Sudan

Assessment of the Effective Deployment, Retention and Performance of the Graduate Village Midwives (VMWs) 2008-2010

Operation Research Report

November 2011

Prepared by:

Dr Ahmed M. Gamal Eldin (Team Leader)

Dr Nasr Abdalla

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Acronyms

AHS	Academy for Health Sciences
DG	Director General (MoH)
EPI	Extended Immunisation Programme
FGD	Focused Group Discussion
FMoH	Federal Ministry of Health
HV	Health Visitor
IHVT	Institute for Health Visitors Training
MM	Maternal Mortality
MMR	Maternal Mortality Ratio
MTS	Midwifery Training School
NMW	Nurse Midwife
OR	Operation Research
RH	Reproductive Health
SMoH	State Ministry of Health
SMW	Sister Midwife
SSI	Semi-Structured Interview
TBA	Traditional Birth Attendants
TMW	Technical Midwife
ToR	Terms of Reference
VMW	Village Midwife

Acknowledgement

A number of people have contributed, in different ways, in facilitating our work in Khartoum and in the field and in making this report possible. First and foremost, we are deeply indebted to the Village Midwives in the six states covered by this research for their time and for sharing their rich experiences with an appreciative ease frankness and honesty. The Deans, teaching and supporting staff in the ten midwifery schools that have been visited (including the Institute for Health Visitors Training in Omdurman), welcomed us and generously shared their long and diversified experiences and perspectives with us. We cannot thank them enough for that. We are also indebted to the beneficiaries of midwifery services and local community leaders in all the states visited, who contributed in our focused group discussions and interviews.

We are also equally grateful to the many government health and non-health officials, including State Health Ministers and DGs, RH Coordinators, Deans and staff of AHS in Khartoum and the six states, who spared generous time of their busy schedule for our interviews and discussions.

The UNFPA staff in the six field offices and in Khartoum (including the drivers) have professionally and patiently facilitated our fieldwork plans and our hectic travel schedules across the country. We thank them for this, and for their openness in sharing with us their experiences, perspectives and internal reports. We also deeply appreciate the time and perspectives of the many UNFPA partners and stakeholders in midwifery who participated in this research.

The draft questionnaires and guiding questions for this research have been tested with VMWs in Haj Yousif, Khartoum North, and we would like to thank them for their time and perspectives.

At last, but not least, we would like to express our deep gratitude for the three data collectors (Sumaya, Selma and Nuha) who helped in conducting the interviews with VMWs in Gadarif Kassla and White Nile. We also appreciate the help by Arwa Salah and her team who entered, processed and statistically analysed the quantitative data.

1.0 Introduction

This report summarises the main findings, issues and recommendations of the operation research (OR) titled: *Assessment of the Effective Deployment, Retention and Performance of the Graduate Village Midwives (VMWs) 2008-2010.* The OR was sponsored by UNFPA Khartoum and conducted by two independent consultants, Dr Ahmed Gamal Eldin (Development Planning Specialist) and Dr Nasr Abdalla (Obstetrician). The research covered six states (namely: Gadarif, Kassla, White Nile, North Darfur, South Darfur and West Darfur) in which UNFPA Sudan Office has been involved in supporting the training of Village Midwives (VMWs) under its reproductive health (RH) programme. The focus of the research was on the period between2008 and 2010.The fieldwork for the research was conducted during the period between September and October 2011. The team conducted interviews and discussion in Khartoum and visited all the six states and the eight functioning Midwifery Training Schools (MTSs) in these areas.

The ToR of the OR outlined five specific objectives for the assessment as follows:

1. To determine effective deployment of VMWs to their community of origin based on the initial need based selection by the respective localities
2. To assess availability of VMWs to ensure continuity of maternal and newborn health services
3. To assess the level of knowledge and skills gained from the training.
4. To determine client-service provider satisfaction in relation to the type of services provided
5. To identify existing retention and sustainability measures (incentives, replenishment of kits, supportive supervision, in-service training etc).

The ToR also identified four key questions to be answered by the research as follows:

- ❑ Where the VMWs are? Does the distribution meet the required standards?
- ❑ Do the VMWs have the right capacities and material support necessary for provision of the midwifery service?
- ❑ What is the quality of the services they are providing?
- ❑ Are the beneficiary communities satisfied with the service rendered? and are the VMWs satisfied with the job in terms of material and non-material gains?

Both quantitative and qualitative data was collected and analyzed using different tools. Qualitative data was collecting through two questionnaires. One was used with VMWs and the other with service users (See appendix for details). Semi-structured interviews (SSI) and focused group discussions (FGDs) were used as the main method for collecting qualitative data. In addition to these a critical review of the literature and reports and conscious observations of researchers were also used to consolidate and inform other methods.

Random sampling techniques were used to select respondents/participants. A sample of 25% of the targeted population was randomly selected for the VMW survey in Kassala, Gadarif and White Nile and 10-11 VMW were randomly selected from each of the 3 states of Darfur. To ensure that the sample is representative of the targeted population, we cluster the sample in terms of state, locality

and MTS, and then use the random technique to select from the graduate lists of in each MTS for the period between 2008-2010.

The full details of the methods and methodologies used to collect and analyze data are outlined in the methodology section of this report, and the people who participated in the interviews and/or discussions are listed in the appendices section, which also provides more details about the ToR.

2.0 Main Findings

Detailed finding of the OR are discussed in the relevant sections inside this report. The main findings, however, can be summarized as follows:

- The involvement and support provided by UNFPA for midwifery service is highly relevant, significant, appreciated and recognized as such, by many authorities and served communities, and seems to be having a clear impact in improving the service throughout the state of intervention.

- Trained VMWs showed high level of knowledge and skills in crucial areas relevant to their work, areas and context.

- VMWs expressed high satisfaction with their chosen career, and showed strong commitment to their profession. They generally view their service as a ”humanitarian work”, and thus all continue to offer their services even when they were not paid, and indeed after retirement.

- Financial gains varies from one VMW to the other and from one area to the other (from earning enough to afford a private car to struggling to cover expenses and subsidizing incomes by engaging in other businesses such as farming and selling vegetables in local markets). Some make more money from home care/administration of injections and home nursing and first aid than from deliveries. Nevertheless, in kind support and social/psychological gains are important and significant (community respect and appreciation).

- The last few years witnessed steady (sometimes sharp) increase in the number of trained/enrolled and indeed recruited VMWs in all the states, especially in Darfur.

- The last few years also witnessed a significant increase in’ in-services training, largely due to the involvement of JICA.

- All schools are increasingly attracting/selecting younger and more educated women. This is a good development that also has the potential of presenting new challenges (single VMWs get married and move away with their husbands).

- Due to the recent sharp increase in school intakes and government/NGOs recruitment of VMWs, coverage has significantly increased in all states. For example in 2011 figures show that Kasala has 59.5% coverage in terms of population standard criteria (i.e. A VMW per each 2,000 people) and 29.5% coverage on the basis of at least one VMW for each village. White Nile 59% coverage per population, Gadarif and West Darfur 57% each on the basis of population criteria standard, North Darfur 53% on population standard, and 15% on village standard. South Darfur has 39% coverage on population criteria compared to a higher 56% on village criteria.

- The one year basic midwifery training programme is the most important and relevant system for serving the most needy rural populations in remote and deprived areas. This system can also provide better guarantee for deployment and distribution of VMWs.

- The recruitment of VMWs by the government (localities) is a key factor in ensuring better distribution, deployment, continuity, accountability and indeed quality of midwifery services.

- Various schools are adopting different curriculums. These curriculums are sometime not used consistently and in most cases not fully written.
- Inadequate or lack of means of transportation is a major problem for schools in all states. Lack of transportation affects the quality and length of training as well as the identification and selection of new candidates and the supportive supervision of VMWs in their own areas of work.
- There is no adequate or consistent materials (consumable supplies) and equipment support for VMWs in all the states. Equipment support is better, but all VMW buy all the materials themselves from local pharmacies.
- Health visitors and assistant health visitors are vanishing in almost all states. This process is worrying and has an impact on the training of VMWs and their on-the-job supervision and support. Unless immediately resolved this will become a major problem in the very near future.
- There is widespread misunderstanding, misinformation, misrepresentation and confusion about what VMWs are, and what they do or do not do.
- There are many agencies and institutions interested or already active in supporting basic and in-service training of VMWs as well as improving the infrastructure of midwifery schools, however efforts are not well coordinated and sometimes overlapping.
- The social image of midwifery and village midwives is improving in recent years, and seems to be better in Darfur compared to other parts of the country. The selection system, government and NGOS recruitment of VMWs and the involvement of some midwives in other health services/ issues (e.g. assisting in obtaining birth certificates, providing first aid and home nursing, participating in EPI and HIV/AIDS campaigns) have indeed helped in improving image. Some efforts in community awareness have also helped.

3.0 Key Issues for UNFPA to Think about and Explore in More Depth

The following are identified as key issues that are of particular importance in advancing the training and work of VMWs, and hence need urgent attention, further reflection and in-depth exploration:

- The implications of the shift to the new two year system of Midwife Technician on rural populations and remote areas.
- Working with or assisting the midwifery schools to manage the on-going transition of their management responsibilities and all aspects of basic training from the RH Directorate to the Academy of Health Sciences.
- The best ways to stop the diminishing numbers of health visitors.
- The need and possibility of improving the one year VMWs basic training curriculum and ensuring teacher have posters for teaching and students have take-home learning materials (hand-outs).
- Training and supporting midwifery school teachers and managers.

- ❑ Best package of in-service training for VMWs in each state, given the state circumstances and needs.
- ❑ Ways to improve supportive supervision in remote areas.
- ❑ Best ways to strengthen advocacy and lobbying in all areas of intervention (White Nile and Gadarif experience).
- ❑ Ways to strengthen internal linkages within UNFPA programmes and expand impact.
- ❑ Dealing with temporary sub-schools (East), two schools in town (Darfur).
- ❑ How to avoid over focusing on saving the mothers and forgetting their newborns.

4.0 Methodology

Given the nature of this study, and the diversity of the informants and the type of information sought, a set of methods and methodology were developed and adopted, each is used in the most suitable cases and with full awareness of its strengths and weaknesses. Full details of the methods and methodologies designed and adopted in this OR are provided in the appendixes section, but can be summarized as follows:

- **Literature review** and written document review and analysis.
- Questionnaire with service providers (VMWs who graduated between 2008-2010 (123 cases). The draft questionnaire was drafted, discussed with UNFPA, finalised and tested in Khartoum North (Haj Yousif). It was then modified, finalised and used for training data collectors.
- **Questionnaire** with service users and potential users (87 cases).
- **Focused group discussions** (FGD) with:
    - VMWs (17 groups of 4-7 persons)
    - Community leaders (13 groups of 4-8 persons).
- **Semi-structured interviews (SSI**) with:
    - Project staff (Khartoum and field offices), stakeholders, partners (UN, INGOs, NNGOS etc) school management and teaching staff (separately), relevant health and non-health officials (Khartoum and states).
    - Midwifery school facility checklist (8 schools in 6 states)
    - Observation and field notes.
- **Conscious and critical observation** and field notes of the consultants and their research assistantswere used as essential methods for gathering information and triangulating data.
- Data collectors were trained and oriented (Khartoum and in the 6 states).

The fieldwork covered the 6 states and Khartoum (UNFPA and government bodies such as FMoH and AHS).

4.1 Assuring Quality and Reliability

It is imperative to ensure that we obtain and present outputs that are guided by the ToR and are of the highest possible quality. It is equally important that our adopted process for conducting this exercise is fair and balanced, transparent and complies with recognized research ethics and professional conduct and practices. Among other things, the consultants ensured that these principles are adhered to by:

- Respecting the privacy of the informants and confidentiality of the information made available to inform the research.
- Giving the informants that right to refuse to take part or answer any specific question, without explaining the reason for that.
- Triangulating data to ensure accuracy and improve reliability of information by collecting the same questions using different methods and from different sources (persons and/or documents).
- Actively seeking and fairly incorporating different perspectives of different actors.
- Requesting various informants to freely explain their views, interpret their actions and reactions of others and give their understanding and reading of realities.
- Designing the questionnaire and guiding questions in a way that allows for internal crosschecking of accuracy and reliability.
- Re-interviewing the same person/s in light of new information or to seek further explanation/justification for possible contradictions and internal consistency of information.
- Using advanced statistical analysis to crosscheck and determine the significance of any factor/pattern or correlation. In doing so, we will seek the professional assistance of a statistician.
- Ensure close, honest and professional consultation with UNFPA and its implementing partners (IPs)
- Sharing initial findings with UNFPA and its partners in Khartoum and the states, and requesting and incorporating relevant comments and addressing relevant observations.
- Sharing draft reports with UNFPA and requesting and incorporating relevant comments.

Random sampling techniques were used to select informants/participants. A sample of 25% of the targeted population was randomly selected for the VMW survey in Kassala, Gadarif and White Nile and 10-11 VMW were randomly selected from each of the 3 states of Darfur. To ensure that the sample is representative of the targeted population, we cluster the sample in terms of state, locality and MTS, and then use the random technique to select from the graduate lists of in each MTS for the period between 2008-2010.

5.0 Evolution of Midwifery

In order to understand the current nature and status of midwifery in Sudan, it is imperative to trace its evolution and highlight some main shifts and development that emerged out of this history. Midwifery in Sudan, however, has not evolved in isolation from other parts of the world, especially Africa.

Midwifery as a profession varies from country to country. Most histories go far back, well before the rise of modern obstetrics. What is often forgotten by modern health systems is that, in most instances ,midwifery has not grown out of, or been a specialist branch of nursing, rather has its origins in social welfare and public health. Midwives working with and serving women in the community is to be found in almost all countries, even those that now have more than 90% of births in health facilities.

In many counties in Africa, the early history of midwifery owes much to the early missionaries unlike Nursing which–which required armed warfare building a nursing cadre to care for wounded and dying soldiers. Many of the early programs for midwifery were less formal than those for nursing and often seen as being at a lower academic level.

Although in many African countries midwifery is often incorporated into nursing curricula, and is not provided as a separate program, some counties did develop specialist midwifery programs. In the late 1960s, concern for the high level of maternal mortality in Africa, some African countries opened professional midwifery schools for registration as a midwife. Later on, in these countries a diploma level program was developed, and more new countries followed this route. These programs are mainly focused on midwifery care in institutions, although many did keep a focus on first level care, close to where women live.

5.1 Midwifery in Sudan

In contrast, the models in Sudan have tried from the start to ensure that the community midwives come from, or have links with the community they serve. Two British sisters: Mabel Wolff (1890-1981) and Gertrude Wolff, who were initially in the country to train nurses, were struck by the massive problem of lack of trained midwives and its devastating consequences. They decided to respond to this situation by developing, organizing and conducting a special midwifery training package, and then persuade the elderly traditional birth attendants in the capital city Khartoum to join. After many years of disinterest and strong resistance, in 1918 Miss M Wolff assisted by her sister Gertrude succeeded in convincing the first group of traditional midwives (traditional birth attendants) to join a training programme which became the nucleus of midwifery training in Sudan. The duration of training varied, from 3months, then extended to 6 and finally to 9 months. The training started in a house in a residential area, and then transferred to the current site of Omdurman Midwifery School (the first in the country). The school tutors were mainly Miss Wolf and her sister in addition to 3 Sudanese nurses (including the renowned pioneer of midwifery Madam Batoul). Graduates of training were called *Trained Traditional Birth Attendants (TBAs).* Mabel Wolff became the founding Matron of the first midwifery school in Sudan, and continued in this position until 1930 when she was appointed as the Inspector of Midwifery in Sudan and succeeded at the school by her elder sister Gertrude (Gee).

In 1921 a direct entry for a one –year midwifery training programme for village midwives was started. The trained TBAs brought their daughters and relatives, in addition to others nominated by

their villages for midwifery training. The school had 3 wards, one for antenatal care, one for delivery and one for complicated pregnancies. The training staff were the same as those involved in the training of TBAs. The graduate from the one-year program were given the title of *Village Midwife (VMWs).*

The training course evolved gradually and had increased to 6 months by 1924. Individual tutoring and coaching were the main methods of teaching, and each student must attend 20 lectures, deliver a minimum of 20 cases and be present at the delivery of another 20 cases. The training focuses mainly on imparting knowledge and skills to students in hygiene, cleanliness and safety. Practical and oral exams were conducted at the end of each study course and it was run by British Medical officers from the Sudan Medical Department. On passing the examinations, the students were given certificate; as a license to enable them to practice in the Sudan.

In 1924 a one-year new training program for midwifery profession was commenced in the same site and in parallel with village midwives training. This time the candidates for training were nurses, who successfully completed a 3-year nursing program with a certificate in nursery. The graduates of this program were given the title of a *Nurse Midwife (NM).* The first batch was composed of 4 nurses, including Madam Batoul. The new Nurse Midwives were trained to work in the health facilities mainly the hospitals, both inside and outside the capital Khartoum. The nurse candidates for this training were nominated by the relevant hospitals.

The trained TBAs, Village Midwives and Nurse Midwives were also used to combat the custom of complete female circumcision, as combating the practice altogether was not seen as feasible at a time. The standard of midwifery has been raised to a higher level at Omdurman and Khartoum, which were fully covered by trained midwives. Other parts of the country, however, remained isolated from this process, and left for the elderly traditional birth attendants to serve.

In addition to training traditional midwives, in 1930, Miss Wolff and her sister also started the first Ante-Natal Clinic in Sudan, within Midwifery Training School. The Clinic, with some great opposition at first, even actually became very successful and popular. The standard of training has also gradually improved as younger and more educated women were persuaded to join.

In 1942 the health authority thought for a cadre to look after pregnant women, children, supervise the village midwives, to train pregnant women in preparing a healthy diet for a pregnant woman and the baby, sewing cloths for the baby and to provide vaccination for women and children. To have that cadre, in the same year, 1942 a group of 6 Nurse Midwives were given one year training at Omdurman Midwifery School. After that, they were deployed to various hospitals to practice what they have learned at the school. Those new better trained graduates were given the title of: *Health Visitor (HV).*

By 1948, the roles and the importance of the Health Visitors became apparent, and the officials decided to establish a separate training school for them. The new school, known as *Institute of Health Visitors (IHVT),* was established in Omdurman adjacent to the first midwifery school, and

continued to this day in the same place and shape. The number of students at the new institute continued to be only 6, however, the duration of training was extended to 2 years. Later on, as the country needs and the capacity to train grew, the number of trainees started to increase, yet remained limited. In spite of its central role in promoting midwifery in the country, the training of health visitors have also suffered from repeated interruption from time to time, mainly due to lack of funds. This interruption in addition to age factors led to the current sharp shortage of health visitors at all levels.

In fact there have been a number of years when the institute was non-operative due to funding problems. The current batch at the institute (2010-2011) composed of 31 students from across the country.

The graduates of the IHVs were to play a crucial role in midwifery, antenatal and postnatal services across the country up to this day. For example over the years their responsibilities extended to cover the management of midwifery schools and teaching of midwives (village and nurse-midwives). Indeed the first graduates have helped in establishing and running all the midwifery schools across the country.

Despite the overall impact of World War II on the colonial administration's budget, the training of midwives and their supervisors was gradually scaled up in the 1940s and 1950s. Consequently, by the eve of independence in 1956, over 624 midwives have been trained, of which 40 were Nurse Midwives and 12 were Health Visitors.

The early independence years has not witnessed the level of expansion need to resolve the severe shortage of trained midwives in the regions, especially in remote rural areas. Trained midwives have therefore largely remained as an urban (mostly Khartoum) based service. However, in 1964 a midwifery school for village midwives was opened in Bahry (Khartoum North) to help in covering the villages in Khartoum State, while the Omdurman school remained a national school for graduating Nurse Midwives.

In the early 1970s extra schools for village midwives were opened, but unfortunately all were closed due to lack of fund.

In the late 1980s a Midwifery Institute was established. The institute was fully supported by USAID. The candidates were graduates of Khartoum High Nursing School, with a diploma in nursing. Their basic education was high secondary school. The training duration was of 18 months. The graduate is carrying a title of *Sister Midwife (SM).* Unfortunately, the institute was closed in 1992, due to lack of fund.

Although schools such as Kassala and Fashir were established during the early years of independence (1957 and 1959 respectively), the other schools covered by this study were established during or after the expansion of midwifery education in the states in the 1970s. For example, Nyala MTS was established in 1971, Gadarif in 1973, Duiem 1974, Kosti 1975, Genaina 1986 and Wager Temporary School in 2010.

The standard of training of midwives has gradually continued to be raised as the younger and more educated women are attracted to the profession, whose social image also started to improve. In 2009 a 2-year program (*Diploma certificate*) and a 4-year program (Bachelor of Science in Midwifery) were introduced. The 4-year program started in Khartoum and the 2-year one started in Wad Medani, Kosti, Kassala, Nyala and Khartoum, the one –year program is still continuing in these and all other functioning schools. The graduates of the new two year programme will be given the title *Technical Midwives (TMWs).*

By the early 2011, the Academy for Health Sciences (AHS) was formally mandated with managing and technically supporting all the midwifery schools in the country.

5.2 Historical Evolution and Present Situation

The modern training of midwives in Sudan, which started in 1920s, did not happen in a vacuum but took place within a context of a colonial government and an existing traditional practice of midwifery associated with widespread practice of female circumcision. Such training programmes which were sought to create enough modern trained Sudanese midwives, out of, and in rivalry to, an entrenched group of traditional midwives, known as *dayathabil*(midwife with a rope). Both the colonial context within which the new midwifery system was introduced and the beliefs of the *dayat* and the women they served have contributed to the slow development of the system and the resistance that faced the desired changes among the midwives, the other health professionals and indeed the community at large. The relationship between the Traditional TBAs and the direct entry students trained at the school have particular been and remained to be a difficult and complex one.

The genesis and the evolution of modern midwifery service in Sudan outlined above, and the nature and the path it had taken through the course of history has generated a number of distinctive characters and characteristics that have shaped midwifery services up to today. The following are some of these enduring characters and characteristics that can be traced back to the early years of the introduction of modern midwifery in Sudan over ninety years ago:

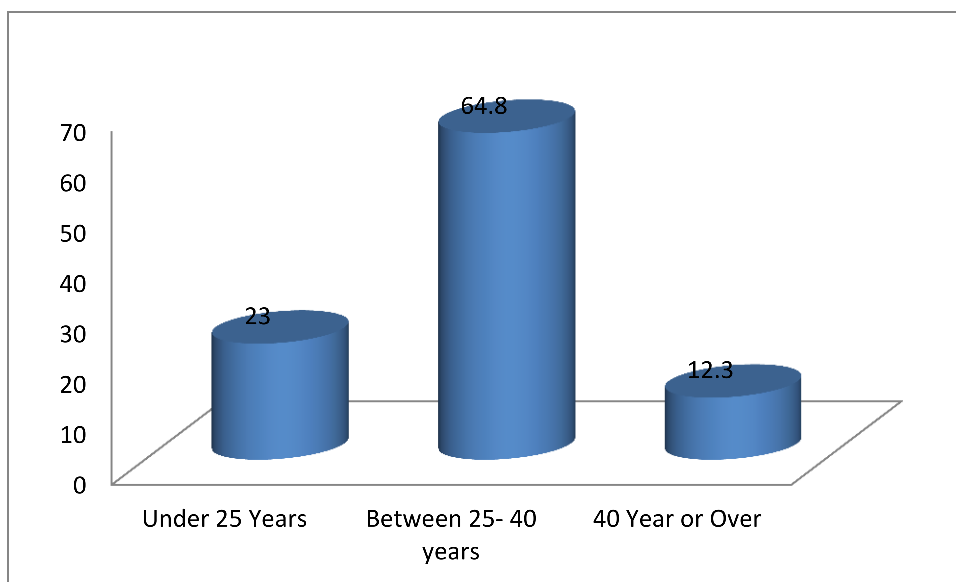
1. Entrenched traditional practices and socio-cultural beliefs were continued to be a key factors fuelling resistance to modernise midwifery, not only among the general public but also the midwives themselves.
2. The lower status of the profession and the women involved in it, who are often looked down upon even by other providers of health care services.
3. The state lack of interest in promoting the profession and its long term neglect of it. Midwives are often not seen as part of the health care system and therefore not recruited or paid by the government.
4. Midwives are often (mis)perceived or depicted, even by some health professionals as old, uneducated, socio-culturally inferior or backward women who are largely behind the very high MMR in the country).
5. Difficulty in attracting younger and more educated women from higher social classes.
6. Lack of agreed and universally used qualifications and curriculum, and continuous changes and amendments of curriculum, awards and system.
7. Interruption and closure of schools due to lack of funding.
8. High dependence on charitable sectors (missionaries and charitable persons, including government officials) rather than on state budget allocation.
9. The training concentrated in urban areas, especially Khartoum, with remote states and rural areas either totally neglected or severely underserved.

6.0 Backgrounds of VMWs

Some 73% of the VMWs included in the research graduated between 2007 and 2010. Among them 50% graduated in 2009.

Analysis of age groups of the VMWs involved, indicate a big shift whereby VMWs are getting increasingly younger compared the historical trends. As shows in the Chart below, nearly in one four of the new VMWs are below the age of 25, with many below the age of 20 years old. A further 65% are between 25-40 years and only 12% are above 40 years old.

Age Group of VMWs



The fact that VMWs are getting younger also has other positive implications. As shown in the table below, there is a statistically significant positive relationship between the age of midwife and her level of education; with younger VMWs have better education prior to joining MTSs.

Age and Level of Education

Age Group	Level of Education				Total
	Secondary school	Intermediate / Elementary school	No formal education	Other	
Under 25	2	16	0	8	26
25- 40 years	7	50	2	8	67
40 or over	1	4	0	6	11
Total	10	70	2	22	104

The disaggregation of data by states reveals significant differences within the general trends. As shown in the table below, the highest percentage of under 25 years old (60%) was in West Darfur (affected by the relatively young nomad VMWs), and the highest proportion of those between 25-40 years old (84%) and the smallest under 25 years old (8%) were in White Nile state, while the greatest percentage of VMWs who were above 40 years old (25%) was found in Kassala state.

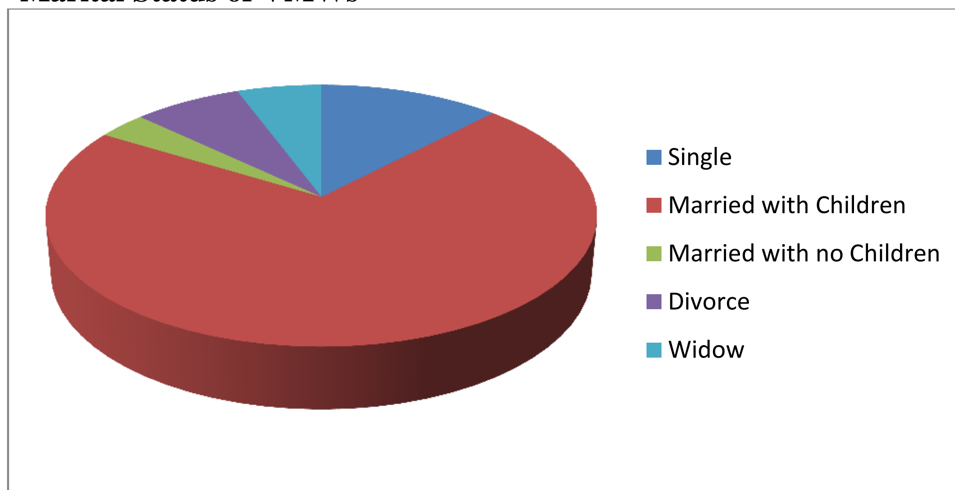
Age of Graduate VMWs By State

State	Age Group	% of Total
Gadarif	Under 25 Years	28.6
	25- 40 years	61.9
	40 or over	9.5
	Total	**100.0**
Kassala	Under 25 Years	20.8
	25- 40 years	54.2
	40 or over	25.0
	Total	100.0
North Darfur	Under 25 Years	11.1
	25- 40 years	77.8
	40 or over	11.1
	Total	100.0
South Darfur	Under 25 Years	16.7

	25- 40 years	66.7
	40 or over	16.7
	Total	**100.0**
west Darfur	Under 25 Years	60.0
	25- 40 years	40.0
	Total	**100.0**
White Nile	Under 25 Years	8.0
	25- 40 years	84.0
	40 or over	8.0
	Total	**100.0**

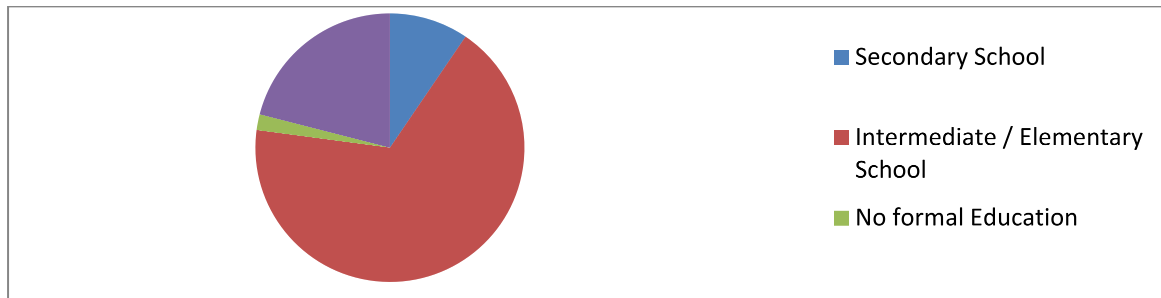
Moreover, in contrast to widely held views on VMWs as largely widows and divorcees, the research shows that the current are overwhelmingly married, with over 72% of them married and have children (for details see Pie Chart below). Only 13% are divorced or widowed and 12% are single. Although data is not available on the backgrounds of VMWs over the years, but if it was true that VMWs in the past were mostly widowed and divorced (something that contribute to the negative social image of the profession), then this has indeed changed in recent years, as shown above.

Marital Status of VMWs



In terms of level of education, the new WMWs, although there is a number of illiterate among them, these numbers are falling. Sixty seven percent of the interviewed VMWs have some primary or intermediate education and 10% had secondary education, while 23% had an informal or other type of education (Pie Chart below). This again shows that the depiction of VMWs as illiterate (and ignorant) women is a misrepresentation that is not supported by evidence. Furthermore, as shown in later section in this report, illiteracy has not made a barrier to the level of education and skills that students can gain. In fact illiterate VMWs tend to do even better than educated ones.

Level of Education of VMWs



6.1 In Their Own Words

- *"Those who are illiterate are good in all aspects, they have strong commitment and dedication to the profession, they concentrate with you, they pay more attention... The illiterate always achieve the highest results. They have a sense of competition and an urge to prove oneself."* Madam Tayba Khair Elseed, Dean of Dueim MTS.
- "The uneducated villagers (midwifery students) come here fully convinced and not half-hearted.... they are also very curious about knowledge." *Dean of the Kosti MTS comparing students with different background.*
- "The illiterate students are respectable women, they respect their teachers". *A teacher at Kosti MTS.*
- *"The nomad girls who have recently been brought to be trained as VMWs are young, illiterate but very clever."* RH Director, North Darfur.
- *"Although many of our 29 VMWs at Wager MTS are illiterate and some used to be practicing as TBAs, but they were very clever... they did well at school and now doing well with the women. "* A community Leader, Wager, Kassala State
- *"Those who cannot read and write are not losing out. You repeat for them, and they remember everything by heart, just like the Quran, they are very keen and good at it. They are also good at practical work, because the pay a lot of attention."* Teacher, Genaina MTS, West Darfur.

7.0 Motivation for Becoming a VMW

The overwhelming majority of VMWs across all the states are highly dedicated and motivated. When asked about the main factors that motivated them to become VMWs, they all expressed a combination of factors behind their decision. Liking the humanitarian nature of the work scored the highest and appeared in the answers of 69%, followed by income (63%) and saving mothers and new born lives (58%). Choosing midwifery because it was the only work opportunity in their areas was mentioned by 37% of the interviewed VMWs, while motivation by family members scored the lowest and appeared only in the answers of 21%.

7.1 In Their Own Words

The following are selected quotations that reflect how the interviewed VMWs expressed their motivations for becoming midwives:

- *"This is a humanitarian work, I like it."*
- *"I like the title Midwife, so I decided to become one. "*
- *"I am proud about this great profession."*

- *"They told us that if there is a divorcee or a widow who have nothing, then there is a chance for her to become a midwife."*
- *"Some people came to our village and met with the village leaders. They said to if there is a woman who has no husband, then she can come forward."*
- *"I am a widow and I have small kids that I needed to bring up".*
- *"I am a divorcee and have* 4 children. To support my kids, I applied for midwifery
- *"My grandmother suggested that I can be a good midwife and encouraged me to join the midwifery school."*
- *"I have always wanted to join the government and be part of the state by any means."*
- *'I saw in my dreams that I was helping a woman giving birth. So I became a midwife."*
- *There was no midwife in my village, and I saw many pregnant women suffering during labour, as well as their families.*

The above are brief statements made during FGDs with VMWs from various states.

As shown in the following sections, other VMWs are more elaborative in expressing the reasons behind their decisions to become midwives:

- *"I chose to become a VMW, because when I was 12 years old I witnessed a woman delivering without a midwife attending the birth, then I saw the woman bleeding after the delivery of the baby. No body from the surroundings could help her. At the end the woman passed away."VMW, FGD, Kassala.*
- *"A VMW in our village encouraged me to be a VMW, saying to me by being a Midwife you can improve your financial status. I was really in need of kind of support." VMW, FGD, Kassala.*
- *"During my childhood I wished to become a doctor, but I failed, because I discontinued my education for financial reason. I tried to be a nurse, but was not selected .Later on I joined the Red Crescent, and I used to accompany pregnant women to hospital for delivery, the thing which encouraged me to apply for midwifery training."VMW, FGD, Kassala*
- *"When I was a child, I saw a nomad woman who was pregnant and in labour. She was young and had difficulties giving birth and they say she was unable to pass urine, no one could help her and she passed away. There were many women, but they were just gathering and screaming around her. From that moment, I said I wanted to become a midwife, but never had the opportunity until a few years ago."* VMW, FGD in Genaina, West Darfur.

- *When I was a child my father asked me and my brother: what do you want to be in the future, my brother said I would like to be a police officer so as to be greeted by others, and I said: I am feeling that I can't go more in learning, so I want to be a midwife, because this profession accepts illiterate people. When I was in the 8th class of the basic education, I went to Nyala midwifery school and asked if there is a way to apply. They wrote down my name and where I am living. Coming back from the school, I told my family .My father supported me and my mother said: it is better to continue your education. After two years two women from the midwifery school came to our house and told me to come to school for the interview. Thanks to God, I passed the interview."VMW Nyala, South Darfur*
- *"There was a midwife in our village, who sadly passed away. Two days after her death a woman-my neighbour -went in labour .All the near neighbours gathered around her, but nobody assisted her .She delivered on her own. One of the women around started to pull*

down on her uterus, assuming that the placenta still not delivered. It was a very painful procedure, the woman cried from the pain while pulling on her uterus. I tried to have a look on the baby, I saw the placenta lying near the baby, I shouted on the woman pulling on the uterus to stop pulling, showing her the entire placenta. After 2 months the mother went to a doctor complaining of vaginal heaviness. Later on, an operation was done for her due to prolapsed uterus. This situation encouraged me to be a midwife to replace the late midwife and to safe mothers." VMW, Nyala, South Darfur

- *"My mother is a trained village midwife. While she was in the midwifery school in 1977, I looked after my young sisters and brothers. I used to visit her in the school. I found all the students in white clean dressings, sitting under a big green tree, I was impressed by that. Every time my mother comes to us, she brought sweets for all. My mother in a clean white dress and bringing sweets were behind my desire to become a midwife."*

- *"In our village there is only a TBA midwife. When she faced a problem, the family of the woman in labour calls the medical assistant (a man). At the beginning I couldn't understand and was unhappy to see a man attending a birth. I asked myself, why a man should be among women to deliver a woman, why not a woman to do that. The answer was clear, there is no trained midwife. So I decided to enter the midwifery school and my husband supported me. I discontinued my education at the 6th class, and I entered the midwifery school."VMW, Nyala, South Darfur*
- *"Haja Bakheeta, a trained midwife, is my neighbour. Once a woman went in labour. The family looked for her and told her about the case, but she didn't come immediately. The woman in labour is a parous lady. She asked me to hold the baby while coming out, till the midwife comes. I tried under her guidance. At this moment the midwife arrived, and told me to continue supporting the baby. I said to the midwife the intestines of the baby are outside. She said: Hadia, don't worry, this is an umbilical cord . From that time Haja Bakheeta started to invite me to accompany her, from time to time, to attend births."VMW, Nyala, South Darfur*
- *"I experienced a severe bleeding during my 5th pregnancy, I was about to die. The midwife called to help is a TBA. I was transferred by a horse cart then by an NGO car to Kutum hospital. There they performed an emergency Caesarean Section. I and my baby were saved. From that moment I decided to be a trained midwife." VMW, FGD, Fashir, North Darfur*
- *"My close relative went in labour .They called a midwife to attend the birth, she is a TBA. The midwife spent 3 days hoping that my relative will deliver normally. At the end of the 3rd day the patient was referred to the hospital, where she was operated on. The baby was born dead and she developed 2 fistulas. Later on the patient went to Cairo where she was treated, but failed to conceive again." MW, FGD, Fashir, North Darfur*
- *"There is no midwife in our village, although it is a large one composed of 8 areas (Firgan).When the residents need a midwife, they go to another village .If they want to transfer a pregnant woman to deliver in a hospital, they face a big problem, because we have transportation to the city twice per week, but if you want to rent a car, you have to pay big money. Based on that when the popular committee announced for a candidate for a midwifery school, I applied immediately."VMW, FGD, Fashir, North Darfur*

8.0 Identification and Selection of VMWs

The criteria for identifying and selecting women to be trained as VMWs are similar across the six states. In all cases the candidate has to be from the community to be served, willing to spend one full year of training, go back and serve, recommended by the local community (in some cases has a letter confirming that she is of good conduct), must not be pregnant or breast feeding, must not get pregnant during the study period. Preference is given to younger women and those who are literate or had longer schooling years.

The procedures for selecting candidates and the people involved in the selection process differ from one state to the other. This has also been changing in recent years from the historic pattern. When asked about who was involved in their selection, the VMWs gave answers that indicate differences from one place to the others. For example, 79% of them mentioned the local community (often represented by the Local Popular Committee), 37% indicated the locality (including the Midwifery Inspector in the locality), and only 6% stated that the health authorities were involved in their selection and 5% mentioned the involvement of the midwifery school. These figures indicate a shift in procedures whereby the MTS and the local health authorities have less direct/visible role in identifying and selecting VMWs.

The involvement of local community which has always been there, is important, but without the strong involvement of others may subject the whole process to the manipulation of local community leaders pursuing their own personal, political, family or tribal interests. Although, they are often involved at the criteria setting level, the declining direct involvement of the management of MTSs at the field level process (often due to shortage of staff and means of transportation) is particularly worrying, as they are the ones who have an accumulated knowledge of what works best. The same can be said about the local health authorities.

8.1 In Their Own Words

- *"In the past, the selection of candidates for our school used to be done by the Dean of the MTS and the Midwifery Supervisor in the State. Now with the security situation and other access problems this has changed: now in most cases, INGOs select and cover the cost of students to work in their areas of operation."* Dean of Genaina MTS.
- "*In the past before the beginning of the war, the need of a midwife was assessed by RH coordinator, senior midwife, a midwife teacher, the senior medical assistant, the village Sheikh, the chair-person of the People Committee and a member of the Women's Union. Now due to insecurity the needs assessment of midwives is carried by the medical officer of the rural hospital and the senior medical assistant. Now we coordinate with them from our office through correspondences. Sometimes the people committee of a village addresses our office directly and we respond according to the result of our assessment of their case*."
  Assistant RH Coordinator and Inspector of Midwifery, South Darfur.

9.0 Knowledge Gained and Used

The research developed a number of questions to test the degree to which the training of VMWs involved imparting knowledge on some of the basic and essential areas that help VMWs do their work in the community. Three areas of knowledge were identified as the most relevant: 1) understanding the main reasons behind maternal mortality (MM) in their state 2) recognising signs

of obstructed labour 3) understanding modern methods of family planning. Questionnaires, focused groups discussions and interviews were used to collect and verify and explain these types of information.

Interviewed VMWs have generally and in all the six states demonstrated an unexpectedly high level of knowledge in the three areas on which they were tested. All of them were able to easily identify three major causes of MM in their state. The following table shows the causes that appeared more frequently:

Causes of MMR Mentioned by VMWs

Causes	Percentage of VMW Who Mentioned it
Haemorrhage (bleeding)	93%
Eclampsia	82%
Obstructed Labour	59%
Anaemia	53%
Puerperal Sepsis	40%
Infective Hepatitis	28%
Malaria	15%
Others	23%

As shown above, haemorrhage (93%) and Eclampisa (82%) were the most mentioned reasons for maternal mortality in all the six states, while malaria was least featured. List of other causes featured in some 23% of the responses.

With regard to the knowledge of the signs of obstructed labour, the results were equally impressive, with 87% mentioning formation of the retraction and 59% stating dehydrated mother.

VMWs also showed an excellent knowledge of modern contraceptives in use in Sudan, and were able to easily mention three of them. The ones that were mentioned the most were: the pills (98%), injection (90%) and Uterine Loop (81%). The use of condom featured in only half of the valid answers, while newly introduced methods, such as Foaming Vaginal tablets and implants, were mentioned by 15% and 10% respectively. Withdrawal, safe period and continuation of breastfeeding were mentioned by one VMW each.

9.1 In Their Own Words:

- *Staying in the school is like a prison, but it is a friendly prison... In fact if it is not for this prison, we would not have been able to learn all that we have learned in one year; we used to learn and study day and night."* *A graduate VMW in Kassala State.*
- *"Earlier marriages among the Hadandawah and the resistance for transfer are major causes of obstructed labour in Kassala."* *VMW in rural Kassala.*
- *I know exactly which cases I must transfer... if it is my delivery, I take it, if it is not mine I raise it up (transfer it to hospital)". VMW, Duiem, White Nile*

10.0 Skills Gained and Used

The research has also developed a number of questions to test the degree to which the training of VMWs involved developing the relevant skills that help VMWs do their work. Questionnaires, focused groups discussions and interviews were used to collect and verify and explain this information.

All the VMWs in all the states have shown a very high level in the various aspects on which they were tested. The tested areas of skills were many and diversified. The scores were high across the six states. For example, all the respondents who answered the skills questions stated that they were trained in menstrual history and they have practiced it in their work, and only 9% of them felt that they need further training on it. Ninety eight percent of the responds stated that they were trained in checking blood pressure. Although only 9% of the respondents expressed a need for further training on checking blood pressure, the detailed questioning during the FGDs revealed many VMWs have no sphygmomanometers and most of them require further training in checking and correctly recording blood pressure.

With regard to the being able to measure uterus, 99% of the VMW stated that they were trained and are practicing it in their work. Only one percent of them expressed a need for further training (the FGD question and demonstration confirm that this high level of skill and confidence). Also all respondents stated that they were trained in, and are comfortably using the skills of: washing hands with soap and water, cleaning with soap, using gloves, sterilisation or disinfection, proper disposal of waste and perform an episiotomy.

As shown in the table below, other skills also scored very high across the six states:

Other Skills Gained and Training Needs of VMWs

Skill	Trained	Used Skills	Need Further Training
Decontamination by chlorine solution	98%	94%	13%
Counselling on family planning	99%	100%	11%
Provide family planning methods	99%	98%	9%
Start intravenous infusion	97%	91%	11%
Give local anaesthesia for cutting and suturing	99%	92%	1%
Repair vaginal laceration	98%	98%	2%
Completeness of the placenta	95%	80%	22%
Bimanual compression of the uterus	89%	89%	15%
Manual removal of the placenta	99%	96%	12%
Give Ergometrine (muscle or vein)	98%	91%	13%

As shown in the above table, the overwhelming majority of graduate VMWs have received training in a number of skills that are crucial in their work, and they are confidently using them. Yet many have indicated that they need further training needs in some important areas, with checking the completeness of the placenta, the bimanual compression of the uterus, decontamination using chlorine and administering Ergometrine receiving the highest score in terms of further training needs (22%, 15%, 13% and 13% respectively).

Although most of these responses about the skills gained and used and level of confidence are verified during FGDs and interviews, these research methods reveal that with regard to skills such as: counselling on, and provision of family planning, bimanual compression of the uterus and the manual removal of the placenta the training needs is definitely greater than how it has been expressed by the respondents in the questionnaire.

11.0 Services Provided by VMWs

As shown in the table below, trained VMWs provide a large package of midwifery and reproductive health services for the women in their communities. The overwhelming majority of them indicated that they provide a variety of services that include: assisting in birth giving (98%), health education 88%, follow up for pregnant women at home 85% or follow up and advice in a health institution 82%. A high percentage also state that they continue to provide follow up service after delivery (79%) and family planning services 70% (in most cases including also distribution of pills and condoms). Relatively fewer, yet more than half, have indicated that they were involved in child care (56%) or HIV/AIDs awareness (51%).

Type of Services Provided by VMWs

Type of service Provided	Percentage of VMWs Involved
Attending/ assisting in birth giving	98%
Health awareness and education	88%
Follow up for pregnant women at home	85%
Follow up and advice for pregnant women at clinic/ hospital	82%
After delivery follow up	79%
Family planning	70%
Child care and vaccination	56%
HIV/AIDS awareness	51%

11.1 In Their Own Words

- *"Last year we had an outbreak of severe diarrhoea among children, the midwife went and reported it in town, they gave her medications that she came and administered it herself and control the situation."* *A villager talking about the role and impact of their VMW.*
- *"Our new VMW is helping in many aspects, in addition to delivery and follow up for pregnant women, she assists with birth certificates for newborns, she can administer injection and IV drip." A villager describing the impact of their new VMW.*

- *“Our experience is that any work on awareness raising or vaccination in the rural areas will not be successful without the involvement of the VMW, as she is close to the community, and they listen to her and accept her advice.“* <u>*RH Officer SMoH, Gadarif State*</u>
- *“There was once a soldier who was shot and his internal organs we outside his abdomen, I saw him and I was trained to stitch, I gave him first aid and stitch his stomach, then they took him to Genaina and to Khartoum and he fully recovered. Everybody said that I saved his life and this gave me a good name and reputation in my area.”* <u>*VMW in West Darfur, FGD*</u>

12.0 Recruitment and Payment of Incentives

Sudan has a long history of training VMWs and then leaving them without any employment chances or incentives payment to earn their living from whatever payment (cash or kind) offered to them by the women they serve. There is therefore very few numbers of VMWs who are recruited by government or paid incentives. In recent years and due to wide campaigns and advocacy by various bodies, the situation started to change. Government in all the states covered by this research expressed strong commitment to recruiting VMWs and many have already taken steps in recruiting new graduates and promise to add a new number every year. State parliaments and executive bodies have made the commitments and left the matter for the various localities to implement. Localities with better resources and stronger commitments have done better than others, though all localities have taking practical steps. New VMW graduates now have a better chance than ever of been recruited and paid a monthly salary and get health insurance. Darfur and Gadarif seems to be spearheading this, making more progress and high rates of recruitments than others. In Darfur in addition to government recruitment, many NGOs involved in health work also recruit VMWs to work in their clinics in the camps, and pay them even better package than the government (SDG 500-1000).

Overall, however, about 59% of the VMWs stated that they are paid by the government (a monthly salary of between SDG 206 and 336) or some regular incentives (example SDG 150 in North Darfur). Some 30% indicated that they are paid by the women they serve. In rural areas where poverty is widespread and access to cash is particularly scarce, VMWs are often paid in kind (soap, sweets, perfumes, sugar). Some 15%, however, stated that they are in many cases not paid by anyone and they have to cover the cost of consumable supplies by themselves.

Payment and incentives at community level seem to be left for the individual women who, and when they use the service. Community contribution is therefore limited with only 6% of the VMWs indicating that they are paid by the community (often in kind in the form of provision of accommodation and food items).

The data collected on the cash payment for VMWs attending and assisting in delivery revealed an unexpected gender dimension and revealed that if the newborn baby was a boy, the VMW will get SDG10-30 higher than in the case of a girl. There are however differences and variations between the states in these gender biases, yet statistical analysis from all the states show that on average payment to VMWs increase by SDG 11 if the newborn is boy.

12.1 In Their Own Words:

- *“The lack of recruitment for our VMW reflects a lack of care for midwifery as a whole.”* <u>*Dean of Kosti MTS.*</u>

- *"After the start of the recruitment of VMWs by the government and the work opportunities in some of the clinics run by NGOs, midwifery becomes more attractive. Midwives here can make between SDG 450 to SDG 600 a month, in addition to the deliveries. Recently we started to get applications from graduates of Fashir University to join the midwifery school, but of course we refuse to take them as they will work in the villages."* RH Director, North Darfur
- "Currently, many women and girls apply for midwifery education. This is mainly due to the engagement of the NGOs in recruiting midwives to work in the camps since the beginning of the war in 2004.The payment in the camps may reach up to 1,000 SG. The State Ministry of Health started since July 2010 to recruit a number of midwives. Now 600 midwives are recruited with a monthly salary of 296+100 presidential bonus =396 SG. We have to continue in recruiting more midwives to increase the coverage of the villages by well trained midwives."Assistant RH Coordinator and Inspector of Midwifery, South Darfur.

13.0 Deployment and Area of Work

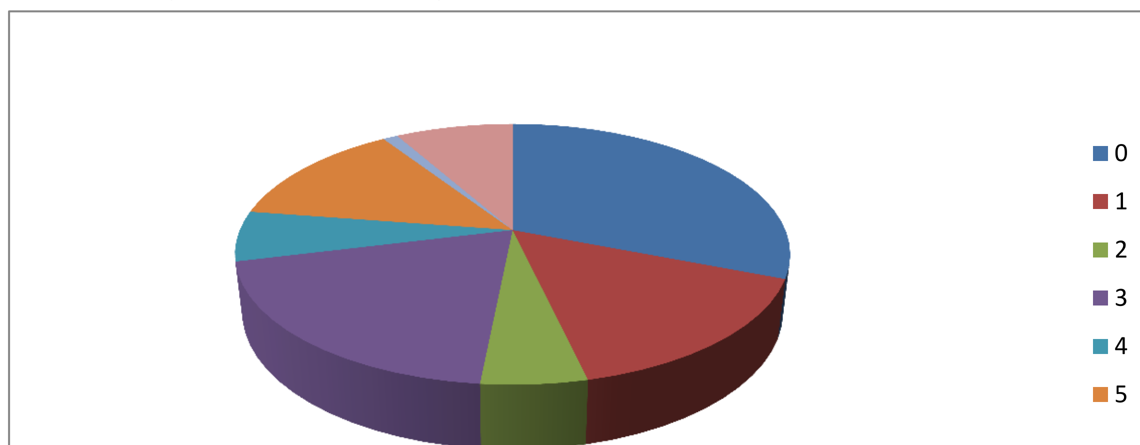
The results of the survey show that the overwhelming majority of the new graduate VMWs (86%) is deployed back into the areas they came from or selected to cover. Even those who are not deployed back to the planned areas, remain either within their locality (4%) or within the state (7%). Only 3% of the VMWs have moved or are moving outside their states (see Table blew). The recent increase in the number of VMWs recruited by the government or paid incentives may have contributed into this rather encouraging situation of deployment for the new graduates. As the government recruitment is focusing mainly on the new graduates, who form the focus of this research, the picture for those who graduated many years ago will definitely be different. Recruitment and payment of incentives in Darfur was the best, followed by Gadarif, which also has the most clear and objective road map for coverage and deployment of VMWs (based on both population and distance). Kassala on the other hand seem to be lagging behind in terms of recruitment and deployment.

Area of Work

Area of Current Work	%
Same as area as initially planned	86.2
Different but within the locality	4.1
Different but within the state	6.5
other	3.3
Total	100.0

Many VMWs cover very large areas (up to 5 villages) with very large population (up to 5,000 persons); with over one in five of them working as the only trained midwife in their areas (27%). Some 35% of the interviewed VMWs stated there are between one to three other VMWs in their areas. There are also fewer cases where they are more than 3 VMWs (see Chart below). In urban and suburban areas, such figures reflect over-concentration of VMWs, while in rural areas they could indicate either overconcentration in large villages or show that some VMWs cover very large areas that have large population.

Number of Other VMWs in the Same Area



13.1 In Their Own Words

- *Mobile phones have really helped and changed the way we work. There is a mobile network in my village, and people who have a woman in labour now call me before they leave their villages and asked me to get ready. When they arrive, I will be ready with my bag at hand; time is very important for saving mothers lives. Also if there is any training workshop or important meeting in town, they invite me by phone...I also sometimes make reports to my supervisor by phone".* A VMW in rural Gadarif.
- *"We used to overwhelmingly focus on the camps, but now we moved to consider other areas, with special focus on the nomads."* RH Director, North Darfur
- *"We are constantly racing against the coverage of villages with VMW. Sometimes you get a woman nominated by the community, you train her, then they come back to you in less than a year and say we need you to train another midwife for us, as ours got married and moved to town."* Head of RH in White Nile State
- *"In some places like Tendelti, VMWs would say to us that you have over flooded our areas with midwives, and we no longer have enough deliveries to make money from... Some midwives are working as tea sellers, due to lack of work while in other areas, people are crying to get one qualified VMW."* Head of RH in White Nile State
- *"Despite the presence of so many NGOs and UN agencies here, we do have a serious shortage of VMWs here in this camp. Our total population is about 45,000 and we only have 4 trained VMWs , the rest are TBA grandmothers, who are still practicing in the camp. We also have only one Health Centre run by Med Air, who told us that they are closing down by the end of this year."* A group of community leaders in Ardmatta Camp, Genaina

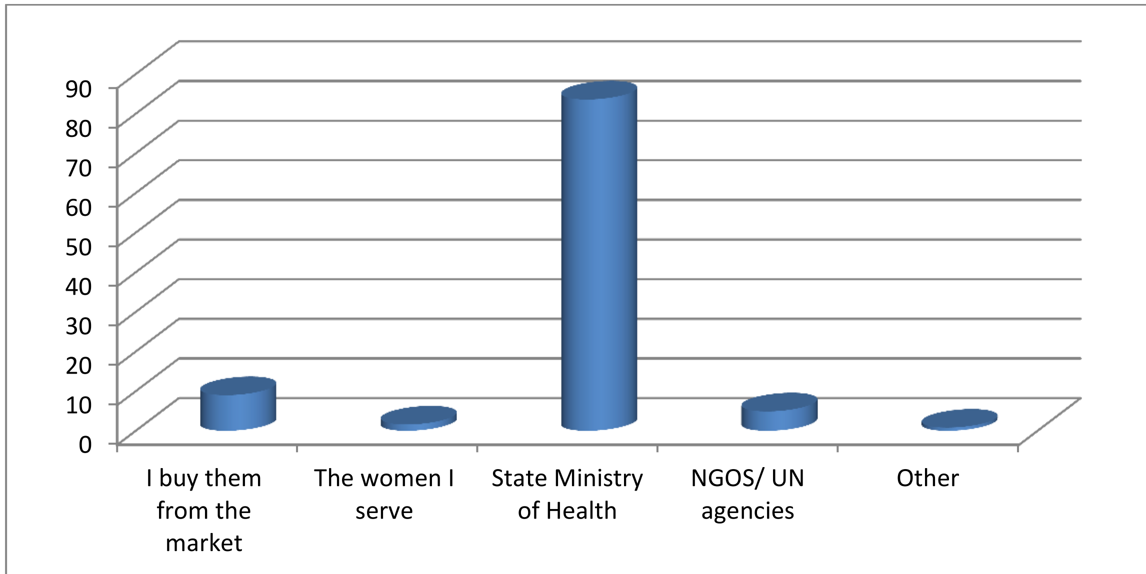
14.0 Provision of Equipment and Supplies

The availability of equipment and supplies for practicing VMS vary from one state to the other, with Darfur showing a better picture, due to the many actors and level of humanitarian fund. The available of essential equipment (for the VMW bag) are generally better across the states compared to the issue of consumable supplies, which represents the main complaints by all VMWs in all the states.

As shown in the Chart below, 84% of the interviewed VMWs stated that they get their equipment from the SMoH on graduation and replacement of damage and lost items during supervisory visit or attendance of in-service training in town. Only 5% said they receive their equipment from NGOs, and

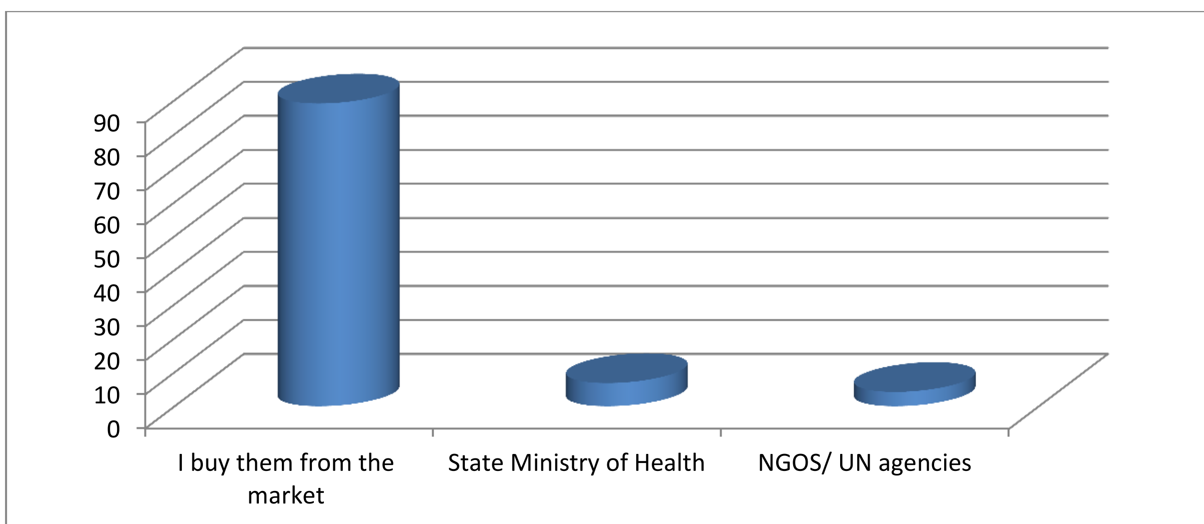
9% stated that they buy some replacement equipment from the market (pharmacies). The fact that UNFPA was not mentioned by VMWs as a provider of equipment, when it is heavily involved in this (but through RH) indicates that there is an issue of visibility to be addressed.

Who Provides Equipment for VMWs



As stated above and indicated in the Chart below, the situation of supplies is very different; with 89% of VMWs buying their consumable supplies from local pharmacies. Only 7% said they get some supplies from SMoH and 4% stated that some of their supply needs are provided by UN agencies and NGOs (mainly in Darfur). Many VMWs stated that the purchase of medical gloves is particularly costly, as their cost in local pharmacies is high, and because of their awareness hygiene and of risk of infection they use a lot of them.

Who Provides Supplies



14.1 In Their Own Words:

- *"We have to procure all the consumables from our resources. It happens you look for a catgut suture and you don't find it in all Nyala. The same happens for the equipment. We have no sphygmomanometer and stethoscope to measure the blood pressure."* Group of VMWs in Nyala

15.0 Supervision and Reporting

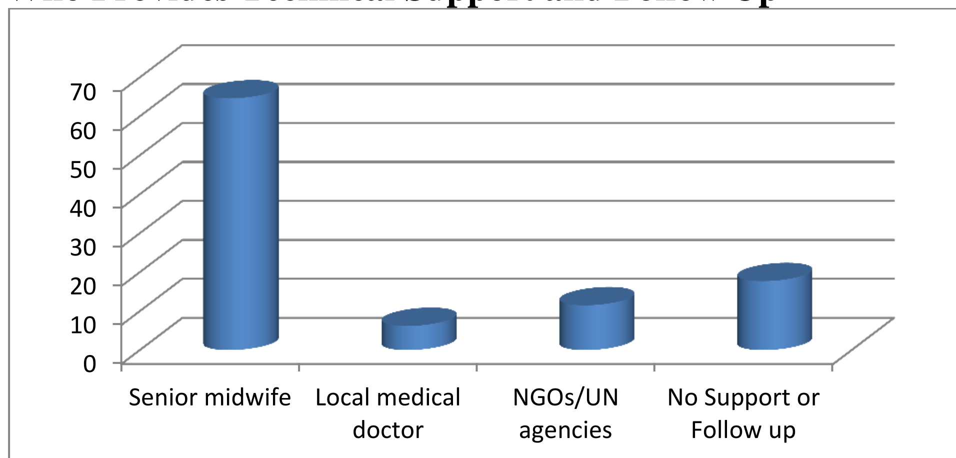
Most interviewed VMWs indicated that they are supervised by senior midwives (65%). The overwhelming majority of the VMW, including many of those who do not receive any supervision do prepare regular reports and deliver them to senior midwives in their locality or state (91%). Some 3% stated that they only report to the health statistics in their state. About 4% said that they report to the locality and the same number report to other various bodies within their state or locality.

Although reporting takes places, the quality of reports and the reporting period vary greatly from one state to the other. VMWs showed strong commitment to continue to report even when they are not recruited, do not receive any supervision, incentives for associated cost. Over 95% of the interviewed VMWs stated they provide regular reports on wider issues that include not only maternal and delivery cases they dealt with, but also use of family planning methods, child health issues and immunisation and vaccination matters. Those who are illiterate stated that they report regularly, by asking their children or friends to write down the information for them. Some said that they sometimes report verbal using their mobile phones.

Monitoring in place of work and supportive supervision of VMWs is either no-existence or very weak across the states, with remote areas, especially in Darfur suffering the most. The reasons behind weak supervision include shortage of staff (namely health visitors), lack of budget, lack of means of transportation, road conditions in the rainy season (Gadarif) and security situation (Darfur).

As shown in the Chart below, the survey shows that 65% of the VMW who are supervised receive supervision from a senior midwife, 6% from local medical doctors and 12% from UN agency or NGOs staff (mostly in Darfur). Most supervised VMWs receive highly inadequate supervision that takes place on an ad hoc basis and involves a quick visit once or twice a year or a meeting at the MTS with supervisors. Over 18% VMWs stated that they receive no supervision of whatever kind. Many stated that they often beg for supervisory visits to refresh their knowledge, assure them and boost their morale and image in their village, but often receive little or none.

Who Provides Technical Support and Follow Up



15.1 In Their Own Words:

- *"When you are visited in your own village by your supervisors from town, you feel really good. They advise you and support you. People in the village also respect you more and take you more serious."* *A VMW talking about the other importance of supervisory visits.*
- *"There is no regular supervision, very rare .We asked, they say: insecurity is a barrier and we have nothing to give it to you."* FGD, S Darfur.

16.0 In-service Training

The availability of relevant and regular in-service training is a major problem across all the states. There are many actors involved in the provision of in-service and their efforts are not well coordinated, and often overlap. Although, 84% of the VMWs stated that they have received some sort of an in-service training following their graduation, and only 16% said that they received no training (see Table below), the reality of in-service training is more complex. Firstly, VMWs in Darfur tend to have a better chance and better diversity in training, while those in White Nile (especially Duiem) seem to get the least. Secondly many of the trainings focus on HIV/AIDs, general infection prevention and family planning, overlooking knowledge and skills related to other important areas such as obstructed labour, bleeding, home nursing and first aid and health of newborn babies. The selection of VMWs to attend in-service training also seem to be a problem with VMWs in or nearby to towns getting better opportunities to attend training and those in remote areas almost totally excluded.

Training after Graduation

In-service Training	**% of Total**
Received Some Training after Graduation	83.7
Not Received any Training	16.3
Total	100.0

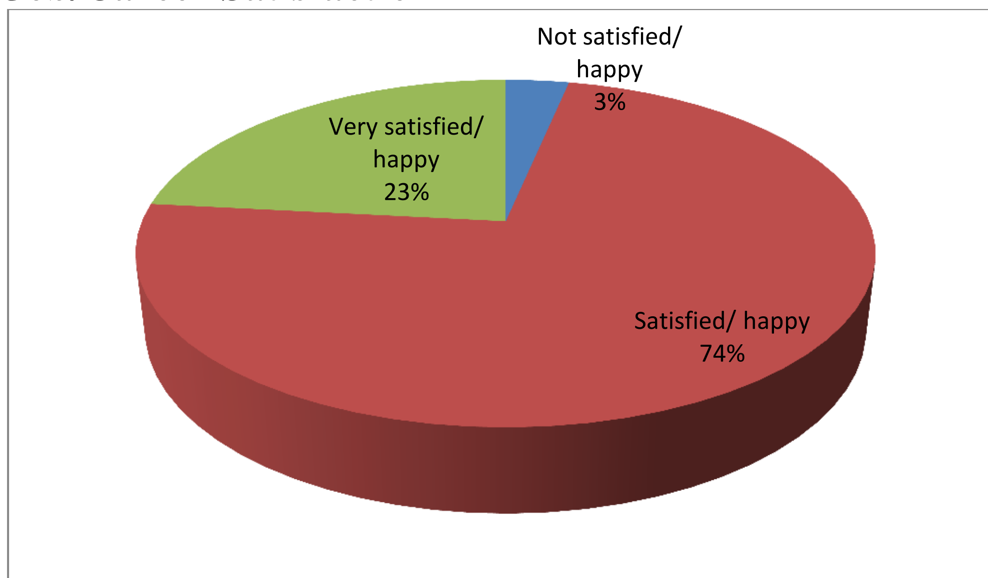
16.1 In Their Own Words:

- *"If we get training on IV drips and various injections, this would help us a lot and help the community". VMW, Gadarif.*
- *"VMW attend training courses out of their own commitment to the profession and they desire to improve their knowledge. There is nothing that obliges them to attend: they are not employed by government, they do not get any incentives for attending training and they lose income from delivery and injection during the time they spend in town… those in remote areas tend not to attend trainings."* Senior Staff UNFPA, Kosti Office.
- ''Sometimes during the monthly meeting, they provide us with some new knowledge and information." VMW, FGD, Nyala
- "We were not trained properly in setting intravenous infusion line and giving intravenous or intramuscular injections". VMWs, FGD, West Darfur

17.0 Satisfaction with Work and Career

Despite the challenges and problems faced, most VMWs across the states expressed high level of satisfaction with their work and career as midwives. In terms of general satisfaction, 3% of the interviewed VMWs stated that they were 'not satisfied'. Some 73% stated that they are 'satisfied' and 23% said they were 'highly satisfied' (see Pie Chart Below).

Job/Career Satisfaction



With regard to specific satisfactions with 'income', the level of satisfaction is fairly good but lower than the general satisfaction, reflecting that matter other than income are equally important for how VMW feel about their work and career. The survey showed that 24% are 'not satisfied' with the income they make out of their work as VMWs, while 66% are 'satisfied' and about 10% 'very satisfied' with their income.

When asked about the most important aspects that they like about their work, most VMWs stated more than one factor; with 'serving my community' mentioned by 84%, 'saving mothers and newborn' 82%, 'Income' 45%, 'recognition from the community' 29% and 'stability of the job'. This

indicates that although income and recognition and appreciation from the community are important to VMWs, their importance is secondary to the sense duty to serve one's own community and save mothers and their children. Job stability ranked the lowest with only 11% choosing it among the important factors.

Besides the high level of satisfaction of VMWs with their career, as indicated in the Table below, a cross tabulation analysis shows that there is no statistically significant positive or negative relationship between the age of VMW and her level of satisfaction.

Age and Level of Satisfaction

Age Group		**Are you satisfied with your work as a midwife?**			**Total**
		Not satisfied/ happy	Satisfied/ happy	Very satisfied/ happy	
	<25	1	19	8	28
	25- 40 years	3	55	18	76
	40 or over	0	13	2	15
Total		4	87	28	119

As shown in the Table below, analysis also reveals that the level of satisfaction related positively with the tendency to encourage friends and relatives to become midwives.

Level of Satisfaction and Encouragement of Others to Become VMWs

Are you satisfied with your work as a midwife?		**Do you encourage one of your friends or relatives to become a midwife?**			Total
		Yes	Yes, very strong	No, I will not encourage them	
	Not satisfied/ happy	4	0	0	4
	Satisfied/ happy	59	26	1	86
	Very satisfied/ happy	9	19	0	28
Total		72	45	1	118

17.1 In Their Own Words

- *"Midwifery is a good career for a family person in the villages; you are staying in your village and in your own home and working at the same time. That is great." VMW in a FGD in Gadarif.*
- *There are no enough deliveries in my village, only one or two a month. The villagers are poor and they can only afford to pay you a bit of sugar, coffee beans, sweets or soap".*
- *"I am always very proud with my work as a midwife. It enables me to do so much for women, including awareness raising and health education, and at the personal level I was able to raise a very successful family that included an obstetrician, general medical doctor, an engineer, a financial auditor and a teacher." Zakia Omer Mohamed Ahmed, VMW in Gadarif State (selected as the best Midwife in the State).*
- "The poor people appreciate our work better than the rich .The rich ones give more value to the money than to the health of their wives." Group of VMWs, FGD in Nyala
- "If a woman delivers a boy, the husband thanks us and gives some money, but if delivered a girl, he doesn't look at us or accompany us back home." Group of VMWs, FGD in Nyala
- *"When we conduct home delivery, some they give us money, or sugar or soap. Some they give us nothing, because they are poor. Others they can pay, but they give us nothing, saying you are governmental employees.* VMW, FGD, White Nile
- *"Are we going to become just midwives, Madam ,nothing else?!" a trainee student in the new 2 years TMW system asking the Dean of Kosti MTS.*

18.0 Continuing to Work as VMW

Regardless of the challenges and circumstances, there does not seem to be a high risk of a large number of VMWs abandoning their career or refusing to provide services for women who need their services. All the interviewed VMWs (100%) stated that they will continue to provide midwifery services at all times. The reasons expressed by the VMWs that we have interviewed suggest that they are strong conviction and commitment for the profession that they are unlikely to leave it whatever the situation. In fact, experiences over the years show that they continued in the career during very difficult times and circumstances, when they were not recruited by the government, paid very little by the women they serve, had little or no supervision, faced prejudice and misrepresentation at both community and health service levels. As most of these factors are improving at the moment, there are enough reasons and history to conclude that very few if any of the VMWs trained will leave the career altogether. The challenge, however, will be on ensuring optimal distribution of the VMWs and their deployment into remote areas where they are needed the most.

19.0 Image and Views on VMW Work

In addition to their own image and views, VMWs were asked about what they think the views/impressions of others (family, relatives, friends and local community) about their chosen career. The response showed a very positive picture that indicates a change in the conventionally believed to be negative image of midwifery as a career. Interviewed VMWs stated that their families, friends and the local communities generally have a positive image of their work as midwives, with some differences among these groups. For example, friends seem to have the most positive view

(98%) higher even than family with (90%) and relatives (96%). Local communities' impression of VMWs also seem to reflect a very strong and positive image (94%) higher even than family, though lower than friends and relatives as shown above. Yet, 6.5% of family members were highly positive and supportive, compared to 5% within the wider community. With regard to the negative and discouraging impression, 2.4% of the VMWs stated that their family and relatives were discouraging, compared to only 1.6 among friends, while only one VMW stated that the community was negative and discouraging.

When asked about whether they will encourage others to become VMWs, 99% of the interviewee responded positively with (60%) saying 'yes', and a further 39% saying 'yes very strongly'.

19.1 In Their Own Words:

- VMWs see themselves as distinctly different from TBAs and superior from them. In describing the difference between them, some stated "*I use gloves to deliver and I have clean medical equipment, we have certificates from the government, we are trained by professional for one full year, we perform local anaesthesia which reduces pain, and we stitch wounds, we are cleaner and hygienic*." Another added, "we know when and how to transfer".
- "To start with; we are legal, formal and they are traditional, that is a big difference". VMW in FGD in Kassala describing how different do they see themselves compared to the TBAs.
- *"We can help with birth registration and birth certificates and they do not have access to this. Also we advice on, and facilitate the vaccination of babies."*
- *"Sometimes the villagers bring a TBA to assist in delivery, and if there is a problem they go and get the VMWs." FGD, VMW Kosti*
- *"VMWs are clean while TBAs are not and they tend to put women's health at risk. VMWs do not take risk."* Community Leader in Kosti, White Nile.
- "In the past it was difficult to get the number of midwifery students you need. Some people used to think of midwifery as a job of low or poor classes, others say there is no material benefit by being a midwife." Assistant RH Coordinator and Inspector of Midwifery, South Darfur.

20.0 Service Users Experiences and Satisfaction

Interviews were conducted with women in the six targeted states, who have used the services of the VMW or are potential users of these services who have some experience with the work of the new VMWs. About 83% of the 87 women who were randomly selected and interviewed were married and have children while some 17% are married but have no children (many are pregnant). The level of education of these women also varies; with 5% university graduates, 16% had secondary school education, 39% elementary or intermediate education, 28% with some other informal education and 11% illiterate.

The interview confirmed that the VMWs in their areas provide a range of services that goes well beyond the conventional work of midwives such as attending delivery and providing antenatal and postnatal follow up, in addition to general health and HIV/AIDs awareness raising, and child care and vaccination services.

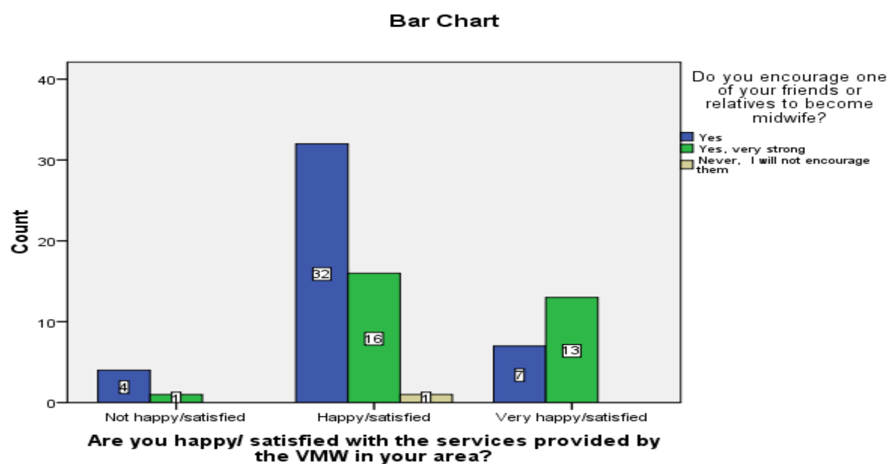
The service users were overwhelmingly satisfied with the services provided to them by the VMWs. Over 66% of them said that they were 'happy and satisfied' with the services of the VMWs in their areas. A further 27% stated that they were 'highly satisfied'. Only 7% said they were not 'happy and satisfied'.

In response to the question on whether they would encourage a friend or a relative to become a VMW, 57% of the women stated 'yes' they will, and a further 41% indicated that they will 'very strongly' encourage a relative or a friend to become a VMW. Only 1.3% stated that they will not encourage.

The service users also indicate that there are general positive views among the community about the work of midwives. For example, over 76% of families were holding positive views about VMWs. A further 21% of families were highly positive and supportive and only 1.3% is indifferent or negative and discouraging. Almost the same percentages were reflected in relation to the views of interviewee friends on VMWs and their work. The impressions and views of the wider community were even stronger, with 83% 'positive' and a further 19% 'highly positive and supportive'.

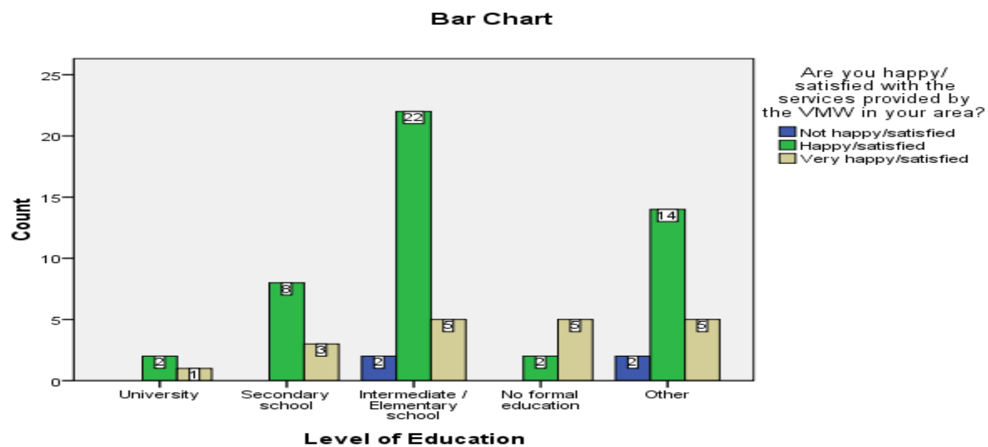
As shown in the Chart below, the cross tabulation analysis of data reveal a statistically significant positive relationship between the level of satisfaction of service users and their tendencies to encourage and support friends and relatives to become VMWs. In other words, the more satisfied the use is, the more likely she will encourage her friends and relatives to become VMWs.

Relationship between Users Satisfaction and Encouragement of other to Become VMWs



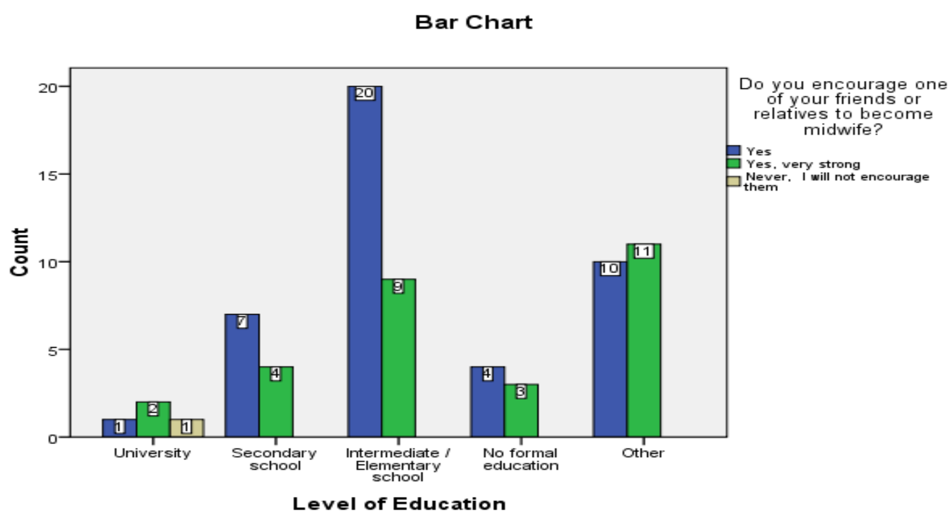
In examining whether users with higher level of education are less or more satisfied with the services of the VMWs in their areas, we found that there are no statistically significant differences. This show that educated, highly educated and uneducated users are satisfied with the services of the VMWs and that more educated users are not less satisfied (see below Chart).

Level of Education and Level of Satisfaction of Users



In fact analyses reveal that better educated users have a higher tendency to encourage friends and relatives to consider taking midwifery as a career. As shown in the Chart below, there is a strong positive relationship between the level of education of users and their tendency to encourage others to become VMWs, which indicates an encouraging positive image of VMWs among educated women.

Level of Education and Tendency to Encourage Others

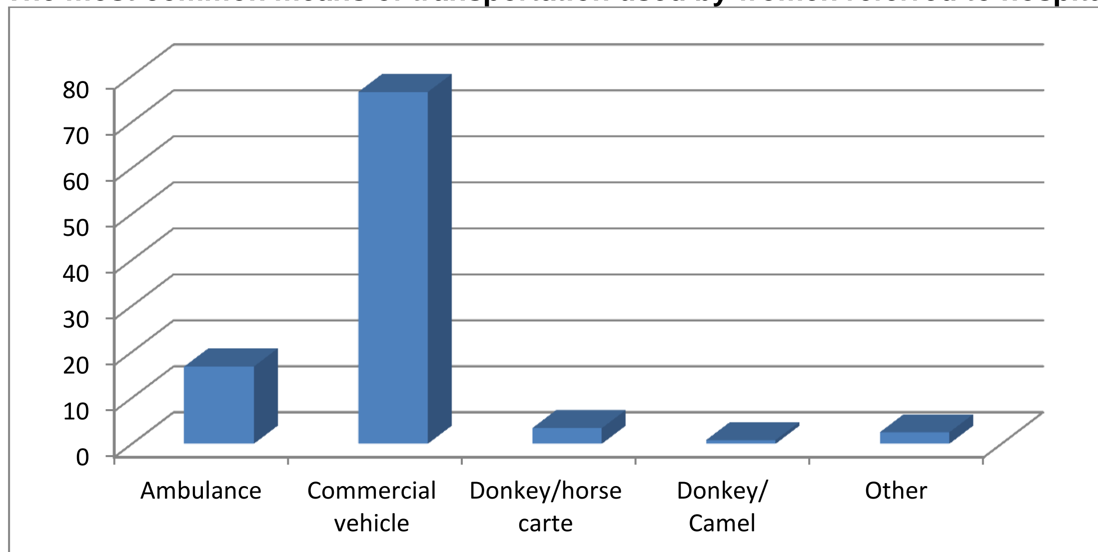


The overall results of the analysis of users satisfaction reflect a positive experience for the users and wider public with VMWs, and indicate a very high level of satisfaction among service users of the services of VMWs. The results also show a significant change in the attitude of the general public on the work of midwifery, showing a large number of people willing to encourage friends and relative to take midwifery as a career. This however, does not mean that VMWs now universally have a positive image. There are still negative images and negative representations about VMWs in many parts of the country, especially among remote rural populations and some pastoralists.

21.0 Means of Transportation for Transfer

The issue of transfer of pregnant women to hospital is a very complex and challenging one cross all the states. It involves the VMWs timely recognising the cause for transfer, convincing the woman and her family to accept that and most important have the means to implement it. In this respect, finding means of transportation that are suitable in terms of cost, comfort and speed is crucial for saving the woman and her baby, especially if the woman is in obstructed labour or bleeding. As shown in the Chart below, the survey shows that the most common means of transportation used by transferred women is private vehicles (77%); indicating, the far distances from rural areas to the urban based hospitals, absence of ambulances, the risk of road conditions and road safety (Darfur) as well as the cost implications, especially for poor villagers. There also over 4% who use donkeys, camels or donkey carts for transportation. In many cases, as women have told us in the interviews and FGDs, they use a combination of means of transportation to move from one place to the other until they reach the hospital. Those in towns or in suburban IDP camps who have access to ambulances represented only 17% of the total.

The most common means of transportation used by women referred to hospital



21.1 In Their Own Words:

- *"Although we suffer so much to convince the woman and her husband to accept transfer and accompany her to hospital through a difficult and long journey, once we arrive in hospital, they take the woman and send us away. In many cases they get despised by the medical doctors."* *VMW in rural Gadarif.*
- *"We have a problem of delay in Darfur that contributes to maternal death. However, the delay is not caused by the VMW holding the woman. It is often caused by many other factors including, access to cash, access to a suitable vehicle, securing another vehicle for the police escort, negation security clearance and of course the road condition."* Medical Director of Genaina Teaching Hospital.

- *"Yesterday I was called to see a primi gravid woman in labour.She was in actual labour .She is of a short stature and I found her pelvis of a small size according to the external measurement of her pelvis . I asked for her husband, they said: he is in the farm, I told them to get a car to transfer the case to the hospital. Her father refused and told me the women deliver 2 and 3 by the TBA; if you carried her to the hospital you will take the responsibility. Two women- without a single man- from her family helped to get a horse-car. We brought 2 blankets; we put one on the car and covered the woman in labour with the second one. Once we arrived at Nyala hospital, I reported to the doctor in charge. The doctor asked me to go now and report the attitude of her father to the police office, because we are going to operate on her. The woman was subjected immediately to an emergency caesarean section. She delivered a healthy baby."* VMW, FGD, Nyala South Darfur.
- "In Utash camp the population is around 72,000.We have three midwives: one has a chronic disease, she refused to work at night, one her husband doesn't allow to work after the sun set so she works only during the day. We have no ambulance, in emergencies we call 999.We asked the health authority to provide a car for emergencies, and they said that they have no fund." Community Leader, Utash Camp, Nyala
- "All of them face big problems in referring emergencies due to difficulties in getting a means of transportation. Sometimes the car owner asks for 500 SG from Korma to Elfasher." VMW, FGD, Fashir, North Darfur
- "Some of the families don't respond positively when I ask them to transfer a woman in labour, saying that they will operate on her in the hospital, or she will deliver normally, but others refuse because they have no money. Sometimes we ask the chair-person of the people committee to convince them and at the end they agree for referral." VMW, FGD, Fashir, North Darfur
- "Once I was called to see a woman in labour .That was her first pregnancy, she looks young and short. After examining her and based on the findings, I told her family to get a car urgently to transfer her to Elfasher hospital. We were in autumn. The driver refused, saying that the road is impassible especially across the nearest valley. We carried her on a bed by a camel to Korma market. Here we stayed up to after-noon the time of departure of the Lorries to Elfasher. When we arrived at the peripheries of Elfasher it was late, they stopped us saying that for security reasons we can only get in early morning. Once we reached the hospital, the patient was subjected to an operation. The baby was born dead and the mother died immediately after the operation. The strange thing was that, the family of the late mother didn't allow me to join them back to the village or even pay for my transportation." VMW, FGD, Fashir, North Darfur
- *"I was called to see a diabetic pregnant woman .I found her in actual labor. I told her husband to transfer her to the hospital, because she is a well known diabetic and at risk to develop a complication while labouring. The husband shouted at me saying that, I am putting him in a critical position in front of his neighbours (means has no money for renting a car). I told him I will pay for the car, he said even though I will not. I said no, this time I will not leave you behind .At the end he accompanied us to the hospital. The woman was subjected immediately to an emergency Caesarean Section. She delivered a baby with a birth weight of more than 5 kilograms."* VMW in Kassla

22.0 Community Views and Perception

Community members and leaders who have been interviewed in this OR expressed highly positive views about midwifery as a career and the value and importance of the work that VMWs do in the community. The appreciation of the community for this work is reflected in their close and direct involvement in identifying suitable candidates, following up with the school, visiting and providing moral and material support for the women during the training period. Community leaders across the six states have also played a central role in the campaign to convince the state government and the localities to recruit VMWs. Some communities encourage their midwives by building or refurbishing her house, providing her with a room to use for maternal care or providing her with some materials support. These positive and supportive views were confirmed by both the VMWs and the service users in the survey, SSIs and FDGs, as shown earlier in this report.

22.1 In Their Own Words

- *"As a midwife, the community respect me and call me the mother of the kids". When people I hardly remember see me in the street or in public places, they come to greet me with enthusiasm and say look this is your daughter or son X or Y (those I helped deliver), you see how grown up they are. This makes me feel very happy and satisfied."* *VMW interviewed in Genaina, West Darfur.*
- *"Generally they encourage, respect and trust us .Many give us in kind incentives (sugar, soap, meat, etc), and some give us money, and few refused to give anything. Few look to us as criminals, doing abortion and delivering illegal pregnancies, and think midwifery is a job of the poor, single women or people from very low social slaves. Some people don't eat with us thinking that our hands are dirty and contaminated."* VMW, FGD, Kassala.
- *"Midwifery School do not just train women in maternal issues, they also change their behaviour and attitude". A Local Community Leader, Gadarif State.*
- *"The VMWs are doing admirable work... they have a big role in our State, though their capacities are limited.... Our strategy is not to immediately abandon the VMW system and adopt the TMW one until we are confident that we have a promising new alternative that we trust... we will walk in a way that does not expose us." Director General of SMoH, White Nile.*
- *"Those village girls are difficult to manage, many are naive. Going out and coming back will not work with them. Here even the social visits are only allowed for fathers and brothers. We also do not allow any mobile phones to be used, and they can only make phone calls through their teachers". A Teacher in Gadarif MTS.*
- *"This new midwife is too young. She is a child; I do not want her to come for my delivery." A villager in Tendelti Area, White Nile.*
- *"Unlike before, when a woman is in labour in our village now, we do not panic, we just call Zahra (VMW), leave her with the woman and go and mind our own business in peace and confidence. If she calls us and said that this matter is becoming beyond my capacity and has to be transferred, we all accept and act. She goes with us to town and help us at the hospital because she knows how to talk to the doctors, where to go and what to say, we just stay buy and she does all the work. We are so happy and grateful" A community leader in Omadda village, White Nile State, describing the difference their new VMW has made in the village.*
- *"The VMW are now the "rose" of the village in terms of personal health and hygiene. They go into home and raise the awareness of women.... this has an impact on the youth." Acting DG SMoH, Gadarif.*

- *"The new VMWs have made a big impact. We are now recruiting them bit by bit....We are currently getting more applications and interests from villages that have a trained VMW. In some cases we have to select one out of five applicants from the same village. Age is no longer a criterion to distinguish as they are all young...This improvement is because of their experiences with these new midwives and the improvement in their income and lives... even their husbands are now enjoying the success and improvement."Acting DG SMoH, Gadarif State.*
- *"Although awareness and experiences with the new graduates have improved the image of the profession, we still do have some problem of image of midwifery among the nomads in particular. There is some work to be done". Acting DG SMoH, Gadarif.*
- *"VMW have very strong management and very strong system and discipline." Senior health Official*

  "The VMWs are highly disciplined; maintain their uniform and punctuality. They are among the most distinguished health cadres in this state: dedicated, selfless, cooperative and committed", Minister of Health, Gadarif State
- *"The new school and the many graduates VMW who finished their studies and now practicing have significantly reduced the number of maternal death cases in this area."* A community Leader, Wager, Kassala State
- "*Some kids derogatorily call my son wad el daya (son of a midwife)". VMW in FGD, Kassala.*
- "*Sometimes my unmarried friends would avoid coming to my house, as they fear that the villagers would say, what is wrong with her, why is she seeing the midwife for?".* VMW in FGD, Kassala.
- *"VMWs are very highly influential in their communities, their words are respected. If they use the influence effectively, they would be no cases of delayed transfer that endanger women's lives."* The Medical Director, Saudi Maternity Hospital, Kassala.
- *"Sometime the community are so appreciative and keen to have a VMW, they tend to cover up cases of maternal mortality in order to protect her." Senior Staff UNFPA, Kosti Office.*
- *"VMWs have leadership qualities and values that other better educated health professionals do not have." Senior Staff UNFPA, Kosti Office.*
- *"Their work is very good, but their number is small, therefore sometimes women go to the TBAs." AOmda in a camp, Ardmatta camp, West Darfur, talking about VMWs.*
- *"Generally they (community) respect us as midwives .They listen to us when we tell them there is a need to refer a pregnant woman or a woman in labour to the hospital."VMWs, FGD, S Darfur*
- *"Some women prefer the TBAs because they do not like cutting and stitches. Some think that the VMW is more likely to refer them to hospital which they do not like."* VMW, FGD in Fashir MTS.

  "Some doctors in hospital treat VMWs very badly. They do not respect them or treat them as professional or colleagues". VMW, FGD, Fashir
- *"VMWs are one of the main reasons behind the high maternal mortality rate in the country". Dean of the Academy of Health Sciences in Gadarif.*

23.0 General Issues and Observations

In addition to the specific issues discussed in the various sections of this report, the following are some general observations and issues of relevance from the fieldwork that UNFPA needs to be aware of or consider in its work:

- Some younger midwives in some states are making a lot of money (working in public and private hospitals) and are not interested in the social and economic disruption that is often associated with joining the only health visitors institute in Omdurman (example, Duiem in White Nile).
- Health visitors are diminishing and fast disappearing, affecting supportive supervision as well as the basic training of village midwives.
- There is shortage in teaching staff in all schools. Most teachers are either part-timers or old (over 65). Many are already in pension, but continue (in some cases not paid in time for their work).
- Most teaching staff and almost all Deans of midwifery schools are already in pension and working through temporary and exceptional arrangements (*Mushahara*).
- There have been very limited training opportunities offered to teachers at midwifery schools (especially on teaching methods). Consequently most of them rely on their experiences when they were students at the health visitors' institute.
- There is no standardised and universally agreed and adopted curriculum in the midwifery schools. Various schools are using various curriculums; in most cases it is either lecture notes from their midwifery student days and recent training courses or a "pick and mix" combination from the various available curriculums in the country (e.g. Standardised Measures Curriculum, Nile Mothers JICA Curriculum, AHS Curriculum etc).
- School teachers are innovative in copying with shortages of training materials and teaching models. An example of this is their innovation in using plastic and old tires pieces to train students on stitching when there are no suitable models/robots. UNFPA and its partners may explore the possibility of supporting such innovation and facilitate sharing of innovative ideas and skills between various MTSs.
- Many schools are introducing their own literacy classes (2-3 days a week) to help those who are totally illiterate or those who have basic literacy to improve reading and writing skills.
- Religious awareness sessions are also introduced in all schools to raise awareness, improve discipline and help improve the image of midwife.
- Health insurance for students for one year while in school is needed to avoid problems of treating sick students who are away from their families for a year.
- The chronic transportation problem affecting the quality of education in most MTSs , and need to innovate on solutions.
- Kosti and Dueim exchanging students, according to level of education and interest in system; as Dueim is continuing with the one year training while Kosti moved into the new two years system under the management of the AHS.
-
- There is still a belief and trust in the grandmother TBAs among some rural groups even when there are trained midwives (example, Dueim Shanabla villages such as Umhinnaitah).
- Dueim area of White Nile states is facing major challenges in recruiting midwifery students from some rural areas. For example, in 2009, after intensive field visits 9 students were

nominated by the community to be trained, but when the school opened, none of them showed up.

- Three midwives in Duiem town (working in hospital and in the community) were making good money that they are able to buy their own private cars, which they use for both work and leisure.
- VMW are involved in the collection of various types of data for the use of the wider health services and not just midwifery and reproductive health. They often receive minimal training and no incentives for their health information work. Various formats are used, most of them are too long and too complex to be used by VMWs. A simplified format is needed, training is required and incentives in cash or kind must be provided.
- VMW are interested and can be useful in grassroots level health education and community awareness campaigns. Some complained that in IDPs camps and villages, government bodies and aid agencies undermined them by bringing in people who are new to health profession and then train and use them as health educators and/or vaccinators in the EPI.
- UNFPA and other partners supporting the training of VMWs must invest in simple home delivery equipment and tools usable at village and household level.
- Most NGOs and UN agencies, especially those operating on humanitarian fund, are either not interested or unable to support the newly introduced two years VMW training programme for various reasons including the one year nature of their funding patterns, their concerns for the possibility to attract suitable candidates from remote rural areas and effectively deploy and retain them in these areas.
- The reproductive health taskforce in Darfur is co-chaired by RH and UNFPA and is having some positive coordination impact, such as sharing information, coordinating intervention, avoiding overlap and duplication in RH in general and midwifery related intervention in particular.
- Security and available means of transportation and the associated costs severely restrict supportive supervision throughout Darfur, with the focus on main cities accessible by UNAMID or UNHAS flights.
- NGOs in Darfur help recruit many VMWs and pay them relatively better than government. This helped improve the overall recruitment and deployment across the region. NGOs also pay cost and/or transportation for their VMWs to attend training held in big cities.
- High population mobility due to insecurity is a big challenge for identifying and address gaps in coverage by VMWs. Sudden new arrivals of thousands of IDPs can post a big challenge for an area covered by only one VMW. The challenge is whether to plan for the current situation and reality in the place of displacement or to plan for the expected return of IDPs to their 'areas of origin'.
- Turnover in rural hospitals is very high, they do their service or get some training and leave. No one has the power or the incentive to retain them. This is having an impact on midwifery as rural hospitals are often the point of transfer for obstructed labour and CS cases.
- Everything in Darfur IDPs camps is controlled by the sheikhs, who often manipulate processes such as the selection of women to be trained as VMWs for their own benefits.
- VMWs are getting younger and better educated. Yet there are different perceptions of VMWs age. For example, Young age is perceived positively at the schools but negatively at community level. "*What does this young girl who never gave birth to a child herself, know about birth giving?!* "

- There is a problem of verbal and physical abuse of VMWs by consultants at some hospitals. There are reported cases of consultants beating up midwives and a serious fall out between midwives and the Saudi Maternal Hospital in Fashir.
- Possible delay in graduation as a result of failure to complete the required number of delivery cases on time, as the number of students increased sharply.
- Officials and aid workers in all the states informed us that there is a significant reduction in the FGM practice in recent years. Although there is no clear evidence on how much of this reduction can be attributed to the new graduate VMWs, the newly introduced anti-FGM oath for VMWs and the expansion in the training and distribution of VMWs are certainly some of the influencing factors.
- The Maternal Mortality Form, in which each case is reported in details, is an important step in understanding and addressing maternal mortality. Yet the form used is too long (12 pages), too complex, only available in English Language and is controlled by senior medical doctors.
- Inaccessibility of some areas in Darfur affects selection and coverage. The establishment of the two new states will also split management and existing capacity, presenting new challenges of coverage, training and supervision.
- Training on blood pressure and administering intravenous (IV) drip are regularly requested by VMWs, who rank them as very important.
- Paying incentives or providing equipment and supplies for VMWs may encourage them to attend in-service training, especially for those in remote rural areas.
- Shorter but more frequent training courses may work best with VMWs who are the only ones in their villages and who may have family and other social responsibilities.
- Midwifery players' platform/taskforce can pool resources, coordinates efforts and avoid overlaps and duplication.
- Minibuses not 4WD vehicles for MTSs, as these are less likely to be taken by senior officials and or relocated to other departments.
- Educational and l memory refreshing leaflets and posters for both students and graduating VMWs, UNICEF N Darfur promised to support printing any quantity of materials
- According to the Medical Director of the Maternal Hospital in Gadarif: maternal death in hospitals has been reduced from around 5 to 6 a months to 0 to one between 2008-2010. Although factors may be many and complex, the timely referral by VMWs is certainly one of the key factors.
- Selection in Darfur is challenging, not based on field surveys and is often influenced by NGOs for their own programmatic needs and/or manipulated by official and sheikhs in the camps.
- Advocacy and awareness to change the community negative perception of young VMWs.
- Issues of international definition of who qualifies as skilled birth attendant (SBA) is very important, but planners and supporters need to be realistic about how Sudan can gradually evolve from where it is now to reach the desired international standard. In other words, it should avoid jumping over reality or overlooking the country context, especially in remote rural areas, where maternal mortality is the highest and where recruitment of even illiterate women to be trained as VMWs is still challenging.
- Midwives requested to go with strange man at night, especially in urban and semi-urban areas is a safety concern for many VMWs. In some areas the practice is that the man must always accompany two or more women if he comes to take a midwife at night.

- To avoid transfer to hospital, some young women giving birth for the first time tend to hide their labour until it is at the very late stage, which poses a big challenge for VMWs.
- Training of VMWs in first aids and home nursing are important; it provides badly needed services and provide an extra source of income for VMW and respect from the community, especially where home deliveries are few and midwives often unpaid.
- State commitment to recruit new midwives helps the process of recruiting and also the process of deployment and distribution in rural areas, but at the same time as it focused on the new graduates only, this discourages and may demoralise those who have been practicing for years without payment. Therefore a balance needs to be stuck between old and new (one possible option is 80% new graduate and 20% old practicing).
- SDG 10-15 pound is the cost of consumables that a VMW buys from her own sources for each delivery. When they are not paid by either the government or the women they serve, this can be a major problem. One element that is necessary for the safety of both the VMW and the pregnant women, and often cost a lot is the gloves, as they may need to use so many for a single follow up and delivery.
- Some of the devastating impacts of midwives not been paid include: practicing FGM, avoiding to go with people they think will not pay them by hiding and asking family members to say that they have travelled, resisting transfer and keeping deliveries that should have been transferred (keeping a delivery that is beyond her capacity), using sewing thread for suturing episiotomy and perineal tears.
- There is serious lack of means of transportation and allocated budget for field supervision for VMWs, especially in remote rural areas. Supervisors therefore often use UNFPA and NGOs vehicles or public transport to conduct monitoring and supervisory visits. This made visits less frequent, less comprehensive in coverage and spend less time than desired. In most cases they are conducted once or twice a year, do not cover VMWs and very limited time is spent with each VMW.
- Collecting other health information and delivering them to health offices in town without getting any incentive. This is particularly difficult for VMWs who are not employed by the government or NGOs. In some cases reports are taken by phone.
- Some VMWs earn money from assisting in issuing birth certificate to villages from the health authorities in town (actual fees SDG 15 but most get up to SDG 40).
- Distant to schools and the relationship of villages or nomads with the place where the school is located are crucial factors for allowing their daughters and wives to join the MTSs.
- Supplies and consumables rather than equipment seems to be the major problem (equipment are not needed every day and when needed are provided by UNFPA or the SMoH.
- FGM is still a big problem in White Nile according to practicing midwives and their supervisors.
- Many of the delivery rooms inside the MTSs are either not operating or hardly used. This due to many factors including change in habits, preference for home birth or hospital birth (both become more available than ever), the perception will be used for training students, and location of the school, either too close to hospital or too far not easy/cheap to access.
- Most VMWs are widow or divorcee with children, and from poor families. There are evidence that in recent years this has started to change, with younger, educated women

from better socioeconomic backgrounds who are never married joining schools (in Fashir camp a sheikh has deceivingly nominated his two wives to join the school).

- The shortage of Health Visitors (HV) in some states is so acute that it affects the whole midwifery system, as some HVs are involved in supervision, basic and in service training. For example, the whole West Darfur State has only nine HVs, six of whom are either recalled from pension or will reach it in a few years. The problem is expected to be further compounded when the State is soon divided into two.
- Some schools stretched beyond their capacity, with very rapid increase in the number of students without investment in infrastructure and staff (the 3 Darfur States are good examples).
- Linkages with GBV, HIV/AIDS and Gender on issues of early marriages, combating fistula and prevention of mother and child from STIs is very crucial for all the organisations involved in training VMWs.
- Genaina MTS in West Darfur was closed due to lack of funding for many years. In on occasion, it was closed for seven years (1990 and 1996). The intake increased from 49 VMWs in 2002 to 61 in 2010 and shooting to 103 students in 2010, without equivalent investment in staff or infrastructure.
- Competition with the TBAs is very high is some areas, as some women see them as older, wiser, patient and more experienced. "I can get you to deliver better and safer and I will come to visit you for follow up afterwards."
- Transfer of many women to hospital in order to avoid any risk of obstructed labour is sometimes seen as sign of *impatience*, lack of *experience* and confidence, and often resisted as it has economic and social cost for the woman and her family. It is also true that the new graduates fear to get a bad reputation in their early days if a women or her baby passed a away under their service, and therefore tend not to take any risk, especially in their early months/years.
- There is a great need for awareness and feedback from hospitals that the transfer was crucial for saving the lives of the mother and her baby.
- In some cases, Nurse Midwives in urban areas are not allowing a chance of income for new VMW graduates as they would practice in hospital as well as in homes across town (have reputation, good contact, better mobility and are often more accessible; even though they are more expensive). Some suggested collusion with obstetricians in hospitals is behind the failure to combat this. For the nurse-midwives they often say: ''the *women prefer us, we have more knowledge and experiences, and know better than the VMWs, and my wound heals faster and would never reopen".*
- Security and access issues in Darfur are contributing to high manipulation of the process of selection, and so called 'ghost villages' that do not exist, but for which VMWs are to be selected and trained.
- South Darfur using clustering in small villages whereby one VMW can be selected to cover 2 to 5 villages.
- In south Darfur, Now only Nyala midwifery school is functioning and 3 midwifery schools closed due to lack of fund (Buram 2008, Ed Alfersan 2008 and Ed Daein 2010).
- In Darfur delay is behind many cases of maternal mortality, but delays are largely caused by the situation of insecurity rather than poverty, late transfer or resistance to transfer from the community.

- It is perhaps ironic that, although the civil war situation in Darfur has worsened the problem of MMR, it has at the same time contributed to reviving midwifery education. For example the Nyala MTS, one of the oldest and largest in Darfur was closed due to lack of funding between 1993 and 2001. Although, humanitarian fund has revived midwifery and expanded it, the security situation of the war led to an overconcentration of training in the schools in the three state capitals. For example, although Buram, Ed Alfursan and El Daein were closed, by 2011 Nyala was training some 111 VMW in its batch number 13.

24.0 Recommendations

- UNFPA should continue to support the one year system of basic VMW training in all the states where it works, for the foreseeable future, as this is the only way to ensure better coverage and continuity in service, especially in the remote, most deprived and most needy areas that often suffer disproportionate MMR.

- UNFPA should get more closely and actively involved in the selection of midwifery trainees/students. It should aim to influence the criteria and process through which VMWs are identified and selected for basic training as well as for in-service training; ensuring a high degree of fairness and better coverage.

- UNFPA should strengthen its advocacy and campaigning for more resources, better coordination at all levels, and most importantly for the recruitment of VMWs, especially in remote rural villages with larger population or cluster villages.

- UNFPA can make a big difference by strengthening its leading coordination and networking, taking advantage of its very wider network, acceptance and good relationship with various partners and stakeholders. It should also continue to operate closely with state RH offices at the federal and the state levels.

- Given the wide programme of In-service training by JICA and UNICEF, especially in some states, UNFPA should consider either focusing more on supporting basic training or supporting specific in-service training in areas such as home nursing, first aids and awareness raising in maternal health issues.
- Selection for in-service training courses should include those in remote areas and avoid mixing VMWs with different capacities and work experience, as well as mixing VMWs with other health persons.
- There is in some places a strong case for the provision of wider reproductive and delivery services support such as the labour ward, maternal hospital and maternal operation theatre can make a big difference (e.g. UNFPA support in Genaina) as another way of improving midwifery services and reducing MMR.

- UNFPA should consider getting involved in supporting the training of health visitors and indeed school trainers, or advocating in order to ensure that there are enough senior midwives and supervisors. If feasible, some of the graduates of the AHS newly introduced TMW 2 year training programme can be selected and further trained to fill this gap. The best option, however, is to sponsor qualified midwives to study at the ITHVs in Omdurman.

- UNFPA should assist in, or advocate for ensuring that all schools have suitable and working vehicles, as this is a key factor in ensuring quality of training (home birth). The 4WD vehicles (Land Cruisers or otherwise) must not be provided, as they are more likely to be taken by senior government officials, allocated for other purposes or stolen (as in the case of Darfur). The better alternatives to 4WD vehicles which will serve schools even better, are mini-buses: as they carry more people and are less likely face the fate of most 4WD vehicles.

- The quality of training provided by schools (one year system) can be greatly improved if the curriculum is revised and standardised, staff are provided with better training (especially teaching methods).

- Fistula support should focus on prevention rather than simply the campaign.
- The current one year period for the basic training of VMWs needs to be reviewed with the possibility of increasing it to 18 months, especially since the number of students has increased significantly, new components entered the curriculum and the staffing capacity in most schools remained either the same or was reduced. In fact in recent years there were many batches that took up to 18 months to graduate.
- UNFPA should advocate for the RH and the MTSs to continue their central role in the identification and selection of candidates for both the one year and the two year basic training system and not leave this role for the AHS.
- Recruited VMWs should not be asked to work five days a week at the health centre, as this will happen at the expense of their work in the community. The adequate practice is 2 days only. We raised this issue with the Minister of Health in Gadarif during our fieldwork and he took an immediate decision to reduce the midwives' working days in the health centres to 2 days only.
- Provision of training for VMWs on HIV/AIDs awareness and prevention is needed in all the states.
- UNFPA should work to encourage local communities in all villages to build places for the VMWs to conduct check up and follow up for pregnant women in places where there is no health facility. This will make the work more formal, allow privacy for both the women and the VMWs who are now conducting these functions in their own homes often throughout the day.

- UNFPA should strengthen the internal linkages between its midwifery support and the other various components/areas of intervention (gender, GBV, other RH, HIV/AIDs) in order to widen and strengthen the impact it work.

- UNFPA should generally invest more time and efforts on advocacy and coordination in RH in general and midwifery in particular. Field level expertism in particular needs to be strengthened.

- UNFPA should improve its visibility in relations to its involvement in the provision of midwifery equipment and supplies.

25.0 Appendixes

25.1 Terms of Reference for the OR

Assessment on the effective deployment, retention and performance of the 2008-2010 graduate Village Midwives in the eight states including Darfur.

Background Information

The Republic of the Sudan has a high maternal mortality ratio, over 600 per 100,000 live births (SHHS1 2006) and is not on track to achieving Millennium Goal 5 which entails the reduction of maternal mortality by 75% before 2015. The midwife has been identified as the most appropriate and cost effective health care professional to provide care in normal pregnancy and childbirth, including risk assessment and recognition of complications.

Currently, midwifery practice does not get the attention it deserves. The 2008/2009 situational analysis of midwifery in the Sudan revealed a number of gaps in the areas of: Human resources and coverage of care; Education and training; enabling environment; Image and attractiveness of midwifery. The critical shortage of proficient midwives because of closure of the one and only sister midwives training institution in 1992, as well as the urgent need to address the problems associated with the VMWs (who are in appropriately trained, not recognized by the civil service and poorly supported), among others, constrained maternal and newborn health services in the country.

In 1992, Sudan launched a new cadre of community maternal health care providers (barefoot doctors as the community use to call them) known as village Midwives. It is the first of its kind with the aim of assigning one VMW per village throughout the country. So far close to 14, 000 VMWs have graduated and were deployed to the villages. The current national coverage of birth attendance by trained personnel is 56% which mostly is attributed to the services provided by VMWs. However, the majority of the VMWs are not employed or integrated into the health system and so do not have job security or guarantee of regular income. Due to limitations in skills or other resources they are often limited in their ability to conduct ANC and normal delivery, and to consult and or refer cases. Further to this, VMWs have widely varying access to supplies and medications and many have no or little supervision.

Ensuring midwifery care at the community level is responding to the urgent need to address the needs of underserved people, who are often in rural and poor urban areas. Scaling-up–increasing numbers and competence of the midwifery workforce–requires investments and capacity-building at all levels of the health system.

Realizing that scaling up the midwifery workforce can only be effectively addressed when there is a guiding strategy; the Ministry of Health and its partners, developed a cohesive unified vision strategy (2010-2015) for scaling midwifery services. The strategy document is in line with current Health and RH policies and strategies It provides a long-term vision for quality midwifery service provision by competent and qualified midwives(two years certificate midwife, 3 years diploma and 4 years BSc midwifery programmes, with a career of continuing education to the level of Masters and Phd in midwifery), who fit the internationally agreed to definitions of midwife and skilled birth attendant

and a short term and medium term plans with comprehensive work plan for the transitioning of the various levels of trained midwives.

The national strategy for Scaling-up Midwifery recognizes that the village midwife is not necessarily per definition a skilled birth attendant, but a certified birth attendant. It further states that the village midwife will be regarded a member of the team providing midwifery care and will receive support and supervision from a more highly qualified midwife. The elements chosen for the transitional strategy further acknowledge that in the short term VMWs cannot be eliminated from conducting their duties as providers of delivery services, but rather, work towards incorporating them into the health system. UNFPA supported the basic training of VMW for more than 8 years in all states targeted by this study. .

Training of VMWs is based on a one year curriculum. But anecdotal evidence has shown that many VMWs still have gaps in skills and too little of a knowledge base to provide the necessary support at the village level. There is also limited information regarding the exact numbers, location and type of services VMWs are rendering after their graduation.

It seems that many VMWs are not remaining in their communities of origin for various reasons, leaving the communities without service. . A significant number seem still to be engaged in HTPs such as FGM for income generation because of the lack of motivation and recognition by the public system, poor supportive supervision and non- replenishment of kits. Although UNFPA has successfully advocated for the VMWs enrolment in the public system and several states have enrolled the VMWs and started paying them salaries, many remain outside the formal healthcare system.

It is against this background that UNFPA, in collaboration with the Federal Ministry of Health and the Academy for Health Sciences would like to engage the services of consultants to undertake operational research to explore a number of issues regarding deployment and services provided by the three batches of VMWs who graduated between 2008 and 2010 in the states where UNFPA supports VMW training, egKassala, Gedaref, Blue Nile, White Nile, South Kordofan, and the three Darfurs.

Findings from this Operations Research will supplement UNFPA Mid Term Review assessment (2009-2010) conducted in May 2011 and will be jointly considered as the End of Country Program Evaluation (CPE) document. This will be part of the submission of new country program document to the Executive Board in June 2011. Both exercises are useful tools to inform future programming and policy/strategy support areas.

Objective of the Study:

To assess the role of recently graduated VMWs in promoting MNH Care at community level

Specific Objectives:

- To determine effective deployment of VMWs to their community of originbased on the initial need based selection by the respective localities
- To assess availability of VMWs to ensure continuity of maternal and newborn health services

- To assess the level of knowledge and skills gained from the training.
- To determine client-service provider satisfaction in relation to the type of services provided
- To identify existing retention and sustainability measures (incentives, replenishment of kits, supportive supervision, in-service training etc).

Key research questions:

Below are some key questions to be used as a basis for developing detailed questions to guide the process across the different proposed methods of information gathering. These are:

1. Where are the VMWs ? Does the distribution meet the required standards?
2. Do the VMWs have the right capacities and material support necessary for provision of the midwifery service?
3. What is the quality of the service they are providing?
4. Are the beneficiary communities satisfied with the service rendered? And are the VMWs satisfied with the job in terms of material and non-material gains?

Proposed methodology:

Both primary and secondary sources shall be considered for data generation. The secondary source includes literature review on the situation and role of VMWs in the provision of midwifery services in the country. The primary sources are VMWs, community members/leaders, health personnel at national and state levels and other relevant actors. Methods of data collection vary from structured and semi-structured interviews and Focus Group Discussion (FGD) with key informants as well as observation. This triangulation of quantitative and qualitative data is intended to ensure comprehensive scope and in-depth research findings.

To that end, close-ended individual questionnaire shall be developed and filled with VMWs. A checklist for assessing the level of knowledge and skills is part of the proposed data collection tools. FGDs with VMWs and relevant community groups shall be facilitated through a pre-determined guide. Final versions of the above-mentioned tools should be shared with UNFPA before the operationalization.

The study applies a stratified random sampling technique where all localities of each of the five UNFPA focus states and the three Darfursshall be selected. A reasonable number of administrative units constituting the localities and a minimum of XXX VMWs in total (TBD) shall be researched. Population frames available at states' level do allow for applying the calculated sample size formula.

Data of questionnaires shall be coded and entered into SPSS for analysis while qualitative data analyzed using successive approximation or other appropriate method.

Team composition and management arrangements:

The research team comprises of two national experts; a team leader with an outstanding skills and practical experience in evaluation and social research work and a team member who will be an obstetrician with community medicine background and experience in working with

communities. There may be a need for a team of data collectors to be identified and contracted (by UNFPA or the research team: TBD).

Data collection tools particularly the questionnaire should be pre-tested before the actual field work takes place and also enumerators to be oriented on the questionnaire and trained on the interviewing technique. Filled questionnaires should be checked for editing on daily basis by the research team or other designated persons.

- At UNFPA Country office, under the overall supervision of the CTA/RH and Assistant Representative, the M&E officer will be the focal point. In collaboration with RH team and administration&logistics (UNFPA), MOH/RHP and AHS, he will facilitate field missions, visiting to key stakeholders including donors, training institutions and organize debriefing meetings.

Expected Results:

- Preparation and submission of draft report
- Organization of a debriefing session to UNFPA CO and partners on the study findings and incorporation of comments and recommendations arising from the debriefingand other consultations.
- Based on the above, production of a final report of not more than 50 pages and submission of hard copies and an electronic copy to UNFPA, the Federal Ministry of Health/the Reproductive Health programme and the Academy of Health sciences

Time Frame: (TBD)

40 days will be required to undertake this activity. The study is expected to start on August 1st 2011- and be completed by 11th September 2011. The team should prepare a detailed plan of activities to be undertaken within the proposed time frame and submit to the research focal point prior to commencement of work.

Qualification/Experience:

- Team of two consultants with the following qualifications:
- 1) An advanced Degree in Medicine/Public Health, ; and 2) MSC holder in social science from a recognized university
- At least 10 years of experience in quantitative and qualitative research, data analysis and report writing.
- Excellent communication and interpersonal skills;
- Proven ability in spoken English and report writing skills
- Computer literacy especially with respect to data analysis packages

Documents to be reviewed

1. The State of the World's Midwifery 2011.
2. MNMR Road Map January 2010.
3. Midwifery Force in Sudan 2009.
4. Republic of Sudan, Federal Ministry of Health, National Midwifery Committee, Transitional Action Plan for Midwifery Development in Sudan, 2009 – 2010
5. Policy and programme guidance for countries seeking to scale up midwifery services, especially at the community level. A UNFPA-ICM Joint Initiative to support the call for a decade of action for Human Resources for Health made at World Health Assembly 2006
6. Sudan national maternal and newborn mortality reduction road map, 2009.
7. National EmOC Needs Assessment, October- December 2005
8. FMOH, Assessment of midwifery services in 5 states 2006
9. Report of consultation and consensus Workshop, 29-30, 2009, held in the CPD center, Khartoum.
10. Sudan Government of National Unity Federal Ministry of Health National Reproductive Health Policy, 2010.

25.2 Methods and Methodologies

Informants/Source of Information	Type of information Collected	Method for collection	Methods for Analysis
Key Documents and internal reports/records	Plans, baseline information, guidelines, policies, strategies, project records, selection criteria, project M&E and Review.	Identified together with the UNFPA focal point and field staff, and collected in soft or hard copies.	Review and analysis, policy analysis, discourse analysis.
Graduate VMWs	Background (Educational and socio-cultural, geographical etc). Motivation/attractiveness for choosing midwifery career, Process of identification and selection. Type of knowledge/skills gained. Level of knowledge/skills gained. Relevance of knowledge/skills to context and needs. Practical training gained (ratio of theory/practical). Competence and Self-confidence. Ability/possibility to apply knowledge/practices consistently. Type and level of financial/technical and material support given (by authorities and/or community). Type and frequency of supervision and follow-up from health authorities. Job satisfaction and satisfaction with the support received and services provided. Distribution and deployment (compared to initial plans) Settlement in areas of deployment and sustainability and continuity in the same area. Type of services provided Area coverage and population coverage. Relationship with local and state health system. Relations with client/communities. Challenges and difficulties (professional, socio-cultural, practical, economic etc). Type of services provided (magnitude monthly etc). Linkages with other relevant services (e.g. FGM, and HIV/AIDS, vaccination awareness, health promotion and maternal and infant mortality. New roles and what differences they made for local community?	Coded Questionnaire Technical competence checklist (knowledge and skills) FGDs	SPSS and cross analysis with qualitative data collected by FGDs and interviews

	Challenges and further training and support needs.		
Relevant staff UNFPA (Khartoum and field offices)	Background to the programme, Programme rationale, initial plans, selection of targeted states and targeted areas, changes. Any changes in initial ideas or plans and justification for doing so. Selection and relationship with IPs. Relationship with other partners and stakeholders Views on the progress of the prograamme. Existence of internal linkages between UNFPA intervention in midwifery, other RH components and other matters within the mandate of the UNFPA. Challenges and lessons learned.	Semi-structured interviews	Thematic, pattern and qualitative data analysis
Relevant IP (government and NGOs)Staff	Views on the initiative and its progress. Views on the new VMWs Views on the impact of the newly trained VMWs Role in the project Policy framework and strategies etc Type of support provided to VMWs Views on the impact of the programme so far. Linkages of the midwifery with other sectors/activities and areas of work. Nature and relationship with UNFPA and the programme What needs o be done to improve the situation	Semi-structured interviews	Thematic, pattern and qualitative data analysis
Other Key Informants	Views on the initiative and its progress. Views on the new VMWs Views on the impact of the newly trained VMWs Role in the project Policy framework and strategies etc Type of support provided to VMWs Views on the impact of the programme so far. Linkages of the midwifery with other sectors/activities and areas of work. Nature and relationship with UNFPA and the programme What needs o be done to improve the situation	Semi-structured interviews/FGDs	Thematic, pattern and qualitative data analysis
Relevant FMOH	Views on the initiative and its progress.	Semi-structured	Thematic,

	Views on the new VMWs Views on the impact of the newly trained VMWs Role in the project Policy framework and strategies etc Type of support provided to VMWs Views on the impact of the programme so far. Linkages of the midwifery with other sectors/activities and areas of work. Nature and relationship with UNFPA and the programme What needs obe done to improve the situation.	interviews	pattern and qualitative data analysis
Relevant SMOH	Views on the initiative and its progress. Views on the new VMWs Views on the impact of the newly trained VMWs Role in the project Policy framework and strategies etc Type of support provided to VMWs Views on the impact of the programme so far. Linkages of the midwifery with other sectors/activities and areas of work. Nature and relationship with UNFPA and the programme What needs o be done to improve the situation	Semi-structured interviews	Thematic, pattern and qualitative data analysis
Other relevant states authorities (e.g. social welfare, localities etc)	Views on the initiative and its progress. Views on the new VMWs Views on the impact of the newly trained VMWs Role in the project Policy framework and strategies etc Type of support provided to VMWs Views on the impact of the programme so far. Linkages of the midwifery with other sectors/activities and areas of work. Nature and relationship with UNFPA and the programme What needs o be done to improve the situation	Semi-structured interviews	Thematic, pattern and qualitative data analysis
Relevant midwifery Schools staff	Views on the initiative and its progress. Views on the new VMWs Views on the impact of the newly trained VMWs Role in the project Views on the training provided	Semi-structured interviews/FGD	Thematic, pattern and qualitative data analysis

	Views on the facilities available for trainee VMWs. Views on the support/follow up provided for VMWs. Type of support provided to VMWs Views on the impact of the programme so far. Linkages of the midwifery with other sectors/activities and areas of work. Nature and relationship with UNFPA and the programme Difficulties and challenges and how best to address them. What needs o be done to improve the situation		
Training curriculum and training methods and materials	Knowledge and skills provided Way training is structured Effectiveness of training methods and materials	Checked against standard and local needs within the context	
School facilities, records (student's attendance and reports).	Facilities available &ready for trainers and trainees. Knowledge and skills provided Way training is structures Effectiveness of training methods and materials Progress and records of students and graduates	Checked against standard and local needs within the context	
Service users/clients (main focus)	Views and perception on the services provided by VMWs. Views and perception on the service provider (the village midwife) Changes and differences made by the new graduate midwives Level of satisfaction with the services currently provided. Views on improving services Perception on midwifery as a profession and practicing midwives/TBA in their area. Main challenges faced by women at child bearing age in the village What can be/needs to be done to improve the situation?	Questionnaire and possibly FGDs	Thematic, pattern and qualitative data analysis
Other women at child bearing age (other focus)	Views and perception on the services provided by VMWs. Views and perception on the service provider (the village midwife) Changes and differences made by the new graduate midwives	Questionnaire and possibly FGDs	Thematic, pattern and qualitative data analysis

	Level of satisfaction with the services currently provided. Views on improving services Perception on midwifery as a profession and practicing midwives/TBA in their area. Main challenges faced by women at child bearing age in the village What can be done to improve the situation.		
Community leaders and key informants	Views on graduate midwives Cooperation and support provided Participation in planning, implementation and evaluation of maternal services Views on services provided Views on midwifery as a profession Level of satisfaction with services provided by the graduate VMWs. Suggestion for improving situation	Semi-structured interviews/FGD	Thematic, pattern and qualitative data analysis

25.3 VMWs Survey Questionnaire

In all questionnaire questions, it is allowed to determine more than one answer unless question required one answer

Part I

State: ………………………… Locality : ………………………… Village/District……………………………….
Date of interview……………………Interviewer Name: ……………………………. Questionnaire Number:…….

1. Interviewee Name: ……………………………………..
2. Age: ………………………………………..(In years).
3. Year of Graduation: ………………………………
4. Marital Status: 1) Single. 2) Married with Children. 3) Married with no Children. 4) Divorce. 5) Widow.
5. Level of Education: 1) University. 2) Secondary school. 3) Intermediate / Elementary school. 4) No formal education. 5) Other (Specify)…………………………………………..
6. What is your area of origin? Village/District…………………………………… State…………………………
7. Current area of work? 1) Same as area as initially planned. 2) Different but within the locality. 3) Different but within the state. 4) Other………………………………..
8. If current area of work is different from the one initially planned, what is the main reason? 1) Availability of work or level of income. 2) Family reason. 3) Relationship with the service users or local community. 4) Better work or living environment. 5) Other. 6) Not applicable.
9. How long have you been working in this area? ……………………………….Month (record no. of months even if period in years).
10. What are the main motivations that led you to become a midwife?
    1) Income. 2) It was the only work chance to me in my area. 3) I liked the humanitarian nature of work. 4) I was encouraged by family or friends. 5) I wanted to save mothers and new born lives. 6) Other……………………………………………………..
11. Who was involved in your nomination/selection to join the midwifery school?
    1) The school staff. 2) Local community 3) The health authorities. 4) The locality. 5) Other (specify)……………………………….
12. What health services do you provide to the women in your area?
    1) Attending/ assisting in birth giving. 2) Follow up and advice for pregnant women at clinic/ hospital. 3) Follow up for pregnant women at home. 4) After delivery follow up. 5) Family planning. 6) Child care and vaccination. 7) HIV/AIDS awareness. 8) Health awareness and education.
13. What is the average number of cases you follow up in a month time?..................................case.
14. How many cases have you referred to the hospital during the last year …………………………. case.
15. What were the main 3 reasons for the cases you had referred to the hospital?
    1.--

2.---
3--

16. What is/was the most common means of transportation used by women you refer to hospital?
    1) Ambulance. 2) Commercial vehicle 3) Donkey/horse carte 4) Donkey/ Camel. 5) Other………... ………..(specify)
17. Do you have files/records of the cases you have dealt with?
    1) Yes. 2) No.
18. What areas, districts or villages do you personally cover?
    Names of villages/ districts…………………………………………………..
19. What is the estimated population of the areas you cover?
    Estimated total population……………………………………………(no. of persons OR no. of families
20. How many other trained VMWs are also working in this area?................... (Please provide number or enter zero in WORDS)……………………………………………………..
21. Approximately, what is the distant of the farthest area/village that you have covered/provided services in?
    A) Time:………………………Minutes………………………Hours……………………Distance……………..Kilometer
22. Who do you report your work to?
    1) The health visitor 2) the locality 3) other……… (specify)
23. Do you get any follow up or technical support from any health professional?
    1) Yes. 2) No.
24. If yes, who provide support and follow up?
    1) Senior midwife. 2) Local medical doctor. 3) NGOs/UN agencies. 4) Not applicable.
25. Who provides you with the equipment that you use in your work?
    1) I buy them from the market 2) The women I serve 3) Federal Ministry of Health. 4) State Ministry of Health. 5) NGOS/ UN agencies. 6) Other……………. (Specify).
26. Who provides you with the materials and supplies that you need for your work?
    1)I buy them from the market 2) The women I serve 3) Federal Ministry of Health. 4) State Ministry of Health. 5) NGOS/ UN agencies. 6) Other……………. (Specify).
27. Did you receive any service training after graduation?
    1) Yes. 2) No.
28. Who pays you for your services?
    1) the Government. 2) the women I serve. 3) The local community (cash or kind). 4) NGO/UN agencies. 5) I do not get paid at all. 6) Other………… (specify).
29. Are you satisfied with your work as a midwife?
    1) Not satisfied/ happy. 2) Satisfied/ happy. 3) Very satisfied/ happy.
30. How satisfied are you with the income you make out of your work?
    1) Not satisfied/ happy. 2) Satisfied/ happy. 3) Very satisfied/ happy.
31. What are the most important things that you like about your work as midwife?
    1) Income. 2) Serving my community. 3) Saving mothers and new born lives. 4) Recognition and appreciation by the community/ women. 5) Stability of the job and its future prospects.
32. Do you want to continue in your work as midwife?
    1) Yes. 2) No.

33. What are the opinions/ impressions of the following people about your work as a midwife?

	Positive	Highly positive and supportive	Indifferent	Negative or discouraging
Your family				
Your relatives				
Your friends				
The Local Community				

34. Do you encourage one of your friends or relatives to become a midwife?
    1) Yes. 2) Yes, very strong. 3) No, I will not encourage them. 4) Never, I will not encourage them. 5) I don't know.
35. What are the 3 main challenges/ difficulties facing you in your work as midwife in this area?
    1)………………………………………………… 2)…………………………………………. 3)………………………….
36. What are your future career plans?
    ……
    ……
    ………..
37. What support do you need in order to provide a better service? (Please list the most important 3 things).
    1)……………………………………………………2)……………………………………………..3)……………………………
    …..

Part II- Performance

	No. of cases referred – per month	No. of cases referred – last year (or in last months if it is less than 1 year)
38. Antenatal care		
39. Deliveries		
40. Postpartum care		
41. Child care		
42. Family Planning		
43. Health education		

Part III- Clinical Skills

1. First ask the midwives if they were trained to perform the clinical skills in the list, please make a check mark in the trained column if they answer "yes".
2. Next ask the midwives if they use the clinical skills in the list during their daily work, please make a check mark in the "use" column if they answer "yes".
3. Lastly ask the midwives you are interviewing if they need training in the clinical skills in the list, please make a check mark in the "Need Training" column.

Clinical Skill	Trained	Use during work	Need training
Antenatal care			

44.Menstrual history	1	2	3
45.Blood pressure checks	1	2	3
46.Measures uterus	1	2	3
47.Fetal heart rate checks	1	2	3
Infection Prevention			
48.Wash hands with soap and water	1	2	3
49.Using gloves	1	2	3
Sterilization of Tools			
50.Decontamination by chlorine solution	1	2	3
51.Cleaning by soap and water	1	2	3
52.Sterilization or disinfection	1	2	3
53.Proper disposal of waste	1	2	3
Counselling			
54.Counsel on family planning	1	2	3
55.Provide family planning methods	1	2	3
Fluid Replacement			
56.Start intravenous infusion	1	2	3
Labour & Delivery			
57.Give local anaesthesia for cutting and suturing	1	2	3
58. Cut an Episiotomy	1	2	3
59. repair Vaginal Laceration	1	2	3
60.Completeness of the placenta	1	2	3
61.Bimanual compression of the uterus	1	2	3
62.Manually remove the placenta	1	2	3
63. Giving Ergometrine (IM or IV)	1	2	3

Part IV: Knowledge

64) What are the most common causes of maternal death in the state?

1. Haemorrhage

2. Eclampsia
3. Puerperal sepsis
4. Obstructed labour
5. Malaria
6. Anaemia
7. Ineffective hepatitis (Jaundice)
8. Other-(specify)------------------------------

65) Mention 3 signs of obstructed labour:

1. Large caput
2. Dehydrated mother
3. Acetonuria
4. Scanty urine
5. Ballooning of lower uterine segment
6. Excessive moulding of the felt skull
7. Formation of retraction
8. Other(Specify)--

66)) Mention 3 types of modern contraceptives:

1. Pills
2. Injection
3. Uterine loop
4. Condoms
5. Implants
6. Foaming vaginal tablets
7. Other (Specify)--

Part (V) Equipment, Supplies and Medicines:

Please ask the midwife if the equipment and supplies listed are available. If yes, please mark the appropriate box and ask if it is in working condition, and whether it needs repair or replacement. If the equipment or supplies are not available, please mark (no).

Is the following	**Available**		**Working**		**In need of repair or Replacement**	
67.Scissors for tire						
68. Blood pressure Apparatus						
69. Fetal Stethoscope						
70. Adult Stethoscope						

71.Sucker: suction bulb						
72.Suture						
73.Suture needles						
74. Suture scissors						
75. Intravenous fluids						
76.Ergometrine, tablets						
77.Ergometrine, injection						
78.Surgical gloves						
79.Syringes and needles						
80. Bladder catheter						

25.4 Service Users Survey Questionnaire

In all questionnaire questions, it is allowed to determine more than one answer unless question required one answer.

Part I

State: ……………………….. Locality : ………………………… Village/District……………………………….
Date of interview……………………Interviewer Name: ……………………………. Questionnaire Number:…….

44. Interviewee Name: ……………………………………..
45. Age: ………………………………………..(In years).
46. Marital Status: 1) Single. 2) Married with Children. 3) Married with no Children. 4) Divorce. 5) Widow.
47. Level of Education: 1) University. 2) Secondary school. 3) Intermediate / Elementary school. 4) No formal education. 5) Other.(Specify)…………………..
48. What are the health services provided by the midwife in your area?
    2) Attending/ assisting in birth giving. 2) Follow up and advice for pregnant women at home, clinic/ hospital. 3) Follow up for pregnant women at home. 4) After delivery follow up. 5) Family planning. 6) Child care and vaccination. 7) HIV/AIDS awareness. 8) Health awareness& education.
49. What areas, districts or villages does your midwife cover?
    Names of villages/ districts…………………………………………………..
50. What is the estimated population covered by your midwife?
    Estimated total population…………………………………………………..
51. How many other trained VMWs are also working in your area?.................. (Please provide number or enter zero in words).
52. What is the most transportation used by women referred to the hospital/ clinic?
    2) Ambulance. 2) Taxi. 3) horse/donkey cart. 4) donkey/ Camel. 5) Other……….. (specify)
53. Are you happy/ satisfied with the services provided by the VMW in your area?
    1) Not happy/satisfied. 2) Happy/satisfied. 3) Very happy/satisfied.
54. What are opinion/ impartation of the following about the midwifery work?

	Positive	Highly positive and supportive	Indifferent	Negative or discouraging
Family				
Relatives				
Friends				
Local Community				

55. Do you encourage one of your friends or relatives to become midwife?
    2) Yes. 2) Yes, very strong. 3) No I will not encourage them. 4) Never, I will not encourage them. 5) I don't know.
56. What are the 3 main challenges/ difficulties facing midwifery in this area?
    1)…………………………………………………… 2)…………………………………3)………………………..

57. What are the 3 main challenges/ difficulties facing pregnancy women in this area?
    1)……………………………………………………….. 2)……………………………………3)………………………….

58. What kind of support you need to have a better midwifery service? (Please list the most important 3 things).
    1)………………………………………………2)……………………..……………..3)…………………………………..

59. On average, how much do you or your friends or your relatives pay VMWs for delivery service (attending giving birth)?
    a. Money…………………………………………………………………………
    b. Gifts (equivalent to SDG)……………………………………………………………………………..

25.5 School Checklist Questions

The main aspects of the MTSs check list were as follows:

- History of establishment and evolution
- School students capacity, no of batches graduated and average number in each batch.
- Infrastructure and general condition of buildings, furniture and equipment.
- The overall learning and living environment
- Offices and classrooms.
- Students' accommodation and other facilities including sanitation.
- Availability of water, electricity and other facilities
- Accommodation for staff and management
- Managerial afflation and financial support
- Management structure and management and admin support staff,
- Teaching staff, background, training and experience.
- Teaching materials, tools, models and technical labs.
- Curriculum used and its source and contents.
- Availability of means of transportation and communication.
- Students over the last three years (numbers and backgrounds).
- Current students, their programme of study and their background.

25.6 Guiding Questionsfor SSIs and FGDs

1. Key informants

A. <u>School management (Interview)</u>

1. When was the school established?
2. By whom?
3. How was it run, who covered the cost before the UNFPA involvement, and afterwards? Who is involved in running the school, and covering students' fees and maintenance?
4. What was the number and backgrounds of the students who joined the school in the past and now?
5. How many teachers/lecturer did you have in the past and what was their qualifications/training etc, how did this changed after involvement of UNFPA?
6. When did you get involved with the UNFPA support?
7. What kind of support is being provided (financial non-financial?
8. What difference has this made to you?
9. How do your recruit your students, and who is involved?
10. Is your current recruitment procedures/system different from past?
11. What type/s of students do you attract and why do you think this is the situation?
12. What curriculum do you use at this school (since when are you using it)? What do you think about it in relation to the actual/specific midwifery needs in your state and the backgrounds of the students you are recruiting?
13. What do you see as the main strength of your school in this state?
14. What are the main challenges you are facing?
15. What are you future plans and how are you planning to implement them?
16. How do you think UNFPA can help you best improve your work in training midwives in this state?

25.7 Key Elements of School Checklist:

1. Overall condition of the premises
2. Overall condition of the furniture and equipment.
3. Students accommodation/other facilities
4. Learning environment
5. Curriculum used
6. Teaching materials, methods and tools/equipment
7. Number of teachers/lecturers and their qualifications/experiences
8. Number of students over the last three years
9. Teaching methods
10. Involvement in follow up and support/refresher and/or in-service training

B. <u>School teaching staff (Selected sample)-Interview</u>

1. When did you join the school?
2. What were you doing before?

3. How and why did you join this school?
4. What training and qualifications do you have and when and how did you acquire them?
5. What do you think about the level/quality of training you provide for VMWs in this school?
6. What do you think about the students you enrolled at this school over the last two to three years? Was it any different compared to previously?
7. How do you assess the learning environment in this school?
8. How satisfied are you with the knowledge and skills you impart to your students.
9. How satisfied are you with your level of training and your work in general?
10. What are the main strengths of this school? Of you work in it?
11. What are the main challenges you face as a teacher/lecturer in this school?
12. How can you be better helped to improve the level and quality of the training you provide?
13. How satisfied are you with your career? And your work in this school?
14. What are you future career plans?

C. Federal and state health service Management (Interview)

1. How do you see the situation of the work of midwives/midwifery services in this state?
2. What are the major challenges facing it?
3. What is your role in promoting the work of midwives in this state?
4. How can this be improved?
5. What is your relationship with the VMWs in this state?
6. How satisfied are you with this?
7. What is your opining about the Midwifery school/s in this state?
8. How do you see the involvement of the UNFPA in midwifery in this state?
9. How do you see the overall institutional and policy framework of midwifery in this state?

D. Other relevant authorities (localities etc)-Interview

1. How do you see the situation of midwifery services in this state?
2. What are the major challenges facing it?
3. What is your role in promoting the work of midwives/midwifery services in this state?
4. How can this be improved?
5. What is your relationship with the VMWs in this state?
6. Who satisfied are you with this?
7. What is your opining about the Midwifery schools in this state?
8. How do you see the involvement of the UNFPA in midwifery in this state?
9. How do you see the overall institutional and policy framework of midwifery in this state?

2. VMWs

A. Trained and practising VMWs(FGDs)

1. Why? and how did you decided to become a VMW?
2. What were the procedures of your requirement? Who was involved?
3. Have do you assess your training in the midwifery school and how useful did you find in practising midwifery within your community? Please give examples of strength and difficulties.
4. How different do you see yourself from other TBAs and what difference did you make since graduating and starting to practice within the community?
5. What were the main strength of the training you received in the schools and why?
6. What were the main weaknesses of the training you received, and why?
7. Who is supporting you in your work, and how? What type of support do you need? What support do you actually get and by whom? How regular/adequate?
8. What do you like most about your work in the community?
9. What are the main problems/challenges that face you in your work and how do you overcome them?
10. What are the factors that affect the distribution of VMWs in this state and their continuity in their own areas?
11. What do you think can be done to improve the work of midwives in your community?

3. Community

A. Community leaders (interview)

- How do you see the work of midwives in this state?
- What are the major challenges facing it?
- What is your role in promoting the work of midwives in this state?
- How can this be improved?
- What is your relationship with the VMWs in this state?
- Who satisfied are you with this?
- What is your opining about the Midwifery schools in this state?
- How do you see the involvement of the UNFPA in midwifery in this state?
- What do you see the overall institutional and policy framework of midwifery in this state?

25.8 List of People Interviewed

1. Zainab Mohamed Ahmed, Dean of Gadarif MTS,
2. Ikhlas Hassan Ali, Inspector of Midwifery, Gadarif State.
3. Sadiya Mohamed Adam, Teacher, Gadarif MTS,
4. Fathiya Elamin, Teacher, Gadarif MTS
5. Huda Ghalib Teacher, Gadarif MTS
6. Dr Hisham, OIC UNFPA Office, Gadarif State
7. Dr Leila Jergis , Coordinator of midwifery program AHS –Gadarif
8. Sumaya Adam Meki, VMW in Ghraigana Village, rural Gadarif
9. Dr Abdelrahman Osman El-Imam, Dean of AHS, Gadarif State
10. Dr Abdalla Elbasheer Elhaj Musa, Acting Director General, Gadarif State
11. Gibreel Mohamed Ali, Acting RH Coordinator, Gadarif State
12. Dr Abdel Gadir Mohamed Osman, Medical Director of Maternal Hospital, in-coming RH Director, Gadarif.
13. Dr Elsadiq Yousif Elbadawi, Minister of Health, Gadarif State

14. Idris Abdalla Mohamed, Executive Director, Islamic Social Welfare Organization, Kassala
15. Musa Ibrahim Mohamed Taha, Community Leader, Wager, Kassala State
16. Eltayeb Abdelrahman, Health Inspector, Wager, Kassala State
17. Hawa Ibrahim (Sukara), Teacher, Assistant Inspector of Midwifery, Wager MTS, Kassala State
18. Elradiya Babiker,Dean, Kosti MTS, While Nile State.
19. Rawda Abdelaziz, Teacher, Kosti MTS, White Nile State
20. Hawa Abdelhadi Fadul, Teacher, Kosti MTS, White Nile State
21. Mahdiya Khamees Mohamed, Former Inspector of Midwifery and Teacher, Kosti MTS, White Nile State.
22. Eltayeb Elmuhtadi Elwaseela, Director General, SMoH, White Nile State
23. Sister Ameena Badai Ibrahim, RH Coordinator, White Nile State
24. Kareema Sabah Elkhair Ibrahim, Inspector of Midwifery, White Nile State.
25. Dr Abutalib, Deam, AHS, White Nile.
26. Dr Khalid, OIC, UNFPA, White Nile.
27. Tayiba Khair Elseed Fadl Elmula, Dean, Duiem MTS, White Nile
28. Umsalama Ramadan Awad, Midwifery Supervisor, Duiem Locality, White Nile
29. Zakiaya Alaala Elkhaleefa, Midwifery Supervisor, Umramtah Locality, White Nile
30. Dr Khalid Badreldeen-SMoH-RH Program Manager, Kosti White Nile

31. Sister Hassanat Elnour, RH Coordinator, North Darfur.
32. Zainab Mohamed Ahmed Bilal, Inspector of Midwifery, North Darfur
33. Hikma Idris, Training Coordinator, RH N Darfur
34. Dr Abeer Mohamed, Assistant RH Coordinator, N Darfur

35. Dr Khadija, Acting Direcor General, SMoH, North Darfur
36. Hayat Mohamed, Inspector of Midwifery, North Darfur State
37. Aisha Hussain Medani, Dean, Fashir MTS, North Darfur State
38. Mr Rami, Health Coordinator, Relief International, Fashir, North Darfur State
39. Judith, OIC, UNFPA, North Darfur
40. Dr Izzeldin Zeroul, Health Coordinator, UNICEF, North Darfur
41. Mr Abubakr, Head of Health Committee, State Legislative Assembly, North Darfur Mr Mohamed Mahgoub, Minister of Health, Fasher, North Darfur
42. Dr Hussein-UNFPA Program Coordinator-Fasher, North Darfur
43. Dr Ibrahim, Assistant Program Coordinator, UNFPA, Fasher, North Darfur

44. Abdelsalam Mustafa Salih, Director General, SMoH, West Darfur
45. Dr Muzamil, Primary Health Care Director, West Darfur
46. Dr Alam Eldin Mohamed, Health and HIV/AID Coordinator, UNICEF, West Darfur
47. Dr Mohamed Ahmed, OIC, UNFPA, West Darfur Office
48. Hassaniya Mohamed Salih, Deam, Genaina MTS, West Darfur
49. Reqiya Mohamed Abdelkareem, Inspector of Midwifery, West Darfur State
50. Arafa Mohamed Suliman, RH Coordinator, West Darfur State
51. Dr Abdel Jabar Ali, Genaina Teaching Hospital, West Darfur
52. Dr Bella Abas Mustafa, Medical Director, Genaina Teaching Hospital, West Darfur
53. Ibrahim Yahya Bashir, Community Leader, Ardmata IDP Camp, Genaina, West Darfur
54. Hassan Abdelrahman Mahdi, Community Leader, Ardmata IDP Camp, Genaina, West Darfur
55. Mohamed Ishaq Rasheed, Community Leader, Ardmata IDP Camp, Genaina, West Darfur
56. Basheer Mohamed Daldoum, Community Leader, Ardmata IDP Camp, Genaina
57. Hawa Adam Mohamed, , Teacher, Genaina MTS, West Darfur
58. Zainab Musa Ahmed, , Teacher, Genaina MTS, West Darfur

59. Batoul Atiya Abdelfadeel Ali Elnour, Dean, Kassal MTS.
60. Fatima Abdellatif Mohmed Salim, Inspector of Midwifery, Kassal State
61. Amina Abdelwahab Ibrahim, Teacher, Kassala MTS
62. Alawiya Issa, Teacher, Kassala MTS
63. Assiya Hassan, Teacher, Kassala MTS
64. Dr Mohamed Fadul, OIC, UNFPA Kassala State
65. Dr Ali Adam, RH Coordinator, Kassala State
66. Dr Abdel Azim Abdella, General Director, Saudi Maternal Hospital, Kassala.
67. Dr Mohamed Elmutalab, Dean, AHS, Kassala.

68. Dr Faroug, Acting General Director-SMoH, South Darfur
69. Sister Hawa, RH Coordinator, SMoH, South Darfur
70. Dr Abubakri Hussein, Dean, AHS, South Darfur
71. Mr Yagoub, Training Coordinator, AHS, Nyala, South Darfur

72. Dr Mohamed Diaeldeen, UNICEF Office, Director of Maternal and Child Health, Nyala, South Darfur
73. Dr Dyal –UNFPA OIC, South Darfur
74. Dr Babiker,UNFPA Office Coordinator, South Darfur
75. Dr Shimaa –UNFPA Coordinator Assistant, South Darfur

76. Dr Sawsan Eltahir, Head of RH Directorate, FMoH, Khartoum
77. Dr Sheikh Eldin, Direcor of Safe Motherhood, FMoH, Khartoum
78. Dr Elsheikh Elsidiq Badr, Vice President, AHS, Khartoum
79. Sister Siyama Abdelalla, Midwifery Program Coordinator, AHS, Khartoum.
80. Dr Abdelkarim Ahmed Elfaki, Midwifery Program manager, AHS, Khartoum,
81. Dr Dafalla Mohamed Elamin, Head of International Relations, AHS, Khartoum
82. Yousif Hamdeen, UNFPA, Khartoum Office
83. Dr Mohamed Said Ahmed, UNFPA, Khartoum Office
84. Ibrahim Sahl, UNFPA, Khartoum Office
85. Juliana Lunguzi , UNFPA, Khartoum Office
86. Dr Abbeer Abdelsalam, UNFPA, Khartoum Office (former S Darfur Office).

Focused Group Discussions (FGDs):

Focused group discussions were conducted with the following:

- VMWs (2 to 3 groups in each state)
- Community leaders (1-2 groups in each state)

25.9 References

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