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Malawi Case Study

How health system strengthening efforts have affected maternal health

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Contents

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Prologue

The health and well-being of women in a society is often reflective of many levels of societal progress, including health, education, and legal frameworks. In the case of Malawi, a southern African nation of approximately 13.3 million people with a Human Development Index rank of 160 out of 182 (Klugman, 2009), the maternal mortality ratio (MMR) has been the bellwether of a health system facing challenges. From 1992 to 2000, the MMR rose 80%, from 620 to 1120 maternal deaths per 100,000 live births (National Statistical Office and ORC Macro, 2001). Over the following six years, data indicates that it slowly declined, with the 2004 Demographic and Health Survey (DHS 2004) reporting a MMR of 984 per 100,000 live births (National Statistical Office and ORC Macro, 2005), and the 2006 Multiple Indicator Cluster Survey (MICS 2006) survey reporting a ratio of 807 (National Statistical Office and UNICEF, 2006). The MMR is currently expected to have declined to the 1992 levels. This will be confirmed by the ongoing DHS, the fieldwork of which will be completed in October 2010.

During this period, general government expenditure on health has increased from 7.3% in 2000 to

Two more days...

17.1% (2006) of total government expenditure. As a country eligible for funds from the Global Fund, PEPFAR, PMI and other large programs, much of this increase can be attributed to the increase in donor funding (as a percentage of total health expenditure) from 26.9% to 59.6% over the same period, which is reported as a part of general government expenditure in the above figures (WHO Global Health Observatory Database, 2010).

Over the past decade, an array of government action strategies, beginning with the SWAp program of work in 2004, which included Maternal and Neonatal Health (MNH) and Family Planning (FP) in the Essential Health Package (EHP), and including the Malawi Growth and Development Strategy (Ministry of Economic Planning and Development, 2005), the National Reproductive Health Strategy

In Gladys' village

(Ministry of Health, 2006) and the Road Map for Accelerating the Reduction of Maternal and Neonatal Morbidity and Mortality (Ministry of Health, 2007b) have emerged. It is widely acknowledged that, since 2004, great gains have been made in terms of reduced corruption, increased fiduciary responsibility and accountability. There also appears to be a stronger vision for the development of Malawi.

Examination of several maternal health outcome indicators demonstrates an increase, from the previous decade, in facility based deliveries, use of modern methods of family planning and HIV counseling and testing (See Figure 2, page 16). External validation of the government strategies awaits the conclusion and dissemination of the 2010 DHS report, which will reveal the impact of these strategies through the provision of population based estimates.

This case study illustrates how Malawi's efforts to strengthen its health system in the course of the last decade have affected maternal health. It draws upon an extensive review of both published and unpublished literature, on data from large household surveys and on information obtained from key informants representing the views from the different stakeholders (see Appendix 1). A newly developed framework (see Appendix 2) was actively used throughout the preparation of this case study. This framework helped structure the interview guide (see Appendix 3), provided a structure for organizing and analyzing collected information, and shaped the structure of the case study itself. This practical application, in turn, provided a good opportunity to validate and further refine the framework (Ergo, Eichler, Koblinsky and Shah, Forthcoming).

The case study captures only the most important health system strengthening (HSS) initiatives. While some of these were introduced by the Malawian government, others were spearheaded by Malawi's development partners in collaboration with the government. Malawi hosts a myriad of donors and relief organizations, including bilaterals, multilaterals, foundations, local and international faith-based organizations and non-governmental organizations (NGOs). These development partners vary tremendously, not only in terms of the scope and magnitude of their assistance but also in terms of the approach they have adopted to deliver their assistance. As a result, there are numerable interventions in the area of maternal and neonatal health that are scattered throughout the country. Of those which have not yet been integrated in government policy, we describe interventions and pilot projects with a clear health system strengthening focus, and those that are likely to be incorporated to future government strategies. While the case study may only allude to the health system strengthening initiative, each is described in more detail in a box or endnote.

This case study looks at the effects of the various initiatives through the eyes of two fictitious individuals, Gladys, a young woman who is about to give birth, and Henderson, a nurse-midwife technician who will assist her at delivery.[1] The story of Gladys and Henderson demonstrates how Malawi succeeded to address some of the health systems challenges it was facing. The story recounts experiences of the two main actors over a ten year period giving insight into how the Malawi health system for maternal care has evolved since 2000. It also points to some major obstacles that still lie ahead.

Gladys' Journey

Gladys was looking through the window, her two arms holding her belly tightly. She could feel every bump in the road. Even though the driver was being extra careful, it was impossible to avoid the shaking and bouncing of the vehicle. The dirt road was in a bad shape. The torrential rains of the past months had left deep ruts and holes. With the dry weather of the last weeks, these ruts had become hard like rock. She would have to endure this uncomfortable journey for at least another two hours. This is what it would take to cover the remaining 40 kilometers to the Lilomba District Hospital. Yet, she felt lucky. Lucky that she and her *agogo* (grandmother) had been offered a ride with this local NGO's project vehicle. Otherwise, her *mwamuna*, her husband, would have had to take her to the hospital on the back of the bicycle that he would have borrowed from her *malume* (uncle). Paying for transport was simply not an option.[2]

She recalled accompanying her mother to the health facility on an ox cart almost ten years earlier. She had always feared that what happened to her mother that night would also happen to her. The memories were still so vividly present in her mind:

It was getting dark. Her mother was in so much pain. Gladys was holding her hand. She thought they would never reach the facility. She was 14 back then. Her mother Rose was 35, and pregnant again.[3] Rose already had six children. Gladys, the third in the series, could not understand why her mother would want another child. She would only learn later, from one of her older siblings, that this was not her mother's choice. After giving birth to her fourth, Rose had begged her husband Mathias, Gladys' father, to use *chishangos* (condoms).[4] Mathias had always categorically refused, even though he was known to have occasional *chiwerewere*, extramarital relationships. Despite the matrilineal family law prevailing in this part of the country, it was still the husband who had the last word in these matters. Even if he had accepted to use condoms, these were not easily available in those days. The closest health facility, a CHAM facility (see Box 2), would not distribute them, and neither would the three Health Surveillance Assistants (HSAs—see Box 1) who reported to that same CHAM facility. The Church to which the facility was attached was firmly opposed to the use of condoms. The only other form of contraception Rose knew about was the injectable, but whenever Rose had been to the health facility, it had been out of stock.[5]

Gladys had lost her father only a few months before that terrible night. Even though he had never been tested for HIV/AIDS, everybody in the village knew it was *matenda aboma*, as they referred to the disease that had already claimed so many lives in the community. It is hard to say whether Gladys' mother had also been infected or not. Unlike today, pregnant women were not automatically tested in those days. The fact that she had been losing rather than gaining weight during her pregnancy, however, would suggest that she was probably HIV positive. However, Rose's options were limited, as treatment was beyond their means.[6] As Rose had done for all previous births, she went to the *Mzamba,* the Traditional Birth Attendant (TBA), as soon as her water broke. This was the cheapest and most convenient option. It would cost her a hundred Kwachas in cash and a bar of soap worth about 80 Kwachas—which the TBA would also use during the delivery.[7] Rose

"The only other form of contraception Rose knew about was the injectable, but whenever Rose had been to the health facility, it had been out of stock"

"As Rose had done for all previous births, she went to the Mzamba, the Traditional Birth Attendant"

BOX 1: The Christian Health Association of Malawi (CHAM)

Background

- The Christian Health Association of Malawi (CHAM) is a not for profit non-governmental umbrella organization of Christian-owned health facilities that was established in 1966
- CHAM is a non-donor signatory to the Sector Wide Approach (SWAp)
- CHAM has a membership of 171 health facilities spread across the country, mostly in rural areas
- CHAM has also 10 Training Colleges producing almost 80% of the nursing personnel in the country
- CHAM health facilities provide about 40% of health services in the country
- CHAM facilities charge fees for their services. These vary from one facility to another. Exemption mechanisms are ad hoc

Key Features

- CHAM signed a Memorandum of Understanding (MoU) with the MoH in 2002, under which the government pays for the salaries of health workers in CHAM facilities
- Since 2005, Service-Level Agreements (SLAs) can be signed between individual CHAM facilities and the DHMT. Under these agreements, the CHAM facility delivers a certain set of health services free of charge and gets reimbursed (based on a fee-for-service system with a ceiling) by the DHMT
- Services covered by a SLA are mostly related to maternal and neonatal health. Some SLAs also cover child health services
- 77 SLAs have been signed to date; these are generally one-year agreements

Successes

- ANC, delivery and PNC provided by CHAM facilities have increased, likely due to free services provided through SLAs
- Overall coverage of MNH services has increased thanks to SLAs

Continued Challenges

- Retrospective reimbursement based on a fee-for-service schedule may introduce perverse incentives and tensions/ mistrust between DHMT and CHAM facility
- District Health Officers have complained that CHAM facilities request reimbursement for ghost patients
- CHAM facilities do not always benefit from same level of attention by DHMT
- DHMT has no separate budget line for SLAs
- The actual cost of the services (which should serve as the basis for the reimbursement amount) is not well understood
- Some CHAM facilities have complained about the long reimbursement delays, and difficulty in renewing agreement
- Free services are often restricted to a specific population, and other users have to pay

[sources: Mann, 2008. Carlson, 2008. HRH workforce—a 'promising practices' study; Griffith's report; Interviews with key informants]

BOX 2: The Changed Role of Health Surveillance Assistants (HSAs)

Background

- HSAs have a long history in Malawi:
  - Initially recruited during an outbreak of smallpox in the early 1960s as a cadre of temporary staff referred to as Smallpox Vaccinators
  - Converted to Cholera Assistants in 1973
  - Given a new mandate of surveying risk factors and behaviors and providing some basic health services in the early 1980s, under the new name Health Surveillance Assistants
- The position of HSA was made permanent and was officially integrated in the structure of the MoH in 1995

Key Features

- HSAs are under the Environmental Health Section of the MoH
- The HSA is the point of contact between the formal health service delivery system and the community and are usually from the communities where they work
- HSAs undergo an intensive 10 week induction course, and is often supplemented by NGO trainings for specific tasks
- HSAs are used to relieve burden of care at health facilities through task shifting, and have been made responsible for activities including cIMCI, FP, TB sputum collection, and community maternal and neonatal health, which vary across districts

Successes

- Increased number of HSAs, with the population served by each HSA decreasing from 2,500 to 1,200 (between 2000 and 2010), with a goal of 1 HSA per 1,000 persons
- In contrast with many African countries, HSAs are integrated into the civil service as salaried workers
- Through community centered activities, HSAs increase the reach of EHP services
- Provide vital health information at community level, to counteract harmful traditional practices in maternal and neonatal care
- Key factor in success of community based maternal and neonatal health mobilization activities (in selected districts)

Continued Challenges

- Unlike other cadres, HSAs have no regulatory body, and no standardized scope of work
- HSA's work under different conditions of employment depending on whether they are funded by the Global Fund, the MOH, or the Ministry of Local Government
- Multiple and sometimes conflicting task orders, with many HSAs receiving instructions from direct supervisors, nurses at the health centers, NGOs and other government departments
- Widespread concern that HSAs are overburdened, in spite of reduction in average catchment population
- Supervision of HSAs is inadequate, despite a hierarchical structure placing them below the Environmental Health Assistant (EHA) at the health facility, and with the District Environmental Health Officer (DEHO) as their highest supervisor in the district

[sources: Kadzandira, 2001. Carlson, 2008. Interviews with key informants]

had already bought it a few days earlier from the merchant in the neighboring village. The government facility was 50 kilometers away. Transport, when available, was extremely costly. The CHAM facility, which was much closer (about 20 kilometers away), would charge around 500 Kwachas back then for a normal delivery—double what the TBA charged—and was woefully understaffed, with only 1 nurse on call all day and night.[8]

After more than ten hours of labor, Rose gave birth to a baby boy. Apart from Rose's exhaustion, everything seemed to be fine. At first, neither the TBA nor Rose realized the extent of bleeding. They did notice some blood, but neither of them thought it was serious. Despite her efforts, the TBA soon realized she could not stop it. In fact, there was not much she could do. Rose became visibly weaker. Her condition deteriorated rapidly. Her chronic anemia, most likely due to her HIV-status and her poor nutrition[9] only aggravated her general condition. The TBA asked Gladys to call Rose's *malume* (uncle), who arranged for transport to the *chipatala*, the health facility. Rose died on the ox-cart just before reaching the facility. Gladys and her 6 siblings had become orphans. The youngest among them, the baby boy, died a few days later from dehydration.

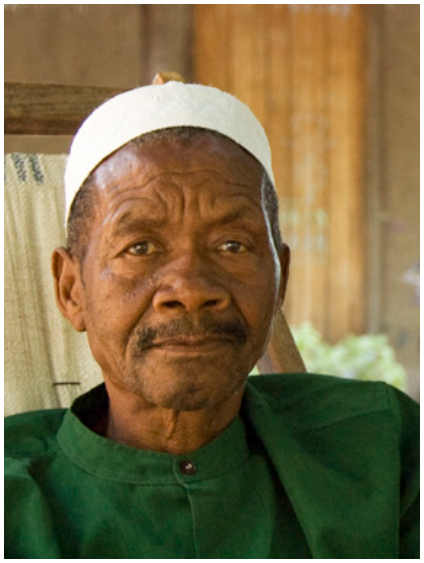
After the tragic events of that night, Gladys knew she would never go to a TBA. A few years later, in 2007, the Ministry of Health redefined the role of TBAs. They were no longer allowed to attend deliveries. Instead, they were supposed to convince pregnant women to give birth at a health facility. Initially, many TBAs preferred to ignore this new government policy. They went on attending deliveries. After all, this was their main source of income. It also gave them a certain status within the community. It became more difficult for them to ignore the new rules, however, when the government started involving *mfumu's*, the traditional village heads. In a large number of communities, a TBA who assisted a delivery would be fined by the village head.

Contrary to her mother, Gladys had been able to adopt a modern family planning method from a relatively young age (See Box 3). When she got married at the age of 17, she was very fortunate to be able to discuss this sensitive topic quite openly with her husband, who approved the use of contraception. Six years of marriage without a single pregnancy had been a source of concern among family and friends. How could this be? Gladys knew that many people around her believed she was infertile. She knew that some had even tried to persuade her husband to leave her. Those who knew that this was the couple's conscious decision could not understand. How could a fertile woman of her age still be without children? Yet, how could they have done otherwise? How could they have afforded feeding an additional mouth? After her mother's passing away, Gladys was the one who had taken care of her three younger siblings. She had quit school at age 14, in order to attend to the many daily, time consuming tasks which made the household run, such as gathering firewood and water, as well as working in the fields. Her two older brothers were already married then. They had both already left the house to live with their respective wife's family. For all those years, it was Gladys who had worked hard, every single day, to feed everyone living under the roof of her mother's house. Her grandmother, who was also part of the household, had of course been a great help. But even though she was only fifty-five when Rose died, she was too weak to work in the field or fetch water. Gladys was pleased to think, however, that

In Perspective (year 2000)

- 45% of births took place in the home without a skilled attendant. 23% of these births were assisted by a TBA (DHS, 2000)
- 70% of uneducated women cite access to transport as the biggest challenge to reaching a health facility (DHS, 2000)
- Up to 27% of maternal deaths are due bleeding during or after delivery (PPH) (various sources)
- 18% of married men report having had extramarital sexual activity (DHS, 2000)
- Only 8.5% of women, including pregnant women were ever tested for HIV (DHS, 2000)

"In a large number of communities, a TBA who assisted a delivery would be fined by the village head"



The *mafumu* or traditional village head

"Typically, women in this part of the country prefer to hide their pregnancy until it shows"

her sacrifice had made it possible for her siblings to attend school, and she would make sure that her child would finish secondary school (Munthali, 2006).

In order to delay her pregnancy, Gladys had used oral contraception, which was provided free of charge at the CHAM facility. Her younger sister, who had gotten married after the last rainy season, also wanted to wait to have her first child. She had told Gladys that now, their HSA would provide them with the injection. This was so much more convenient, as the HSA would come to their house once every 3 months for that purpose.[10] Gladys stopped using contraception about two years ago, but since her husband was often away, fishing at the lake, the pregnancy had taken some time. The HSA would visit her once in a while, and insist that she should inform him of any indication that she might be pregnant. Typically, women in this part of the country prefer to hide their pregnancy until it shows. They believe that if it is known that they are pregnant, a witch might come and *scoop away* the fetus. When the HSA visited her seven months ago, she told him that she thought she was pregnant. He asked her a few questions and acknowledged that it was very likely indeed. He then made her aware of the importance of early antenatal care. He also told her that the CHAM facility no longer charged for maternal health services (see Box 1). She decided to follow his advice and went for an antenatal care visit to the CHAM facility. She walked all the way. Luckily, the rains had not come yet. The road was still dry. As part of the antenatal care visit, she was asked whether she wanted to be tested for HIV/AIDS. She accepted and was relieved to hear that she tested negative. She was also tested for syphilis; there again, the test result was negative.[11] She was given iron and folic acid. Given her short stature—she was moderately stunted—and the size of her pelvic girdle, she was told that delivery might not be straightforward and was encouraged to give birth in a health facility.

The HSA visited her two more times during her pregnancy, when she was in her second and third trimester, respectively. Each time, he insisted on her going back to the health facility for more antenatal

BOX 3: Family Planning

Background

- While FP was essentially banned under rule of Banda (until 1994), child spacing was encouraged and a network of volunteer community based distribution agents (CBDAs) arose.
- TFR has not declined appreciably over the last 20 years, but has large rural/urban difference. [1992: 6.9/5.5; 2000: 6.7/4.5; 2004: 6.4/4.2]
- Abortion is illegal, and if performed in health facility to save woman's life, requires the consent of two clinicians and spouse.
- CPR rose from 7.4% in 1992 to 26.1% in 2000. Unmet need for FP declined from 36% in 1992 to 24% in 2004, but remains significant.

Key Initiatives

- Expansion of the Marie Stopes International sponsored BLM social franchise for FP/RH services
- Training of master trainers initiative supported by Jhpiego
- Training of HSA's to provide injectable contraceptives (pilot program in 8 districts)
- Training of CBDA's in FP counseling and some methods provision in 8 districts and selected provision of VCT
- Social marketing of condoms, oral and injectable contraceptives by PSI to galvanize private sector provision of FP

Successes

- All health centers able to provide FP services
- High demand for FP provided by HSAs and CBDAs. Pilot programs were found to be successful.
- Inclusion of pre-service training in FP into nursing and medical curricula
- National Reproductive Health Strategy developed

Continued Challenges

- Access to FP for unmarried women/ Youth friendly services are lacking
- Lack of continuity due to high turnover or re-posting of trained health workers
- Competing initiatives to the government "approved" HSA and CBDA programs which lure health workers by providing attractive incentives
- Uncertain sustainability of volunteer-based CBDA activities
- Family planning activities not highly prioritized by many DHMT
- Frequent stock-outs of contraceptives at national and district levels
- Poor integration of FP and HIV services and between RHU and HIV units

[sources: MoH, 2006. National Statistical Office and ORC Macro, 2001 and 2005. Solo, 2005. Richardson, 2009. Hamblin, 2009. Key informant interviews with Rudy Thethard, Mexon Nyiorongo, Dr. Chisale Mhango, Fannie Kuchale, Tambudzai Rashidi]

care. Despite the muddy road, she went. Her husband was extremely supportive, unlike the husbands of many of her friends. A few days before due date, her husband started looking for transportation to the health facility, other than her *malume*'s (uncle's) bicycle. He went to the village head who told him about the NGO project vehicle that would soon drive back to the town where the district hospital was located. Gladys and her grandmother were offered a ride. The hospital was quite far, but the nurse at the CHAM health center, where she had received her ANC, strongly suggested that she try and make it. The CHAM center did not have an operating theater, or an ambulance, and if there were any difficulties, it would be better if she were already close to a doctor.[12] Gladys took her advice. After all, Gladys, her *mwamuna*, *agogo*, and all of her relatives had been waiting so long for the baby, that she needed to do everything she could to make sure things went well.

The NGO vehicle reached a junction. Gladys was somewhat relieved. She knew they would soon reach the health facility. She also knew that this last stretch of the road was in a far better condition. Despite the many potholes, it was at least tarred. This road formed the border between Malawi and Mozambique. All the villages they were passing were extremely busy. Whether or not it was a market day, people from both sides of the border engaged in all kinds of trade.

The road got even busier as they approached town. Coming from her remote village, this was all a bit overwhelming. She could count the number of times she had visited this place on one hand. Finally the vehicle turned into the hospital driveway. A health worker pointed to the maternity waiting home.[13] It was extremely busy. The room was supposed to accommodate ten women. There were at least 35. She spotted an empty space on the floor, between two women who were fast asleep. Her grandmother could not stay in the room. She would need to find a spot outside, under one of the covered alleys connecting the different wards.

Two days later, her water broke.

In Perspective (year 2010)

- 41% of women use a modern form of contraception (MICS, 2006)
- Since 2007, women in 8 pilot districts are offered injectable contraceptives (Depo provera) in the community by HSAs. In 2010 this program was endorsed by the MOH for national scale-up (USAID-funded)
- Since 2007, women in 7 districts have benefited from antenatal and postnatal home counseling and referral visits by HSAs. In 2010 this program was formally endorsed by the MOH for national scale-up (USAID/Unicef-funded)

At the antenatal visit

Henderson's Choices

Henderson Mpula was 18 when he enrolled in the training program at one of the CHAM colleges in 2005. This was only one year after the launch of the six-year MoH SWAP Emergency Human Resource Plan (EHRP) (Box 4). Yet, improvements in the college facilities were already clearly visible. Major investments had been made to increase the capacity of training institutions such as this one. The room he was assigned to was in a brand-new building, and many of the classrooms in which he was taught had recently been expanded to accommodate a larger number of students. At least two of his teachers had been recently appointed. Above all, his student fees were entirely sponsored by the EHRP. Without this generous financial assistance, he would simply not have been able to afford these studies. In return, he committed to working in a government facility for at least five years after graduation. His first assignment after he graduated as a nurse-midwife technician in 2008 was at the Lilomba District Hospital.

"...his student fees were entirely sponsored by the EHRP. Without this generous financial assistance, he would simply not have been able to afford these studies"

"They were all striving to achieve a score of 80% on the performance standards..."

Apart from some remaining issues with the blood bank[14], this hospital was able to deliver all the services included in CEmOC.[15] The Standard-Based Management and Recognition (SBM-R) initiative for improving infection prevention practices, locally known as the Ukhondo Ndi Moyo ("Hygiene Is Life") (Jhpiego, 2010), had been introduced in the Lilomba District Hospital in 2005. Thanks to the dedicated efforts of the District Medical Officer (DMO), Dr. Joster Mtonya, and the leadership of his District Health Management Team (DHMT), they had been able to raise the facility's summary score from 35% to 68% in less than three years. He was working hard to motivate his staff, and had set a goal for the hospital to become a recognized center of excellence by 2011. They were all striving to achieve a score of 80% on the performance standards, which would put them in rare company. Only twelve out of the 35 hospitals implementing the initiative nationwide by 2007 had been awarded the plaque that comes with this remarkable achievement (see Box 5). Before the introduction of SBM-R, infection

BOX 4: The Emergency Human Resources Program (EHRP)

Rationale

- Severe human resource shortage, aggravated by HIV/AIDS epidemics and brain drain
- Limited financial support for the 1999–2004 human resource development plan
- Limited focus of initial emergency plan (launched in 2002)—the plan only addressed pre-service education

Key Features

- Six-year program (2004-2010) based on a situational analysis and initially aiming at scaling up staffing to set targets by 2010
- Initial funding from Ministry of Finance, DFID, NORAD and the Global Fund. Later also incorporated into the SWAp's Program of Work
- Initially costed at almost $200 million based on donor commitments, funding for the program was subsequently increased to a total of $270 million.
- Focus is on retention, deployment, recruitment, training and tutor incentives for 11 priority cadres . Support includes:
  - Attracting unemployed or retired staff back into service
  - Using expatriate staff (doctors and nurse tutors) to temporarily fill gaps on a volunteer basis
  - A 52% salary top-up, improved staff housing, and other in-service incentives (e.g., transportation, priority for professional development training)
  - Expanding training capacity (by 50%) and improving training quality
  - Increased student intake through tuition subsidies for nurses, midwives, clinical officers and technicians
- EHRP also aimed to strengthen human resources information system through international technical assistance

Successes

- Reduction in nurse emigration
- Increase in number of doctors from 43 to 241 and in nurses from 3,456 to 4700 (between 2004 and 2009)
- Increased capacity of health training institutions (38% more graduates between 2004 and 2009) leading to future flow of additional health workers

Continued Challenges

- Staffing numbers still far from optimal. Some rural health centers, for example, are still staffed by only one nurse, assisted by HSAs
- More remote rural areas did not benefit as much from added staff
- Health worker dissatisfaction with promotion potential and taxation of salary top-ups
- Problems with temporary expatriate staff (poor coordination/oversight by MoH, issues around remuneration, lack of counterparts)
- Delays in development of HR-MIS
- Management and supervision insufficiently addressed by EHRP

[sources: Center for social research, 2007. Carlson, 2008. Picazo, n.d., Aukerman, 2006. Global health sector workforce alliance, 2008. MoH, 2010. Ministry of Development, Planning and Cooperation, 2009. Health workers income and expenditure in Malawi: an assessment of the relative contribution of incentive schemes to take home pay and the extra living costs of rural posts; Country Case Study – Malawi's EHRP; interviews with key informants...]

control in most health facilities was extremely poor. With a national HIV/AIDS prevalence of more than 12% (Conticini, 2004), the high rate of hospital infections was a serious source of concern among health workers. Henderson's older sister, also a nurse, had immigrated to the UK just before Henderson began his studies. She sought better working conditions, pay and security in a time when the Malawian government would regularly delay the provision of resources to the districts (Palmer, 2006). These days, emigration was more difficult, and the government was offering various incentives to keep the nurses in the country (see Box 4).

From his very first day at the facility, Henderson had been assigned to the labor room. He learned a lot from Dorothy Lomosi, the registered nurse-midwife in charge of the maternity ward. After no time, she made him responsible for the routine data collection in the labor room. He considered this new responsibility burdensome. Following the guidelines, he would duly complete all the forms and submit them to the hospital's Health Management Information System (HMIS) coordinator. He had no idea where the data went from there. He knew that no one in the maternity ward ever looked at it and that he would never receive any feedback. This, combined with the heavy workload, led him to gradually lose the zeal he put into this activity.[16] The District Health Officer (DHO) would regularly send him to one of the district's health centers to temporarily fill a staffing shortage (see Box 6). These assignments tended to be *ad hoc*, leaving him little or no time to ensure a proper handing over of his patient's files and increasing the workload of his colleagues in the labor room. But there was not much he could do about it. Also, the exposure to the conditions of the health workers assigned to those remote locations made him more understanding. They were tremendously grateful to receive some support from the district. He had to admit that they were very much on their own out there. They rarely received visits from the members of the DHMT who were supposed to supervise them on a regular basis. The DHO, despite being responsible for this task, did not see the potential of monitoring and supervision in improving the health of her district's population. Henderson always got the feeling that she did not really care, especially since she would get her pay check at the end of the month, irrespective of her performance. In her defense, however, the district's limited authority and difficulties securing transportation to reach the facilities, made it difficult to respond to the numerous needs. Many of these facilities, while categorized as

BOX 5: Infection Prevention (IP) and Reproductive Health (RH)/ Standards Based Management and Recognition (SBM-R)

Rationale

- Health worker attrition due to fear of contracting HIV in early 2000s
- Development of IP standards and introduction of Performance Quality Improvement (PQI) training to meet IP standards and stem attrition (2001)
- Development of RH standards using SBM-R methodology to meet RH standards and improve quality of care for RH services (2007)

Key Features

- Recognition ceremony for hospitals which achieve 80% of IP standards
- Active support of the PQI process at hospitals by the Jhpiego (2001–2007) and ACCESS/MCHIP (2007–present) programs

Successes

- Adoption and institutionalization of IP and RH program by MoH and established of National Quality Assurance Technical Working Group led by the Director of SWAp
- Implementation of PQI/RH process at 100% of central hospitals and 100% of district hospitals by 2010
- Percentage of RH standards achieved by facilities trained in PQI can double within 1 year of training, indicating that many resources exist at district level to improve quality of care and prevent infections

Continued Challenges

- Inadequate financial resources to meet some of the standards, such as a functioning incinerator.
- Dependence on DHMT leadership and initiative
- Unwillingness of co-workers untrained in new RH skills to accept the implementation of best-practice concepts from their peers

[sources: ACCESS, 2010. Key informant interviews with Tambudzai Rashidi, Luwiza Soko Puleni and Victoria Luwesha]

"...the exposure to the conditions of the health workers assigned to those remote locations made him more understanding..."

BEmOC facilities on paper, failed to deliver some of the most elementary maternal services, due to their severe understaffing, the poor conditions of their equipment and the frequent stock-outs (Leigh, 2008). Moreover, the living conditions of the health workers were anything but enviable: away from everything, no electricity, no running water, the price of many commodities higher than in the country's capital. For him, these short stays in the remote areas of the district were real lessons in humility.

After two years in Lilomba, he was now the most experienced staff person in the labor room. As such, his temporary assignments to health centers became less frequent. He had not been away from the hospital in the last two months.

Another Day at Lilomba District Hospital

Gladys' labor pains began early in the morning, and the midwife on night duty in the maternity waiting home asked her grandmother to take her to the labor ward, where there was another, intermediate, waiting room. The room already had 3 occupants, so conditions were cramped, but the women were at least able to support each other. When Henderson Mpula, nurse-midwife technician in charge of the

BOX 6: Decentralization

Background

- Prior to 1994, during the single party era, power and functions were highly centralized. Administratively, ministries and departments had representatives located at regional and district levels working with vertical decision-making structures
- Local governments existed only on paper, with most decisions of local governments being subject to ministerial approval
- A District Focus policy, piloted in 1994, sought to assign more responsibility to District Development Committees (DDCs) for district specific development

Key Features

- Devolution model for decentralization, seeking to devolve powers, functions, responsibilities, and resources to elected Local Government Units called Assemblies
- National decentralization process managed by the Ministry of Local Government (MoLG)
- The 1998 National Decentralization Policy and Local Government Act provide for the establishment of Local Assemblies
- Local Governments financed through percentage of national revenue and levy of local taxes
- Incremental implementation strategy to devolution through a ten year National Decentralization Program (NDP)

Successes

- Greater financial autonomy and decision making authority for districts
- District Health Management Teams have more control over the deployment of health workers within the district, and ability to pay for locum
- Improved planning process and stronger District Implementation Plan (DIP) in some districts

Continued Challenges

- Limited local authority in human resource management, including hiring, firing and promoting
- Weak communication and relationship between MoH and MoLG. Responsibilities to move decentralization process forward poorly defined
- Overall, planning at the decentralized level remains challenging for both DHOs and District Commissioners (DCs). The health planning process is still relatively detached, with the MoH DIP insufficiently integrated into the general district plan
- The planning processes for Central Hospitals are insufficiently linked to the planning processes of the districts they serve

[sources: Ministry of Local Government and Rural Development. A Strategy for Capacity Development for Decentralization in Malawi. 2005; SWAp MID-TERM REVIEW SUMMARY REPORT; Interviews with key informants]

labor ward arrived at 7:30 a.m., each of the women was brought into the labor and delivery room to be assessed.

Henderson remembered Gladys, since he was on duty the day that she arrived and was admitted into the waiting home. He tried to examine each woman upon arrival, in case there were obvious reasons to be extra vigilant. In Gladys' case, he suspected that they may have some trouble, given her extremely short stature and narrow pelvic girdle. Gladys' blood pressure, pulse, and fetal heart rate were monitored, but to Henderson's dismay, none of the night duty nurses had started a partograph.[17] He asked Gladys and her *agogo* (grandmother) some questions to try and determine how long she had been in labor.

A recent training in Basic Emergency Obstetric Care, provided by the MoH, had reminded him of how to use the partograph properly, so that cases of obstructed labor could be detected more quickly and the many complications, such as ruptured uterus, fistulae and sepsis that often arrived from the rural areas could be avoided. Gladys was pleasantly surprised at his care and demeanor. Despite a busy ward and women waiting to be examined, the nurse did not make her feel as though she was doing something wrong by not having the baby fast enough.

Using the partograph, Henderson determined that Gladys had been in labor for 4 hours already, with contractions approximately 10 minutes apart, but that her cervix was dilated only 6 cm. After consulting with the other midwife in the ward, Henderson asked for a consultation from one of the clinical officers, who agreed that Gladys would benefit from a caesarian section. Preparations for the surgery began, by first ensuring that the operating theater was not in use, and that an anesthetist and surgeon (both clinical officers) were available. Clinical officers receive 4 years of training, and are the major clinical provider in Malawi, including for routine surgical procedures. With an additional 12–15 months training, they are also the designated anesthetists in District Hospitals (Bradley, 2009). In the Lilomba hospital, as in most Malawian hospitals, there was only one medical doctor at the establishment, and she was at a retreat for a training sponsored by one of the many NGOs operating in the district.

The maternity ward

Gladys underwent pre-operative preparations in the labor ward, including administering IV fluids, antibiotics, and bladder catheterization, and was then wheeled directly to the operating theater. Henderson intended to look in on her when she returned to the postnatal ward in a few hours, but sent another nurse-midwife technician to receive the baby during surgery. A mere three hours after her first examination by Henderson Mpula, Gladys held a healthy baby girl in her arms. She was immediately directed to put the baby to her breast, and was given a bed in the overcrowded postnatal care (PNC) ward—priority status accorded because of her surgery. Gladys fell gratefully asleep, while Henderson continued to assist the 15–20 women delivering in his ward each day.

Pilirani's Story

"...it was likely that Pilirani used a stick or other sharp object to try and induce the abortion..."

Over the next few days, Gladys saw many women come and go from the postnatal ward. Sometimes, women would have to sleep on mattresses on the floor because the ward was so full. At least twice during her stay, a ward attendant gathered all of the women together for a group lesson on the essentials of breastfeeding and care of the baby. This was often interrupted by women who were mothers several times over, with suggestions for taking herbs to increase breast milk production and to make the umbilical stump fall off quickly. Although the ward attendant did not say anything, Gladys knew that these traditional remedies were not always helpful. The community group in her village had organized a drama about the topic, and her neighbor's baby had died from infection that could have been from the herbs.

On her fourth day in the PNC ward, a young girl arrived in a wheelchair pushed by another woman—possibly her mother. She did not look well, but smiled at Gladys and asked if she could share the bed, because she was in quite a lot of pain. As they began talking, Gladys learned that Pilirani was only 14 years old—far too young to be a patient in a maternity ward. But Gladys knew that many girls in her district, particularly from the villages which were farther away from the main road, were made to marry at an early age. Since Pilirani did not have a baby with her, Gladys assumed that the baby must have died. In fact, Pilirani had been admitted due to complications from an unsafe abortion.

Her "boyfriend" had forced her to have sex with him, and after missing her monthly cycle twice, she concluded the worst. If she admitted her condition, she would be forced by her family to marry him.[18] However Pilirani wished to remain in school—not an option if she were pregnant or married. Gladys did not need to hear any more. She knew what girls like Pilirani did in the villages. Even the thought made her cringe. Abortions are illegal in Malawi, but that is not the reason for the barbaric methods used by such girls. Even if abortion were legally allowed, a girl cannot go to the health center by herself[19], and if she asked her mother, it would surely result in a beating, followed by a swift marriage. Gladys didn't ask, but it was likely that Pilirani used a stick or other sharp object to try and induce the abortion.[20]

Several days after Pilirani's attempted abortion, her pain and the symptoms of her infection became visible to her mother. In spite of her anger, the mother understood that if Pilirani was not treated, she could ruin her ability to conceive in the future. The two walked the 15 km to the nearest government health center, but despite the girl's poor condition upon arrival, they waited several hours. According to Pilirani's mother, the ANC and Under-5 clinics were being conducted by HSAs, while the sole nurse-midwife attempted to manage the more critical cases, including 4 women in labor.[21] When Pilirani was assessed, the nurse said that she could only offer Pilirani some antibiotics, but could not tell her whether or not she was still pregnant. In fact, the nurse accused Pilirani of bringing it upon herself and said that the consequences were hers to bear. Such a story was not unfamiliar to Gladys. In an understaffed health center, the nurse was under a lot of pressure and was supposed to be on duty 24 hours a day, 7 days a week. Gladys thought she remembered hearing that nurses had received a 50% raise a few years ago from some

In Perspective (Pilirani's Story)

- 34.5% of women aged 15-19 have begun childbearing (MICS, 2006)
- When emergency contraception was made available at selected sites, 17% of users cited rape as the primary cause (Masepuka et al., 2007b)
- Complications from abortion account for 30% of obstetric complications (MoH, 2005)
- 54% of postabortion care (PAC) clients are under the age of 25 (Masepuka et al., 2007a)
- 75% of PAC clients accept an FP method at discharge (Masepuka et al., 2007a)

foreign assistance (see Box 4), but such funds disappear quickly in an extended family.

At any rate, Pilirani was fortunate to have made it to the district hospital, where the abortion could be completed in a clean environment. She and her mother had arrived by motorcycle ambulance.[22] The Lilomba district hospital was not currently able to perform the easier and safer manual vacuum aspiration procedure because the syringes were not in stock.[23] The Ministry of Health has a goal of equipping most health centers (primary level of care) with the appropriate equipment and training for the Manual Vacuum Aspiration (MVA) procedure (Ministry of Health, 2007c), to reduce the burden at the secondary level facilities, but the facilities not only need equipment, but also sufficient trained personnel. Fortunately, USAID has been a strong supporter of postabortion care in Malawi. Through Jhpiego and ACCESS, USAID funded the establishment of 111 post abortion care sites offering MVA services and family planning counseling and referral.

Pilirani's curettage procedure was successful, however, and Gladys overheard one of the PNC ward nurses telling her that her prognosis was good, and that she would be able to conceive again if she chose. The nurse told Pilirani quite a lot, in fact—on topics ranging from the importance of completing her education to making sure she did not get involved with boys who did not care about her health. More practically, the nurse said that similar to women who delivered, Pilirani should wait at least 6 weeks before having sex, and then only if there was no vaginal discharge. Condoms were the best option, particularly to guard against HIV as well as pregnancy, but Pilirani could also receive oral contraceptives or a monthly injection. If the HSA in her village could not tell her how to begin these methods, or was not open to providing them for a girl of her age, Pilirani could return to the hospital. With these words of advice, Pilirani and her mother were sent on their way. Gladys hoped that they could find some transport to carry them at least part of the way, as their village was over 50 km from Lilomba.

Seven days after the baby was born, Gladys went into the office of one of the medical assistants[24] so that her sutures could be removed. Things had gone well, and Gladys was very grateful for the help of her *agogo*. While she was waiting outside the room, she read a sign that said that exclusive breastfeeding was not just good for the baby, but also good for the mother and asked the clinician about this. The MA told her that as long as she was only breastfeeding her little girl, chances of her becoming pregnant were very minimal. Nevertheless, she should think about starting some form of contraceptive in about three months, and should wait at least 2 years before having another baby. She was also advised to come back with the baby in six weeks, or sooner if either

"She was also advised to come back with the baby in six weeks, or sooner if either of them became unwell"

In the maternity ward waiting home

of them became unwell.

As Gladys, her *agogo* and her baby prepared to leave, they saw their original nurse, Henderson. He wished them well, even while he quickly checked the baby's eyes to see that they were not yellow from jaundice. He too wished he could go home, but he was going to work the night shift that evening for some extra pay (see Box 6). As Gladys and her *agogo* discussed the best way to go back to their village, they were most surprised to see Gladys' husband and her younger brother waiting outside on two borrowed bicycles. Her brother had been attached to her ever since their mother died, and would not have wanted her and their grandmother to walk in the hot sun. As for Gladys' *mwamuna*—he had been waiting for this day for the last 2 months and wore a big smile. He was in such a loving mood that Gladys even considered asking him if they could name their daughter Rose, after her mother.

Epilogue

"Through Rose's story both community level and service delivery level weaknesses in the health system become clear..."

The purpose of this case study has been to illustrate changes in the pregnancy and childbirth experience for the average Malawian woman. The experience of Rose, Gladys' mother, during the birth of her seventh child ten years ago demonstrated several of the contextual factors which contribute to the problem of maternal mortality. Lifetime risk of maternal death in Malawi, given the high total fertility rate and maternal mortality ratio, is 1 in 18 (compared to 1 in 14 in 2000). The primary cause of maternal mortality, accounting for 25% of all maternal deaths, is hemorrhage, followed by sepsis (15%) and unsafe abortion (13%) (Geubbles, 2006). All three direct causes of maternal mortality require mitigation through formal health system interventions. These interventions, and the support structure required to implement them, have been undergoing a process of development and improvement over the past 10 years.

Situation around the year 2000

Through Rose's story, both community level and service delivery level weaknesses in the health system become clear. At the most proximate level, she is portrayed to have HIV, which impacts her pregnancy and overall health, from malnutrition to anemia leading to postpartum hemorrhage. The prevalent spousal dynamics mean that she is unable to limit her pregnancies, or to protect herself from contracting her husband's illness. Additionally, cultural practices within central and southern Malawi place high importance upon the maternal uncle, who has to be consulted before Rose can be transported to the health facility. Rose relies on the services of the traditional birth attendant, both because she has done so before, and because of the barriers to accessing care from the health facility. There are both physical and financial barriers to facility-based delivery, including actual cost of delivery at the private (CHAM) facility and the cost of transport. The CHAM facility's catchment area contained Rose's village, and their religious objections to the use of condoms impacted her contraceptive options. This is compounded by the stock-

Figure 1: Health Systems Strengthening Initiatives—Timeline

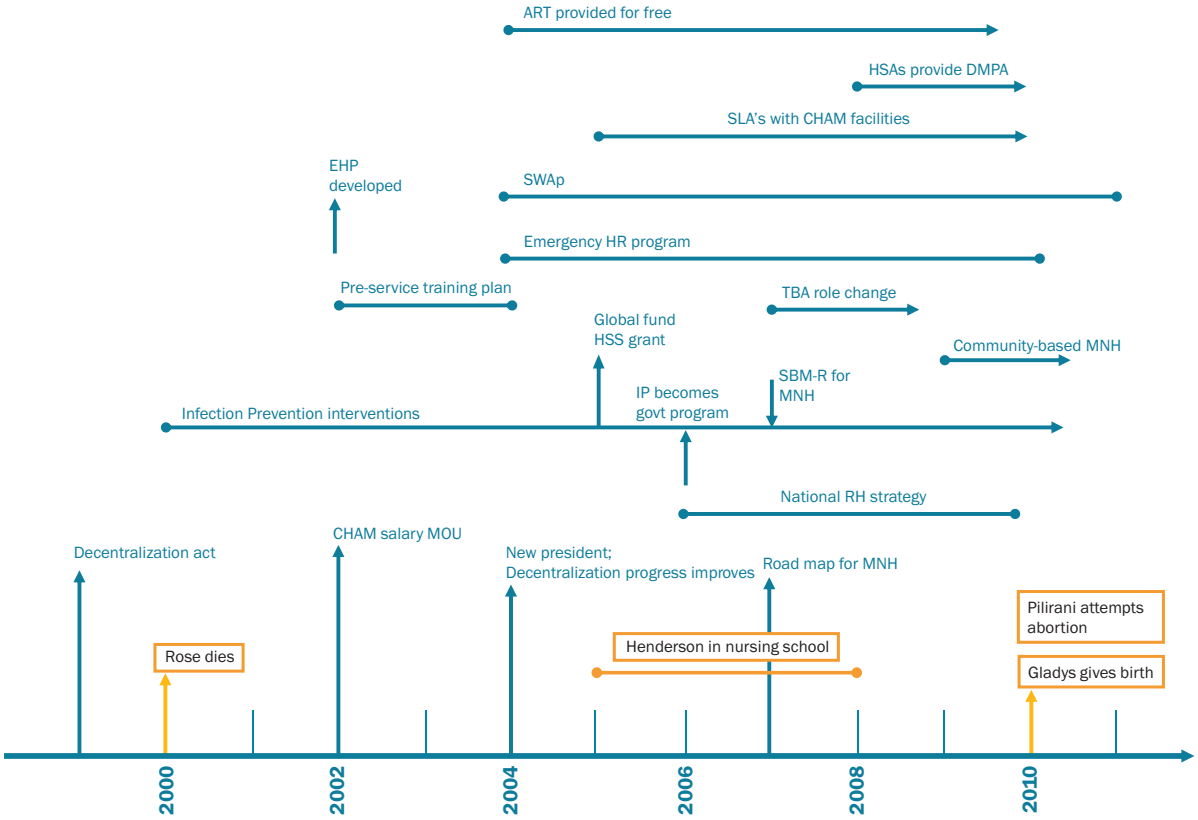
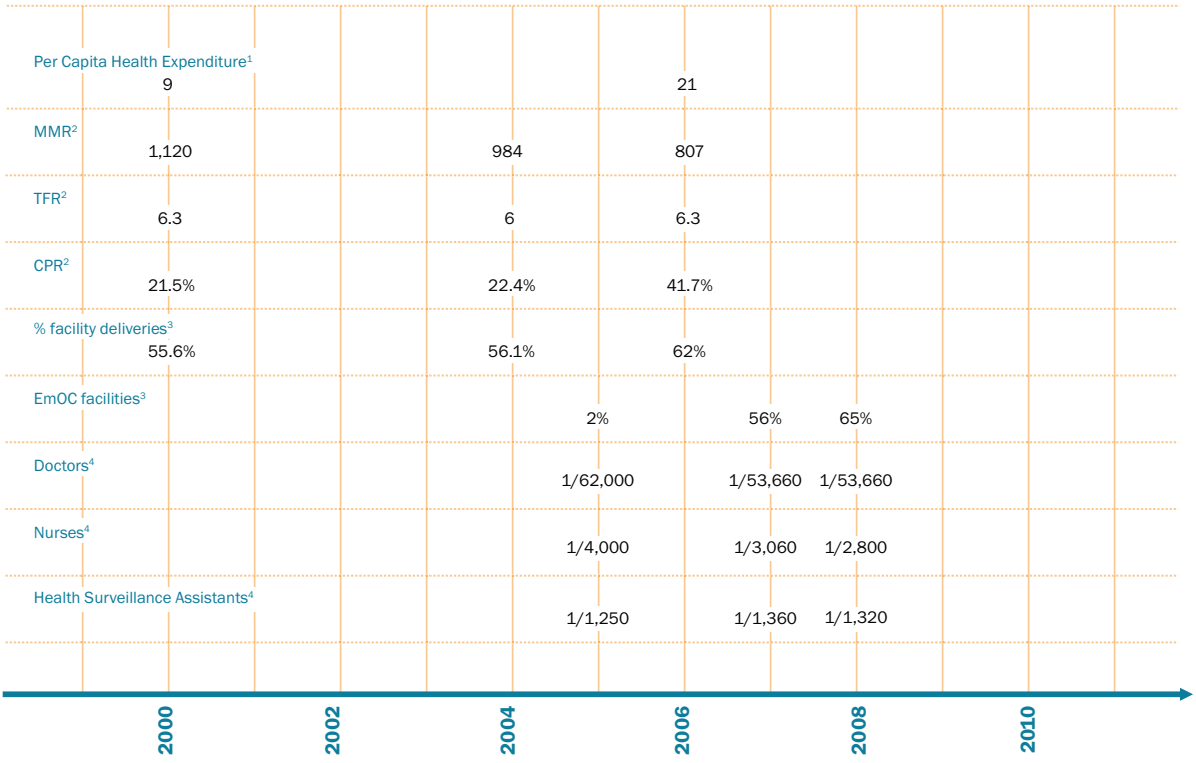


Figure 2: Trends in Key Indicators



[1] USD average exchange rate. WHO Global Health Database; [2] DHS2000, DHS2004, MICS2006; [3] DHS2000, DHS2004, Ministry of Development 2009; [4] MoH 2010

outs of the injectable contraceptive that Rose may have had access to. Finally, should Rose have gone to the CHAM facility, which was the most accessible, she would have been a victim of the severe health worker shortage plaguing Malawi.

Rose's story is highly representative of the challenges that the Malawian government has tried to address. In Figure 1, the primary interventions, many of which have been alluded to in the case study, are mapped on a timeline. Some of these interventions have ended, or have a finite end date, while others continue. Among those that continue, only few have so far been institutionalized, impeded perhaps by lack of funds or donor preferences. Interventions such as the community maternal and neonatal health projects and provision of Depo-Provera by the HSA are restricted to certain districts until additional funds become available, while others are implemented nation-wide. Indicators of health status, and the health system, have also been shown in Figure 2, including health worker density, maternal mortality ratio, contraceptive prevalence, total fertility rate, and institutional delivery rate. Available data sources, particularly HMIS or other government sources, are acknowledged to be imperfect. Consequently the indicators listed are meant to convey trends and should be interpreted cautiously.

"The various health system strengthening initiatives undertaken by the Ministry of Health and its partners have undeniably improved the overall situation of the Malawian health system..."

Achievements in past decade

The various health system strengthening initiatives undertaken by the Ministry of Health and its partners have undeniably improved the overall situation of the Malawian health system and, more particularly, the availability, use and quality of key reproductive health services. This is reflected by the changes in the values of some of the indicators presented in Figure 2. As mentioned in the prologue, results from the ongoing DHS 2010 will reveal whether or not these initiatives have also improved maternal and neonatal health outcomes. Based on the key informants' assessment and on the limited available data, there is some reason for optimism.

- The introduction of the health SWAp in 2004 (see Box 7), with a Joint Program of Work focusing on the delivery of the Essential Health Package developed a few years earlier as part of the Malawi Poverty Reduction Strategy (GoM, 2002), has had several beneficial effects. For the Ministry of Health, it has eased the task of coordinating the larger donors. It has also allowed for a greater focus on results and for the adoption of an integrated monitoring framework, thereby enhancing transparency.

  The SWAp supports the 2007 National Road Map for Accelerating the Reduction of Maternal and Neonatal Mortality and Morbidity (MoH, 2007b). In conjunction with ADB funding, it has enabled the upgrade of equipment and infrastructure in health facilities (Carlson, 2008). This, combined with the strengthening of blood bank and drugs supply chain, has resulted in an increase in the coverage of Basic and Comprehensive Emergency Obstetric Care (BEmOC and CEmOC) (Leigh, 2008; MoH, 2010).

- Decentralization (see Box 6) has given districts a little

more financial and managerial autonomy. Districts can decide how to spend funds under the budget line Other Recurrent Transactions (personal communication with Machinga District Assembly). They have used these funds for different purposes, including the introduction of locum payments, the financing of maintenance and repair works in health facilities or the provision of financial incentives to TBAs referring pregnant women to a health facility. Decentralization also gives District Health Management Teams more control over the deployment of health workers across the health facilities within the district to correct imbalances in staffing (personal communication with Machinga DHMT).

- The Memorandum of Understanding signed with CHAM and the subsequent introduction of Service-Level Agreements signed with individual CHAM facilities (see Box 1, page 4), have contributed to making services—especially maternal health services—at CHAM facilities more accessible (Mann, 2008).
- The strategy to deploy a large number of additional HSAs and to expand their scope of work (Box 2, page 4) is bearing fruit. Contraceptive prevalence is on the rise where HSAs are involved in family planning activities. The more recent promotion of a *community maternal and neonatal health package*, which relies heavily on HSAs, combined with other initiatives such as *community mobilization for maternal and neonatal health* and the redefinition of the role of traditional birth attendants (MoH, 2007a), has strengthened the link between the community and health facilities in the area of maternal health and increased the rate of facility-based deliveries.
- Thanks to the salary top-ups and the other financial and non-financial incentives introduced as part of the EHRP, staffing numbers have increased at all

BOX 7: The Health System-Wide Approach (SWAp)

Rationale

- Fragmented donor interventions did not necessarily address MoH priorities
- Poor health indicators reported in 2000 DHS study, coupled with severe health worker shortage, fueled the sector wide cooperative approach to develop a 6 year program of work in health

Key Features

- SWAp activities organized around successful universal implementation of the Malawi Essential Health Package
- Joint donor disbursement procedure, single reporting mechanism
- 6 pillars of the SWAp program of work (POW):
  1. Human Resources
  2. Pharmaceutical and medical supplies
  3. Essential basic equipment
  4. Infrastructure and facilities development
  5. Routine operations at service delivery level
  6. Central institutions, policy and systems development

Successes

- Establishment of standards, goals and national policies in the health sector
- Increased donor coordination, through technical working groups, bi-annual evaluation reports, and buy-in into program of work even if donors are not part of pooled funding mechanism (i.e., USAID)
- Mobilization of 85% of the resources required to implement the POW over the 6 year SWAp
- Measured improvements in the following indicators:
  - Facilities able to deliver EHP
  - Facilities with minimum PMTCT
  - Facilities offering BEmOC

Challenges

- Reporting burden of discrete partners, and inability to re-allocate discrete partner resources to other areas within POW
- Planning and sustainability of programs initiated during SWAp, such as Emergency Human Resource Program, training of newly recruited HSA's, and health care infrastructure improvement
- Gaps in baseline measurement of indicators, in target setting for specific indicators through 2008 (4 years into SWAp) and questionable reliability of HMIS data
- Inability to meet targets in indicators such as:
  - % of children underweight
  - % of women starting ANC in first trimester
  - Health centers meeting minimum staffing norms

[sources: MoH Department of Planning, 2004. Carlson, 2008. Key informant interviews with Tambudzai Rashidi, Dr. Ann Phoya and Hudson Zithane-Nkunika]

levels of the system, and in both MoH and CHAM facilities. The increased capacity of health training institutions resulting from the introduction of a tutor incentive scheme combined with investments in infrastructure and tuition subsidies have led to a remarkable increase in student intake (Carlson, 2008. MoH, 2010). The benefits in terms of increased production of health workers are only now starting to be felt.

- The delivery of maternal health services has also been strengthened through the nation-wide provision of training in BEmOC, postabortion care, and postpartum family planning (MoH, 2010). In several districts, health workers are trained alongside tutors and preceptors, in order to facilitate inclusion of the concepts and skills into the nursing curriculum (personal communication with Luwiza Soko Puleni, MCHIP). To augment the cadre of nurse-midwife technician, crucial to providing care at the health center, many established nurses are pursuing an additional year of midwifery training. This variety of initiatives will increase the ability of BEmOC-equipped health facilities to provide emergency services, and should increase demand for maternal health services. Another positive development that has gathered momentum in the past two years is the introduction of the BEmONC concept and its inclusion into the list of indicators to be monitored and reported to the SWAp.
- The observed improvements in staffing numbers are also partially attributable to the infection prevention and control (IPC) initiative (see Box 5).In a context of high HIV/AIDS prevalence, effective infection control within health facilities is critical for attracting and retaining staff. The expansion and institutionalization of this initiative, with the establishment of a formal recognition system and performance standards for use at hospital and health centers, constitute an important foundation for the ongoing efforts to improve quality of care. The success of the IPC program led the MoH to request for the SBM-R approach to be applied to Reproductive Health (RH) services in 2007. This has now been scaled up countrywide to all central and district hospitals and it is being piloted at health center level.
- The 2004 introduction of free antiretroviral therapy within the public health sector in Malawi, and the subsequent introduction and scale up of PMTCT services have also impacted maternal health. Although the scope of these interventions goes beyond mothers, the overwhelming majority of ART recipients are women. The number of facilities providing ART has increased from 9 in 2004 to 138 in 2006, and PMTCT from 34 facilities in 2004 to 367 in 2007 (MoH, 2010.). Improved general health of women of childbearing age has the potential to lead to reduced maternal mortality, particularly from causes such as sepsis and hemorrhage.

At the Lilomba hospital

In conclusion, we believe that the EHRP and the SWAp have been the real drivers of change. The country was going through a severe crisis in terms of human resources for health in the early 2000s prompting the introduction of the EHRP. The SWAp, in addition to bringing donors together to agree on a common

government-led program of work centered on the essential health package (EHP), also brought some of the much needed additional funding to the health sector. The planning and monitoring of the SWAp has been done in an objective and coordinated manner. Although both initiatives have (or are about to) officially come to an end, they are to some extent sustained. A SWAp II was under preparation at the time of writing. Thanks to lessons learned during the first SWAp, this SWAp II has the potential to be more effective. Moreover, it is likely to incorporate several components of the EHRP and SWAp I.

Remaining challenges

The preceding paragraphs summarized the main effects, on the Malawian health systems in general, and on maternal health in particular, of the various health system strengthening initiatives adopted by the MoH and its partners in the course of the past ten years. Despite these improvements, however, major challenges remain, as suggested by the experiences of Gladys, Pilirani and Henderson.

"...major challenges remain, as suggested by the experiences of Gladys, Pilirani and Henderson"

These challenges are listed in Table 1. They have been grouped under four headings:

i. Challenges still in the process of being addressed
ii. Challenges for which an extension of current interventions would be needed
iii. Challenges that have not yet been addressed
iv. Challenges that are the unintended consequences of some of the interventions

The following paragraphs clarify each of these four headings and elaborate on some of the challenges found in Table 1.

Many key informants acknowledge the challenges listed under the first two headings. While measures to address those under the first appear to be planned for, those under the second would require additional funding or extension of planned programs in order to be adequately addressed. The prevalence of child marriages is clearly a challenge. Given that legislation to set legal age of marriage at 18 is currently under debate in the parliament, however, this challenge falls under category (i). Similarly, many persons interviewed listed the end of tuition subsidies for future nursing students as the main reason for the sudden decline in student intake evident in 2010. Given this highly observable impact and its coverage in the popular press, arrangements are underway for the Government of Malawi (GoM) to take over the subsidy. The GoM has stated that they will fully subsidize the tuition of all currently enrolled students so as not to contribute to high drop-out rates. So far, there has been no further commitment for the future, which is why this challenge falls under category (ii) in the table. This and other aspects of the EHRP will hopefully be included in the SWAp II.

Of greater concern are the challenges listed under the headings (iii) and (iv). An example of an unaddressed challenge under the third heading is the insufficient use of HMIS data at all levels of the health system. This challenge leads to problems in planning and management, and perpetuates the problem of poor data quality. None of the initiatives identified during the course of this study provide a comprehensive solution to this challenge. An example of a challenge which is an unintended consequence of some of the interventions (heading iv) is the increased burden of work for the nurse/midwife, resulting from

the increased demand for facility based MNH services. Initiatives which have led to this increased demand include the changed role of the TBA, the community MNH package consisting of home visits by HSA for ANC and PNC and the complementary community led mobilization efforts which combat traditional practices. Slow progress in staffing of health centers, lack of funds for infrastructure development, and continued problems with staff productivity meant that facilities were unprepared to absorb this increased demand. This may explain the numerous anecdotes of women being delivered by untrained workers at the facility. To illustrate the data quality problem mentioned above, these births are included in the increased "facility based deliveries" indicator which is used to measure success. The inability of health facilities, especially health centers, to meet the increased demand leads to

TABLE 1: Remaining Challenges

	Challenges still in the process of being addressed	Challenges for which an extension of current interventions would be needed	Challenges that have not yet been addressed	Challenges that are the unintended consequences of some of the interventions
Enabling environment and governance	Age of marriage	Financial resource constraints Donor harmonization (i.e., Global Fund) Expansion of SLAs (number and scope) Enforcement of new TBA policy	Financing and implementation of strategies Leadership/planning / management Accountability at all levels Government oversight Coordination of small donors	
Service delivery	Upgrade of infrastructure Training of staff Family planning for youth Blood supply chain Procurement of equipment MoH human resources management information	Fees for nursing education Improvement of supply chain Financing of salary top-up Scaling up of community based interventions	Staff attitude and productivity Supervision Quality and use of data Government salary/ benefits not in line with private sector/NGOs Reliance on expatriate specialist physicians	Experience/confidence to put training to use (i.e., BEmOC) Burden of work for nurse/midwife (due to demand increase) Task-shifting to HSAs
Community *Physical environment* *Social environment*	Transport for referrals Social/cultural norms			
Households *Household characteristics* *Individuals*	Nutrition HIV		Cost of transport	

additional inefficiencies, with patients by-passing health centers or even district hospitals, and to poor patient satisfaction. A potential consequence of the latter is that all the work that has gone into increasing the demand will eventually be wasted.

The EHRP aimed to tackle the acute human resource crisis. Even though some of the beneficial effects of this initiative will only become apparent in the years to come, as more students graduate, additional efforts are needed to bring staffing levels closer to the norms and to ensure that the staff maintain their skills.

Contributing to the human resource shortage is the numerous in-service trainings supported by NGOs, bilateral and multilateral to fill the knowledge and skills gap of providers. At any one point in time, up to half of the skilled providers could be off-site participating in trainings and workshops. Back to back trainings sponsored by different organizations affect continuity of service delivery as alluded to in Henderson's story.

The vast array of interventions propagated by various donors and vertical actors, and apparent lack of coordination between well-intentioned NGOs and the district management, create confusion. The DHMT often has difficulty in prioritizing interventions that may not have been a part of the district's planning and budgeting process. Priorities are often biased towards the NGOs' funding interests.

Although the EHP is supposed to represent the basic package of health services to be delivered, it appears to be, at least in many districts, still too broad to be implemented in its entirety given available resources. It then becomes a pick-and-choose exercise for the DHMTs, which is to a large extent influenced by the importance of the various national programs in terms of staffing and funding. For example, even though reproductive health activities, including family planning and BEmOC, represent an important component of the EHP, they tend to be given less priority due at least partially to the limited means and influence of the Reproductive Health Unit within the MoH.

For a long time, the low priority given to family planning activities by DHMTs has also resulted from the fact that family planning had taken a back stage at all levels including the national level.[25] Fortunately, this situation is now gradually improving, with family planning being reinvigorated and with new initiatives, such as Depo distributed by HSAs, being endorsed by MoH.

Weaknesses in the supply chain management system result in frequent stock-outs (even for the most essential drugs) and wastage. A detailed assessment of the ARV and essential medicines logistics systems (Rao and Durgavich, 2008) reveals problems throughout the supply chain. These include problems related to procurement planning, product selection and storage conditions at the level of the central and regional warehouses. At one of the regional medical stores (RMS), for example, almost a third of the space was found to be occupied with expired or nearly expired products and over-stocked non-drug consumables. At that same RMS, more than two thirds of the essential medicines were found to be below the minimum stock level established in the standard operating procedures. A major problem at the level of the health facilities is poor reporting to the District Pharmacist or Pharmacy Technician, who is responsible for entering the data from the facilities into the Supply Chain Manager software. Less than half of the public facilities, for example, report on time. Some

Waiting for care

facilities provide incomplete reports or do not report at all. NGOs bypass the system altogether. Moreover, for many of the more than 1,500 drugs and consumables, much of the data needed for proper forecasting is simply not recorded at the facility level and there is no clear effort to prioritize data collection for EHP products.

At present, accountability within the system is extremely weak. Apart from the SBM-R initiative and to some extent the SLAs signed with CHAM facilities, rewards tend to be disconnected from actual performance. Health facilities and individual health workers have limited incentives, financial or other, to perform. They are not held accountable for the results they achieve.

Recommendations

- **Staffing:**
  Staff at health centers can be sent to the district hospital for short-term rotations in order to refresh their clinical skills, particularly for the types of cases they do not often see at their facility. Alternatively, clinical mentoring and facilitative supervision can be encouraged and supported. These involve an expert clinical provider from the district visiting health centers and conducting mentorship and guidance with the health center staff. For this, the visiting expert clinical provider would need to spend at least one full day with the health center staff as opposed to half an hour, which is currently the norm.

  Short-term measures such as the employment of expatriate staff to temporarily fill the gaps may need to be extended.

  Many administrative and managerial tasks could be handled by non-medical health management cadres, allowing doctors to focus on clinical work.

  Recently graduated Malawian physicians could gain specialized skills by being paired with expatriates.

  Given the major expansion of HSAs, and their increased prominence as a front-line health care provider, the MoH should formally define the scope of their responsibilities, and refine the systems to ensure that the care they provide is appropriate.

  Increased investment in pre-service training can have a sustainable impact on future cadres of health workers and the health system in general.

- **Referral system:**
  Ongoing efforts to improve the referral system through the purchase of communication devices and ambulances need to be sustained. An adequate maintenance plan needs to be developed and funded.

  One of the main reasons why health centers are often bypassed is their lack of staffing leading to their inability to absorb the increased demand for maternal health services. In conjunction with addressing the staffing issue (see above), community sensitization will be critical to signaling community members towards appropriate use of health facilities.

  Financial incentives introduced at the community level can further support the strengthening of the referral system. These incentives could for example go to pregnant women in the form of vouchers,

to HSAs, to TBAs and/or to community action groups.

- **Service delivery:** The SBM-R initiative, which is currently being piloted in a limited number of health centers, could be scaled up of to cover all health centers. It could also be introduced at community level. The SBM-R could also be used in a pay-for-performance scheme that rewards quality in addition to quantity.

  Service-level agreements (SLAs) could be expanded to more CHAM facilities.

  The MoH, and more particularly the RHU, could play a bigger role in the monitoring and evaluation of ongoing pilots so as to be better informed about what works and what does not, and about what would be worth translating into national policy.

- **Supply chain:** Rao and Durgavich (2008) made clear recommendations on how to strengthen the supply chain, some of which are already being implemented. These recommendations relate to the legal status of the Central Medical Store, the management of the central and regional warehouses, the prioritization of items needed to treat conditions in the EHP, the share of the budget for drugs and medical supplies controlled by DHOs and hospitals, the transportation of drugs and medical supplies etc. In addition to these recommendations, actors at all levels of the supply chain could be held more accountable for the performance of the supply chain and by rewarding progress on these indicators. This is discussed in greater detail in the following paragraphs.

- **Accountability:** While the availability of inputs is a necessary condition to an operational health care delivery system in general, and to the effective delivery of maternal health services in particular, it is by no means a sufficient condition. Inputs by themselves will not lead to improved data use, to better supervision, or to increased staff productivity, just to give a few examples. Data will not be used unless the need for it is felt, irrespective of the level of inputs. Similarly, supervision and staff productivity will not be enhanced unless individuals are held accountable to defined roles and responsibilities, and given incentives to reward superior performance. Conditional upon the availability of a minimum level of inputs, making health facilities and health workers at all levels more accountable for the quantity and quality of services they deliver would help align the incentives and address some of the cross-cutting challenges. This can be achieved by rewarding performance, as measured by changes in selected indicators. This is illustrated in Table 2 for various actors. The list of possible incentives or rewards is by no means exhaustive. To build further on the earlier examples, a clever choice of indicators and rewards can provide the right incentives for effective supervision and increased staff performance. It also makes data, which is being used to calculate the indicator values, more directly relevant to the staff, while at the same time calling for efforts to increase data validity.

"While the availability of inputs is a necessary condition to an operational health care delivery system [...], it is by no means a sufficient condition"

Based on the resources they involve—both in terms of the required minimum level of inputs that needs to be in place and in terms of the incentive payments themselves—and on the type of actors they relate to, some incentives are more easily put in place than others. Most of the easier ones are at the community level. It is easier, for example, to introduce incentive payments for TBAs than for district hospitals. A system of

TABLE 2: Rewarding Performance

	Desired behavior	Initiatives to facilitate behavior change
Pregnant woman	Should be motivated to seek care from professional health worker	Payments (e.g., through a voucher system) to overcome some of the financial barriers for transport and length of stay at the facility
TBA	Should not attend delivery but refer mothers to health center	Financial incentive for referral of mothers who sought their assistance to health facility Public recognition of their contribution/membership of community action group
HSA	Should identify pregnant women, teach them danger signs and encourage them to go to the health center for three ANCs and for delivery	Should have clear job descriptions, roles and responsibilities Part of their pay could be linked to the satisfactory fulfillment of these various tasks Should have opportunity for promotion, linked to their overall performance
Health centers	Should provide support to and supervise HSAs Should provide ANC Should be more patient-friendly Trained professional should attend deliveries (BEmOC functions) Women in need of care beyond what they can deliver (ideally beyond BEmOC) should be referred to the district hospital in a timely manner	Should have clear performance targets Should be given a financial incentive based on changes in selected performance indicators towards the targets Could be given authority over the use of part of their budget and over at least part of the financial incentive Public Recognition of best performing facilities in the district
District hospital	Should be able to provide CEmOC Should assist referrals (ambulance service)	Along the same lines as health centers
DHMT	Should manage, organize, supervise and monitor service delivery throughout the district	Should have clear performance targets for the district Incentive payments based on their performance as a team and the overall performance of the district Membership of the DHMT should be conditional on performance
District assembly	Should work with traditional leaders to mobilize the community Should work with DHMT to plan, budget and monitor health activities within the district	Similar to DHMT, but for their involvement in various sectors, health being only one of them
Zonal/Central level	Should ensure that health facilities are operational (staffing, equipment, infrastructure…) Should assist, monitor, supervise districts	Should be rewarded for sustained improvement in health status of the population they cover

incentive payments for TBAs has already been adopted in several districts. Changing the incentives within health facilities or DHMTs is far more complex and requires a more active involvement from the central level. This involvement is not only necessary to ensure that the minimum level of inputs is in place. It is also needed for the development of adequate procedures and tools, including the definition of relevant indicators and of ways to measure and validate them.

Along the same line of thinking, SLAs could be transformed from a mere reimbursement arrangement, which absorbs a portion of the district's finite health budget, to a tool that promotes the strategic purchase of quality services while at the same time rewarding the district for the SLA's contribution to improved district health indicators.

Many of the actors listed in Table 2 should be made more accountable not only to their superiors, but also to the community they serve. This could for instance be achieved through the involvement of traditional leaders and the inclusion of community satisfaction as one of the indicators used to determine incentive payments. Community leaders could serve on the facility's quality improvement support team to facilitate monitoring of standards related to interpersonal communication and client-provider interactions.

The preparation of this case study was guided by the framework presented in Appendix 2 (Ergo, Eichler, Koblinsky and Shah, Forthcoming). Information was collected on both the status of the health system and the maternal health situation at two different points in time, namely around the year 2000 and around the year 2010. These two snapshots were compared to identify whether and where major changes had taken place. Information was then gathered on the main health system strengthening initiatives undertaken during the ten-year period between 2000 and 2010. The two snapshots and the efforts undertaken during the ten-year period separating them were presented through a combination of stories—the stories of Gladys, Rose, Pilirani and Henderson—and text boxes highlighting the key features of the most important health system strengthening initiatives (Boxes 1 through 7). The contribution of these initiatives to the observed changes was then assessed, as were the remaining challenges by the end of the ten-year period. In the last section, a number of strategies to address these challenges were proposed.

Key Messages

Situation in 2000

- Maternal health indicators among the worst in the world
- Acute HRH crisis exacerbated by HIV epidemics and brain drain
- Poor quality of care with high rates of hospital infections
- Poorly coordinated external assistance

Major health system strengthening initiatives undertaken by the MoH and its partners

- Infection Prevention and Standards Based Management and Recognition (2000–present)
- Development of Essential Health Package (2002)
- Emergency Human Resources Program (2004–2010)
- Health System-Wide Approach (2004–2011)
- Service-level agreements signed with CHAM facilities (2005–present)
- Strengthening of community-level activities, including expansion of role of HSAs

Situation in 2010

- Measured improvement in various areas (health worker density, availability of and demand for maternal health services, donor coordination…)
- Major challenges remaining (continued resource inadequacies, unmet demand, poor supervision, limited use of data, low productivity…)
- Possible strategy: in addition to obvious need for increased resources (financial and human), accountability of actors at all levels should be increased; specific targets should be defined; monitoring of progress towards these targets should be undertaken; performance should be rewarded to align incentives

Endnotes

1 The names of the characters and places in this story are fictive.

2 A combination of poor rural infrastructure and limited availability of reliable transport leads to high costs of transport for women in need. Distances between villages and the nearest health centers can be vast, and transportation can be hindered by obstacles such as high water during rainy season. (Seljeskog, 2006). Key informant interviews with Victoria Lwesha and Anna Chinombo).

3 Total wanted fertility rates are substantially lower than the total fertility rates of women in Malawi. Rural women wanted 5.5 children but had, on average, 6.7 children in 2000. As birth order increases, the proportion of births which are not wanted or were wanted later also increases, with 30% of forth or higher order births being unwanted (National Statistical Office and ORC Macro, 2001).

4 The brand of condoms distributed with the support of Population Services International (PSI).

5 Contraception procurement is an ongoing problem in Malawi. Prior to the SWAp, contraceptives were primarily obtained through international donations to the CMS. It was, and continues to be, the responsibility of the DHMT to ensure adequate stocks at the facility level. However, contraceptives are now procured through the SWAp funds, and stock-outs at all levels have been observed, due to inadequate ordering, lengthy procurement processes, and budgetary constraints at the district level (Health Policy Initiative and DELIVER Project, 2008). The most frequently accessed method in Malawi is the injectable contraceptive (30% of currently married women have ever used), and it is most often procured at a government health center (54% of the time) (National Statistical Office and ORC Macro, 2001). Contraceptives are available free of charge in health facilities.

6 Despite a national HIV rate of 15%, testing for HIV in 2000 was rare, with only 9% of married women and 17.8% of married men having ever been tested (National Statistical Office and ORC Macro, 2001). Programs to test women during pregnancy, in an effort to prevent mother-to-child transmission of HIV, began in Malawi in 2002, but were only offered in limited health facilities. Recently, HIV testing has been brought to the community by training volunteers in a pilot program in 9 districts (personal communication with Mexon Nyirongo), demonstrating dramatic levels of demand (90,000 tests done by less than 200 trained volunteers).

7 In 2000, a US dollar was worth approximately 50 Kwachas. In 2010, the exchange rate was about 150 Kwachas per US dollar.

8 Information regarding cost of birth attended by TBA from personal communication with Victoria Lwesha. Cost of attended deliveries reported in Levin, 2003. Staff shortages occurred (and continue to occur) in both CHAM and government facilities, at vacancy rates of over 70% for some cadres (Aukerman, 2006).

9 As for many Malawians, her diet consisted of primarily *nsima*, which is the local corn-starch dish.

10 A pilot project in 9 districts, managed by MSH, uses HSAs to provide community based family planning. The HSAs are given “uniject” devices which administer a single sterile dose of DMPA. Districts are: Salima, Nkhotakhota, Phalombe, Kasungu, Karonga, Mangochi, Balaka, Zomba and Chikwawa. A second pilot project (Community based maternal and newborn care), in 8 districts which partially overlap with the family planning project, asks HSAs to ensure women attend ANC and PNC, and to counsel them on danger signs during pregnancy. Districts are: Chitipa, Rumphi, Dowa, Nkhotakota, Machinga, Thyolo and Phalombe.

11 Standards for ANC at the Health Center include provision of the following: Lab test for hemoglobin, blood type, syphilis, voluntary testing and counseling for HIV, and urinalysis (unpublished documentation from MCHIP Malawi).

12 See Kongnyuy, 2009a.

13 Many health facilities (both health centers and district hospitals) have constructed special areas for expectant mothers to stay in, in an effort to bring women to the facility in a timely manner if complications arise. These maternity waiting homes are often just a single room with several cots, however. The occupants are considered admitted patients, and if at the district hospital, are provided 3 meals per day. Women waiting at the health center are typically not provided food, and must bring their own (Personal communication with Henderson Lomosi and Dr. Jerome Nkhambule).

14 District hospitals often face blood shortages. While blood is supposed to come from the central blood bank, delays can be excessive, forcing the hospital to look for local donors and forego some of the tests which ensure a safe blood supply in emergency situations (Personal communication with Machinga DHMT).

15 To be considered a BEmOC (Basic Emergency Obstetric Care) facility, the Ministry of Health requires that all 6 signal functions be able to be performed, and that the facility is staffed with a minimum of 2 nurse-midwives and 2 clinicians (medical assistant or clinical officer). The 6 signal functions are: injectable oxytocic drugs, antibiotics and anticonvulsants; manual removal of placenta; removal of retained products; assisted vaginal delivery (ability to do manual vacuum aspiration and vacuum extraction). CEmOC facilities must also be able to provide blood transfusions and caesarian section deliveries (Kongnyuy, 2009a).

16 Data quality was consistently reported as a major problem throughout key informant interviews in Malawi. Problems range from incomplete human resources management information system at MoH to lack of vital registration system in Malawi. Data, when collected, is rarely cross-checked, used at the local level, or used at the district level.

17 Use of partograph is part of the Normal Labor and Delivery Integrated Performance Standards (unpublished document—MCHIP Malawi).

18 A bill is currently being debated in parliament to establish the legal age of marriage at 18. There is no existing law prohibiting child marriages in Malawi.

19 Fortunately, this is gradually changing thanks to progress made in the field of adolescent health. As part of the National Reproductive Health Program, the Ministry of Health has recently developed and adopted a Youth Friendly Health Services (YFHS) policy, which formalizes guidelines for providers in the delivery of sexual and reproductive health services for adolescents (Mayzel, 2008). As a result of this new policy, access to FP methods—both at YFHS and at ordinary FP clinics—is gradually improving for adolescents.

20 According to the national survey of adolescent reproductive health, by age 14, approximately 5% of females and 11% of males have had their first sexual experience. 82% of young girls did not use any method of contraception at first sex, and 80% of sexual experiences for girls aged 12–19 were transactional, whereby they received gifts or money. Approximately 1/3 of 12–14 year old girls knew of a way to terminate a pregnancy, and 19% knew of a friend who had tried to do so. Methods reported by young Malawians include drinking herbal potions, bitter medicines, use of stick or sharp object, or ingesting tablets. Abortion is only legal in Malawi to save the life of the mother, and the woman may not seek abortion without consent (Munthali, 2006).

21 Similar situations were described during key informant interviews, and observed during a visit to a health center in Machinga district. The staff shortages in

Malawi are being addressed, but numerous facilities have not met the minimum staff requirements of 2 clinicians and 2 nurses (MoH, 2010).

22 Motorcycle ambulances have been introduced in various parts of the country to facilitate referrals (Hofman, 2008).

23 2009/2010 SWAp review indicates that procurement of syringes has been a problem nationwide (MoH, 2010).

24 A medical assistant is the most junior level of clinician in the health system

25 Reproductive health commodities are also more "expensive"; they are therefore the first to go under budget constraints. For example, DHMTs have to pay a handling fee to the Central Medical Store for distribution of Depo within their district. Reluctant to pay this fee, many DHMTs tend to order insufficient quantities of Depo.

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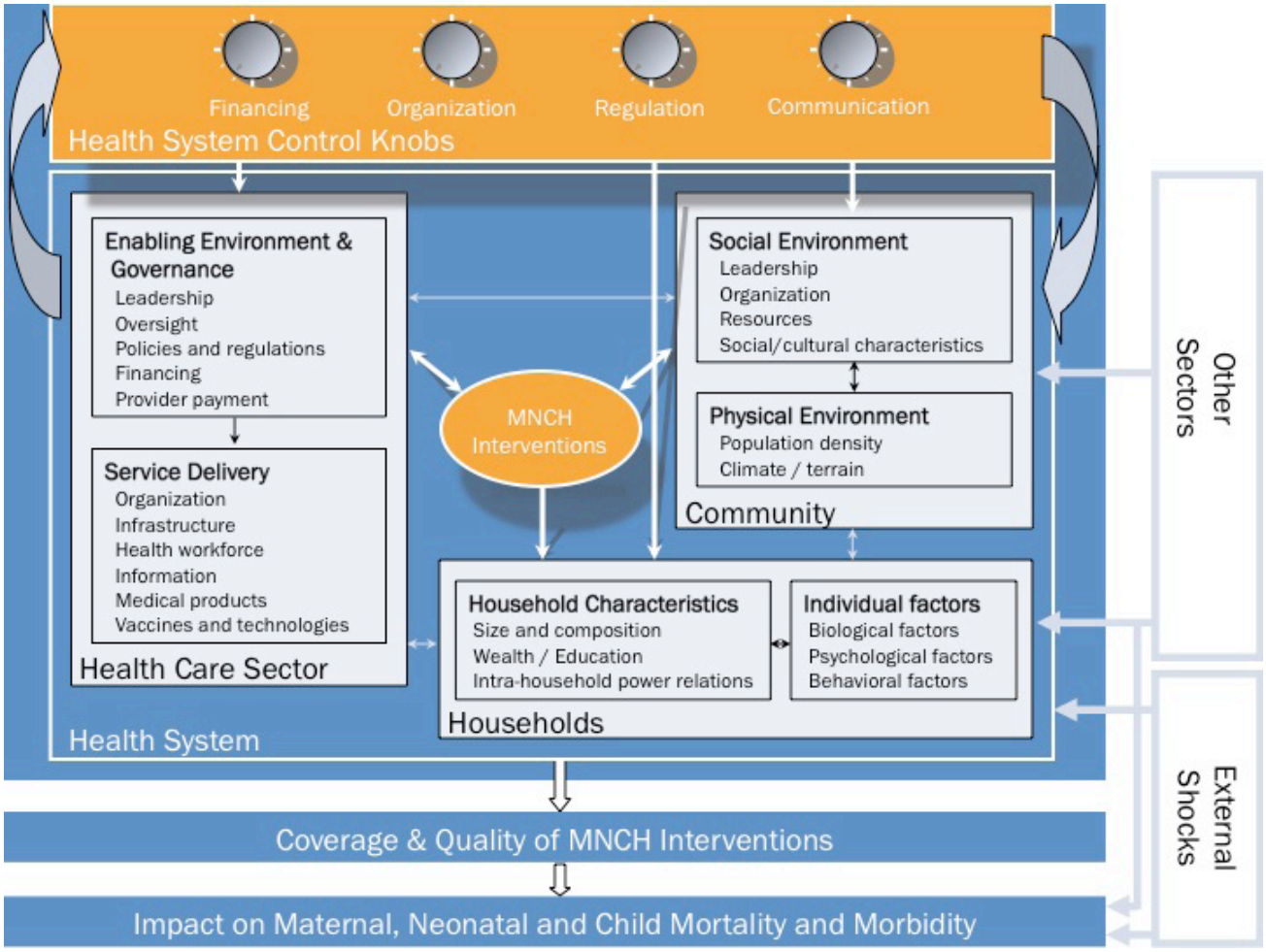
Appendix 1: Key Informants Interviewed

Name	Organization
Amouzou, Agbessi	Johns Hopkins Bloomberg School of Public Health, Baltimore
Banda-Maliro, Lilly	USAID – Malawi, Deputy Team Leader (Health, Population and Nutrition)
Bandazi, Sheila N.	Ministry of Health – Director of Nursing Services
Blanchard, Holly	Maternal and Child Health Integrated Program – Washington, DC
Burrows, Dave	Maternal and Child Health Integrated Program – Malawi Program Officer HQ-Zambia (Phone conversation)
Caiola, Nancy	Maternal and Child Health Integrated Program – Washington, DC
Chanza, Harriet	World Health Organization (WHO) – National Professional Officer – RH/MPS
Chimota, H.R.	Ministry of Health – Controller of Human Resources Management & Development
Chinombo, Anna	Maternal and Child Health Integrated Program – Malawi Community-based Maternal and Neonatal Health Specialist
Ford, Nick	Family Health International (FHI)
Ilse, Julia	GTZ – Human Resources adviser
Kalimbuka, Gladys	Machinga District Hospital – Nurse-midwife in the labor ward
Kumzinda, Potiphar	Christian Health Association Malawi (CHAM)
Liv Evensen, Anne	Royal Norwegian Embassy - First Secretary/Health and HIV
Lomosi, Henderson	Mponela Rural Hospital – In-charge
Lwesha, Victoria	Maternal and Child Health Integrated Program – District Coordinator Machinga & Phalombe
McGrath, Michael; George, Joby	Save the Children – Country Director; Senior Health Manager
Mhango, Chisale & Kachale, Fannie	Ministry of Health – Reproductive Health Unit (Director and Deputy Director)
Mon, Aye Aye	Unicef – Reproductive Health & HIV Manager
Mtonya, Sarah	UK Department for International Development (DFID)
Nkhambule, Jerome; Banda, Joster	District Medical Officer – Kasungu District; Chief Clinical Officer
Nyasulu, Dorothy	UNFPA – Assistant Representative
Nyirongo, Mexon	Management Sciences for Health – Community-Based Family Planning Chief of Party
Phoya, Ann	Ministry of Health - Director of SWAp
Rashidi, Tambudzai	Maternal and Child Health Integrated Program – Malawi Chief of Party
Rosenblatt, Seth	Maternal and Child Health Integrated Program – Washington, DC
Rozario, Aleisha	Maternal and Child Health Integrated Program – Malawi
Schouten, Erik	Ministry of Health – HIV/AIDS Technical Advisor
Soko Puleni, Luwiza	Maternal and Child Health Integrated Program – Malawi Maternal and Neonatal Health Specialist
Thetard, Rudi	Management Sciences for Health (MSH)
Umbandwa, Frank	Ministry of Health, Department of Planning & Policy Development

Name	Organization
Walker, Damian	Johns Hopkins Bloomberg School of Public Health, Baltimore
Zithane-Nkunika, Hudson	Ministry of Health, Department of Planning & Policy Development (Health System Strengthening (HSS) Coordinator & Global Fund (HSS) Desk Officer
Mpando, Davis Tenga, Mariam Kondowe, Ella Dembo, Abert	District Health Management Team – Machinga District District Medical Officer Human Resources Officer Community Health Nursing Officer District Environmental Health Officer
Kanyangalazi, James Mlaviwa, Biswick Musa Banda, Law Chumachao, Enock Medi, Amos W. Luhanga, Ezekiel	Machinga District Assembly District Commissioner Director Planning & Development Director Administrator District Education Manager Director Finance Monitoring & Evaluation Officer
Community group	Chikaonde Village, Ntaja Health Center catchment area, Machinga District
Mid-term evaluation of CBDA program	Ministry of Health – briefing on evaluation by GHTech

Appendix 2: Strengthening Health Systems to Improve MNCH Outcomes—A Framework



Appendix 3: Key Informants Guide

Interview Guide:
Key Informant

Interviewer name: _____

Date: _____

Time: from _____ to _____

Case study country:	(Malawi)

Details of key informant:

Name:	
Organization/department:	
Title:	
Time in post:	
Address/location:	
Request for anonymity (Y/N):	

Interviewer comments:

GENERAL NOTES RELATING TO THIS INTERVIEW GUIDE

Interviews will be conducted in the US (Washington DC area) and in the case country.

They will be held with:

- government officials from relevant ministries/departments
- representatives from various organizations (multilateral/bilateral organizations, foundations, international/local NGOs…)
- health workers and managers in both public and private health care facilities of various levels (primary care, hospital)
- public health researchers in academic centers

A short introduction will be provided before each interview (see next section).

Sections A–E provide indicative questions to guide the discussion in the various areas relevant to the case studies.

The interview guide should be used flexibly. The wording of the questions can be adapted according to who is being interviewed. The sequence of the questions can be modified as needed. Respondents do not necessarily need to be asked all the questions. The selection of questions should be based on the area of expertise of the respondent and on the respondent's answers to previously asked questions.

It is likely to be easier for the respondent to describe/discuss the current maternal health situation than the situation that prevailed ten years ago. This is why the more detailed questions are asked in connection to the present situation.

As multiple respondents are interviewed, data from prior interviews can be used to clarify and triangulate facts on the situation. Health systems strengthening interventions and policies can be asked about directly if the respondent does not mention them without prompting.

INTRODUCTION TO THE INTERVIEW

(Use the following points as appropriate)

- MCHIP is the USAID Bureau for Global Health's flagship maternal, neonatal and child health (MNCH) program. It focuses on reducing maternal, neonatal and child mortality and accelerating progress toward achieving MDGs 4 and 5. Awarded to Jhpiego and partners in September 2008, MCHIP works with USAID missions, governments, nongovernmental organizations, local communities and partner agencies in developing countries to implement programs at scale for sustainable improvements in MNCH.
- The drive to achieve the health MDGs by 2015 has mobilized leaders, policy makers and donors to focus on attaining clear reductions in maternal and child mortality. While there has been some progress in reducing child mortality in Sub-Saharan Africa, maternal mortality continues to pose a persistent challenge. To begin to shed some light onto what countries can do and donors can support to accelerate

progress on MDG5, MCHIP is examining two countries in Sub-Saharan Africa that have introduced comprehensive reforms aimed at increasing access to a range of services that save mother's lives. This interview is being conducted as part of one of the two country case studies. It aims to capture the views and perspectives of the various actors who are in one way or another involved in or knowledgeable about health system strengthening initiatives and/or maternal health issues.

- Both case studies are structured around a common framework that is being developed for MCHIP. The objective of the framework is to allow assessing the effects of health system strengthening initiatives on newborn, child and maternal health results. A first version of the framework was presented to MCHIP in DC in January 2010. The case studies will provide an opportunity to refine and validate this new framework.
- The case studies focus on the relationship between the health systems and indicators of maternal health. We may ask about specific indicators of maternal health in order to develop a full picture of factors relating to changes in maternal mortality and morbidity.
- This interview provides an opportunity for a variety of stakeholders to share their thoughts on:
  - the maternal health situation in the country: progress, achievements and challenges
  - the access, use and quality of the three selected maternal health services and how these could be further improved
  - past and ongoing health system strengthening initiatives and their effects on maternal health services (and status)

SECTION A – GENERAL QUESTIONS

Key ideas to explore:

Assess for which aspects of the case study the respondent's experience is the most relevant – you can then focus on questions relating to those aspects.

A1. Is/was the respondent's organization or department directly involved in maternal health activities in Malawi?

IF YES:

- Which activities?
- Is/was the respondent personally involved in those activities?

A2. Is/was the respondent's organization or department directly involved in health system strengthening activities in Malawi?

IF YES:

- Which activities?
- Is/was the respondent personally involved in those activities?

SECTION B – CURRENT MATERNAL HEALTH SITUATION (IN THE BROADER HEALTH SYSTEM CONTEXT)

Key ideas to explore:

- What does the respondent think of the maternal health situation in the country?
- How do the different boxes of the framework contribute to this situation?
- What does the respondent consider to be the main obstacles to improved maternal health?
- Which elements of the health system pose the biggest challenges and which are most conducive to better results?

1. Maternal health status

B1a. How would you summarize the maternal health situation in Malawi?

B1b. What do you consider to be the main obstacles to improved maternal health in Malawi?

This could include elements from any of the boxes in the framework.

2. Access to/use of selected maternal health services

B2a. In your view, what are the main reasons why a pregnant woman would NOT use antenatal care in Malawi?

Probe elements from the different boxes in the framework!

For example:

- *Limited geographical access: 'physical environment' and/or 'service delivery' and/or 'other sectors' (transport)*
- *Financial barriers: 'enabling environment and governance' (health financing) and/or 'social environment' (poverty)*
- *Lack of women's freedom of movement: social environment (cultural/social norms)*
- *Lack of knowledge about when to seek care: 'individual factors' (psychological/behavioral factors)*

B2b. In your view, what are the main reasons why a pregnant woman would NOT seek the services of a SBA in Malawi?

Probe elements from the different boxes in the framework! (see examples above)

B2c. In your view, what are the main reasons why a pregnant woman who received antenatal care and/or who sought the services of a SBA would NOT receive necessary EmOC in Malawi?

Probe elements from the different boxes in the framework! (see examples above)

B2d. In your view, what are the main reasons why a woman would not seek family planning services or use contraceptive methods in Malawi?

3. Quality/availability of selected maternal health services

B3a. Are there, in your opinion, major issues hampering the effective delivery of any of the three maternal health services in Malawi, that relate to:

- The organization of the services *(e.g., levels of care, supervision, referral, private/public, ...)*
- The infrastructure *(e.g., number/type of facilities, distribution, condition, maintenance, utilities...)*
- The human resources *(e.g., number, mix, gender, distribution, training, attitude...)*
- The medical equipment *(e.g., availability, condition, maintenance...)*
- The information system *(e.g., comprehensiveness, validity, timeliness, use...)*
- The vaccines and medical supplies *(e.g., availability, affordability, quality...)*

The focus of this question is on one particular part of the framework, namely 'Service Delivery'

B3b. What are, in your view, major strengths of the health system that may contribute to better maternal health outcomes?

Probe for factors in the different boxes of the framework (e.g. strong leadership, strong governance, clear policy/strategy, strong public-private partnership, effective decentralization, universal health insurance, strong sense of solidarity in the community, high literacy rate among women, ...)

B3c. What are, in your view, major weaknesses of the health system that may hinder progress in maternal health?

Probe for factors in the different boxes of the framework (e.g. poor leadership, lack of governance, unclear policy/strategy...)

SECTION C – CHANGES IN MATERNAL HEALTH SINCE 2000

Key ideas to explore:

- How does the respondent believe the maternal health situation has changed in the country?
- Where (in which boxes of the framework) did the biggest changes occur?

C1. Overall, do you think the maternal health situation today is better, the same, or worse than what it was ten years ago? Why?
This question relates to the comparison of the two snapshots.

C2. In the course of those ten years, have you noticed major changes affecting the delivery of the three maternal health services and relating to:

- The organization of the services *(e.g., levels of care, supervision, referral, private/public, ...)*

- The infrastructure *(e.g., number/type of facilities, distribution, condition, maintenance, utilities…)*
- The human resources *(e.g., number, mix, gender, distribution, training, attitude…)*
- The medical equipment *(e.g. availability, condition, maintenance…)*
- The information system *(e.g., comprehensiveness, validity, timeliness, use…)*
- The vaccines and medical supplies *(e.g., availability, affordability, quality…)*

The focus of this question (which also compares the two snapshots) is on one particular part of the framework, namely 'Service Delivery'

C3. What external factors, if any, have contributed to these changes?

Probe for any factor that is not associated with the control knobs (factors outside the health system such as a major economic crisis, important changes in the political context…)

SECTION D: MAJOR HEALTH SYSTEM STRENGTHENING INITIATIVES SINCE 2000

Key ideas to explore:

How have health system strengthening initiatives (not) contributed to observed changes in maternal health over the past 10 years?

D1. In the past ten years, has the government adopted any major health system strengthening initiative?

Probe for initiatives that would fit under each of the control knobs in the framework.

If more than one initiative was adopted, ask the following questions for each of them separately.

D1a. Who initiated the HSS initiative?

Find out whether it was donor-driven?

D1b. If it was not initiated by the government, was there immediate government buy-in?

D1c. Which problem(s) was the HSS initiative meant to address?

D1d. To what extent did the HSS initiative manage to solve these problem(s)? Please explain.

D1e. Did the HSS initiative change some of the incentives in the system? Please explain.

D1f. What were the positive/negative effects of the initiative on the four selected maternal health services?

SECTION E: FURTHER HEALTH SYSTEM STRENGTHENING INITIATIVES NEEDED

E1. According to you, what other HSS measure(s) should the government adopt to increase the accessibility, use and quality of the selected maternal health services? Why?

Probe for initiatives that would fit under each of the control knobs in the framework.

ENDING THE INTERVIEW

Thank the respondent for taking the time to answer all the questions. Ask if there is any important point that was left out or if there is anything he/she would like to add.

The Maternal and Child Health Integrated Program (MCHIP) is the USAID Bureau for Global Health's flagship maternal, neonatal and child health (MNCH) program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening.

www.mchip.net

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