in to recruit PEER participants may be women's groups, patients' groups, youth groups/clubs.

3. They provide names and telephone numbers (if available) of the selected individuals in each location to the TL/FR

4. The FR contacts the recruited peer researchers, confirms the dates for PEER process and terms of engagement (voluntary, level of stipend, ceiling for travel expenses, refreshments to be provided during training and debriefs).

5. VSO introduces or makes links between the FR and the community health representatives, and helps address logistic details of the PEER process (when he is on site).

# Annex 4 - Evaluation sample

	Lindi		Kagera		Dar es	Salaam	
Stakeholder type	IDIs	No.	IDIs	No.	IDIs	No.	TOT.
	held		held		held		No.
Health Management	4	12	2	5	-	-	17
teams							
Health workers	4	10	1	3	-	-	13
Community	2	2	2	2	-	-	4
representatives							
RHMT	1	1	1	1	-	-	2
VSO volunteers	1	1	3	3	-	-	4
VSO ex-volunteers	-	-	2	2	-	-	2
Other VSO partners	1	1	1	1	-	-	2
(GIZ and Mugana							
Nursing School)							
VSO staff	-	-	-	-	2	4	
IDI sub-total	13	27	12	17	2	4	48
PEER	Researc	Respo	Resear	Respo	-	-	
	hers	ndents	chers	ndents			
Community	3	8	2	5	-	-	13
members – non-							
service users							
Community	6	16	4	13	-	-	29
members – service							
users							
PEER sub- total	9	24	6	18	-	-	42
TOTAL overall		51		35		4	90

# Annex 5 - Quality assurance, data management and analysis

PEER tools were piloted in Dar es Salaam, at a "mock" PEER session held prior to the Field Researcher's departure to the field. The "mock" PEER involved 4 female community members recruited through the Team Leader's network. This did not produce any change in the tools or handouts, but ensured quality in facilitation of PEER sessions. Daily debriefing between the Field Researcher and Team Leader allowed tailoring of PEER sessions to each context and troubleshooting. Interim analysis of data from 2 PEER sessions was used to improve data quality (specifically, probing positive experiences of care more in-depth).

Data from In-Depth Interviews (IDI) was collected through computerized written notes, completed by the Field Researcher and quality assured on a regular basis by the Team Leader. The Evaluation Technical Lead also undertook a second quality review of randomly selected sets of notes. Notes were allocated a Unique Identifier Number and filed by project site.

IDI notes were coded by a qualitative Research Assistant (not originally included in the evaluation team but engaged to allow adherence to the timeline and supervised by the Evaluation Technical Lead), according to a coding framework developed by the Evaluation Technical Lead and Team Lead. Additional codes were added as the analysis progressed. Data was summarised into a coding dictionary in MS Excel. This was analysed jointly by the Team Leader and Evaluation Technical Lead, who were in regular communication to ensure a systematic and coherent approach.

Narrative data from peer researchers was collected by the Field Researcher in debrief sessions held the day after the PEER training session, which discussed the key stories, points and dialogue remembered by the Peer Researcher. Data was computerized by the Field Researcher, and assigned a unique reference number. Data was quality assured by the Evaluation Technical Lead, and summarised into a MS Excel PEER analysis matrix, which was analysed thematically by the Evaluation Technical Lead and Team Leader.

The literature review and secondary analysis was undertaken by the Evaluation Technical Lead according to the evaluation analytical framework (e.g. evaluation questions) and with close oversight by the Team Leader. These analyses were written up in note form for internal use, which were discussed via email at various points between the Evaluation Technical Lead and Team Leader. This ongoing communication ensured the comparison of different perspectives and ideas, and helped reduce bias and improve reliability of analysis.

## Annex 6 - Reference list (in alphabetical order)

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# Annex 7 – List of volunteer placements in Hospital Strengthening initiative

No	Name of	Partner	Title	SOS	EOS
	volunteer				
1.	Jodie Bamforth	St. Joseph	Laboratory	03/02/2013	05/01/2015
		Kagondo	Technician		
2.	Sjoerd Steendijk	St. Joseph		02/02/2013	1/11/2014
		Kagondo	Medical doctor		
3	Evelyn Wasilwa (	Based at Rubya	Human Resource	08/02/2014	06/08/2014
	Working in 4		Advisor working		
	hospital)		in all 4 faith based		
			hospitals		
			supported by VSO		
			in Kagera		
4	Erin Freeman	Kagondo	Human resource	03/02/2013	18/07/2014
		hospital	Advisor		

## CURRENT VOLUNTEERS

## **EX VOLUNTEERS**

5.	Kirsten Van Noord	St. Joseph	Medical doctor	01/01/2012	1/07/2013
		Kagondo			
6	Neil Hubiera	Mugana	Laboratory	1/04/2012	2/03/2014
			Technician		
7	Luz Delipillar	Mugana	Nurse Tutor	03/04/2013	02/03/2014
		nursing school			
8	Sjoerd Van Setten	Medical doctor	Kagondo hospital	2/07/2013	13/01/2014
9	Cees Weel	Kagondo	Medical doctor	20/07/2010	January
		Hospital			2013.

## Annex 8 – Range of activities implemented in Hospital Strengthening initiative

In HR

- Assess and make recommendations to improve Human Resource Management.
- Meetings with key government and health management counterparts to promote good HR practice.
- Coordination of exposure visits by Admin staff to other hospitals to learn about HR and admin processes elsewhere.
- Implementation of Human Resource Needs Assessments to guide HR strategy recommendations.

#### In M&E

- Assess and make recommendations to improve data management.

In strengthening health worker clinical skills

- Assess and oversee training/capacity building to improve nursing skills and service standards.
- Presentations to doctors to improve clinical skills/best practice.
- Encouraging learning through ward rounds with volunteers.
- Training on x-rays, medical investigations and diagnostic tools.
- Support to the hospital management team in the overall running and effort to improve care and services in the hospital.
- Assess the capacity building needs of clinical officers and nurses.
- Train clinical officers and Assistant Medical Officers.
- Do ward rounds and be responsible for the care of medical in-patients.
- Build up the skills of staff of the medical and nursing team of the hospital.
- To share in medical on-call duties for general hospital patients as agreed and scheduled.

In Standards and processes

- Assist the Medical Officer In-Charge and the members of the management team in the development of local protocols and implementations of national guidelines.
- Audit clinical care, suggest improvement strategies to the Medical Officer In-Charge and ensure their implementation at clinical level.

For the Laboratory

 Provide guidance on management of the laboratory department, build technical capacities within the lab and provide guidance on the optimal linkage with other departments.

## In Outreach

- Participation in outreach together with health workers (focusing on malaria and HIV prevention)

In Nurse training

- Capacity building of nurse students
- Classroom-based teaching of nurse students.
- Supervision of nurse students in the surgery ward of Mugana Designated District Hospital

- Orientation of the first year nursing students.

# Annex 9 – VSO CPD model in Tanzania in relation to VSO global Theory of Change.

Theory of Change block	Contributions of reviewed approaches
INTERVENTIONS	
BUILD CAPACITY Work with partners to improve operational practices & the delivery of existing health, HIV and AIDS projects and programmes	Strongly evidenced in the area of health (particularly neonatal, and to some extent maternal health and general hospital care)
ADD CAPACITY Work with partners and communities to design and pilot new health initiatives, new partnerships and promote active citizenship	Strongly evidenced by the NBLO project in all dimensions except the promotion of active citizenship.
ADVOCATE FOR CHANGE Conduct health, HIV and AIDS research, build alliances and engage with national and international institutions and policy processes	Limited evidence. Some efforts around health financing, but a one-off initiative. Advocacy lacks a coherent strategy linking project implementation to broader regional, national and international decision-making processes.
OUTCOMES	
MORE EFFECTIVE HEALTH MANAGEMENT More effective public health institutions	There is strong evidence in support of this, particularly in relation to NBLO model.
EMPOWERED INDIVIDUALS - More skilled, motivated and confident health professionals and community health volunteers	Strong evidence in relation to health workers' empowerment
- Communities more aware of rights and duties concerning health, HIV and AIDS.	Some examples of contributions to awareness raising through outreach in the NBLO project, but focused more at health education that rights and duties.
STRONGER COMMUNITIES -Stronger networks of health, HIV and AIDS civil society organisations.	Evidence points to increase in service uptake and demand, but not adequately corroborated by quantitative data.
providers and the wider community.	Moderate but conflicting evidence on the effect on health workers' attitudes towards and relationships with patients
	No clear engagement in strengthening CSO networks.
	No evidence of VSO contribution to the promotion of community involvement in health management e.g. Hospital Boards
IMPROVED DELIVERY OF HEALTH SERVICES More accessible, better quality of health, HIV and AIDS service delivery	Improved quality of health services was observed. Attribution to VSO is problematic, and it is more plausible for NBLO than HS project.
	No significant evidence of improved delivery of HIV and AIDS services.
	Improved accessibility is a result of improved quality, rather than as a direct outcome per se.

INCREASED VOICE AND INFLUENCE	Some efforts documented, but no coherent
Health professionals, local health volunteers, and	strategy or goals for advocacy on health workers'
community members have greater influence in	needs
health planning and policy	
GREATER ACCOUNTABILITY	Some evidence on health workers' and managers'
Health ministries and service providers are more	responsiveness to health users' needs at facility
accountable and responsive to the needs of	level, but it remains a challenge. No evidence of
health workers and service users	efforts directed to or resulting in greater
	accountability at the level of MoH.
BETTER POLICIES	Main observed improvement in development and
Improved design and implementation of health,	implementation of protocols for neonatal care, in
HIV and AIDS policies	Lindi.
	Opportunities for more coherent advocacy for
	policy-influencing.
IMPACT	
Marginalised children, youth and adults realise	Newborns in Lindi are targeted as a distinct
their full potential, have a choice, voice and	patient group having previously been given
control over their lives and access to basic	comparatively less focus.
maternal child, sexual and reproductive services	
including HIV and AIDS.	