Quality of Maternity Care in Rural Tanzania: Understanding Local Realities and Identification of Opportunities for Improvement

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Abstract

Maternal health remains a challenge in sub-Saharan Africa, and Tanzania is no exception. Despite increases in access and use of health care services, both during pregnancy and birth, maternal deaths have not decreased at a sufficient rate. Attention for the quality of care that women receive, while seeking care in health facilities, reveals that the content of care is not always in accordance with evidence-based standards. Additionally, there is increased recognition of the occurrence of unfriendly and disrespectful care during facility births. Women's experience of sub-standard care might become a disincentive to seek future care. Decision-making processes of women when seeking care for birth is multifactorial and remains poorly understood. This thesis describes and assesses the quality of care provided by facility based health workers during pregnancy and birth in a rural setting in Tanzania and explores how this influences women's care seeking during birth.

Data was collected over several periods between 2012 and 2016 and took place in Magu District, in The Lake Zone, Tanzania. Study designs included in this thesis are descriptive and analytic. A variety of data collection methods were used, and were primarily qualitative. Throughout the entire study period, participant observation formed an important part of the research approach. Mixed-methods were used to assess the quality of antenatal care at 13 dispensaries, one health centre and one district hospital. Data collection included a facility survey, direct observations of antenatal care consultations (N=664), and exit interviews with women attending care (N=286). In order to gain understanding of the quality of care during birth, from a provider perspective, I observed and participated for more than 1300 hours on maternity wards in four rural and semi-urban health facilities. Follow-up of 14 women's pregnancy, birth and post-partum period enabled me to explore women's individual reproductive pathways, women's exposure to facility-based care and decision-making processes for care seeking. Data included observation reports of 25 antenatal visits, three facility births and transcripts of 92 in-depth interviews (5-8 with each woman).

Findings revealed that quality of care, provided during antenatal care and birth, was severely compromised due to health system challenges, such as resource constraints, insufficiently qualified staff and lack of referral options. Health workers prioritized or neglected elements of essential care, influenced by complex working conditions, rather than adhering to evidence-based guidelines. Priorities for some services during both antenatal care and birth appeared more out of habit, than instrumental for clinical reasoning and decision-making. In particular, during birth, care provision could become highly unpredictable. Providers balanced their perception of not being able to influence the process of care, with the fear they would be held responsible for the outcome. Findings demonstrated how a tandem of underuse and overuse of essential interventions mitigated poor quality of care. Women's narratives descriptively illustrated their experiences and thought processes throughout their pregnancy in anticipation of birth. All participating

women were exposed to non-supportive care, including incidences of disrespect and abuse, during antenatal care and birth. Women's normalization and justification of these experiences revealed how structural and ingrained substandard care has become throughout women's reproductive lives. The weight attributed to isolated factors, and the, often tacit, meanings of perceived risks and opportunities, provided understanding of the choices women make for care seeking during birth. Women in this study appeared resilient and made decisions for birth based on what they perceived to be in their best interest and capability to seek care.

In conclusion, the quality of care that women received during pregnancy and birth was sub-standard, both from a technical and interpersonal perspective. Striving to attain skilled care for all requires acknowledgement of health providers and women's thought processes in their decision making for providing and seeking care. Strengthening the health system to ensure availability of 'good enough' quality and respectful care, to ensure women have a positive pregnancy and birth experience, will likely encourage more women to seek care in a timely manner during birth. Complex evaluations, embracing the intricacies of maternity care in low-income settings are needed to understand implementation gaps of essential interventions and to identify how these interventions can be adapted to fit the local context and cater to women's needs. Furthermore, substandard care and mistreatment of women across the continuum of care, must be holistically tackled, and needs to consider the realities of people's lives and the context of structural social, economic and political forces driving the health system.

List of acronyms

ANC	Antenatal care
AMTSL	Active Management of Third Stage of Labour
AWF	African Woman Foundation
Bpm	Beats per minutes
CUHAS-SPH	Catholic University of Health and Allied Sciences – School of Public Health
DHS	Demographic and Health Survey
EmOC	Emergency Obstetric Care
FB	Facility Birth
GA	Gestational Age
GLOBVAC	Global Health and Vaccination Programme
Hb	Haemoglobin
HIV	Human Immunodeficiency Virus
L&D	Labour and Delivery
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
NIMR	National Institute of Medical Research
PPH	Post-Partum Haemorrhage
RMC	Respectful Maternity Care
RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
RPR	Rapid Plasma Reagin
SBA	Skilled Birth Attendant
SP	Sulfadoxine-Pyrimethamine
TBA	Traditional Birth Attendant
UiO	University of Oslo
WCCP	Woman Centered Care Project
WHO	World Health Organization

List of papers

Paper I **Antenatal care and opportunities for quality improvement of service provision in resource limited settings: a mixed methods study**

Solnes Miltenburg A, van der Eem L, Nyanza EC, van Pelt S, Ndaki P, Basinda N, Sundby J.
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Paper II **Quality of care during childbirth in Tanzania: identification of areas that need improvement**

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Paper III **Disrespect and abuse in maternity care: Individual consequences of structural violence**

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Reproductive Health Matters. 2018. DOI 10.1080/09688080.2018.1502023

Paper IV **Understanding women's decision-making process for birth location based on four women's reproductive pathways: a life course perspective**

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Chapter 1: General introduction

The question should not be why do women not accept the services that we offer, but why do we not offer services that women will accept? *- Mahmoud F Fathalla, 1998*

Rationale

Worldwide the yearly number of maternal deaths has reduced from an estimated 532.000 global maternal deaths in 1990 to 303.000 deaths in 2015 (1, p467). Despite this significant reduction, maternal mortality remains a problem, particularly in low-income countries, affecting especially the poor and most vulnerable women. The lifetime risk of maternal death is 1 in 36 in sub-Saharan Africa, compared to 1 in 4900 in high-income regions (2, p16). Medical causes for maternal deaths include haemorrhage, sepsis and other pregnancy-related infections, hypertensive disorders of pregnancy, obstructed labour, complications related to abortion, other direct causes (e.g. anaesthesia, embolism) and indirect causes (e.g. human immunodeficiency virus (HIV) and other chronic diseases) (3, p237). These conditions have been studied intensely and interventions that can prevent and treat them are well known. For example, for the leading medical cause of death, haemorrhage, maternal anaemia and bleeding need to be prevented or treated. Strategies to prevent maternal anaemia include provision of iron supplements during antenatal care. Skilled care at birth and active management of the third stage of labour can prevent excessive bleeding. The latter includes the provision of oxytocin within one minute after birth of the baby. If haemorrhage does occur several measures can be taken in order to save the woman's life including uterine massage and provision of additional uterotonics (4).

Prerequisite in preventing and treating haemorrhage, as with any other condition, is for women to seek health services, during pregnancy, birth and in the post-partum period, for routine care and in case of emergencies. Lack of available and accessible services are important barriers for some women to seek care, particularly in very remote areas (5). However, there are substantial increases in availability and use of maternity services in most countries in sub-Saharan Africa (6). The slow progress in maternal mortality reduction, despite increased access and use of services, has exposed a large gap in the quality of care. Many women receive services that are delayed, inadequate, unnecessary, or harmful and despite reaching health facilities, some do not receive services at all (7–9). Decades of maternal health research resulted in a range of intervention strategies that in an integrated way can contribute to a reduction of maternal deaths. Strategies target both community and health facility level and include elements of health promotion, health seeking behaviour and service provision (10,11). Several simultaneous health system strategies are required to ensure adequate human resources and effective supply systems (7). If necessary investments are

not made at political levels to ensure effective implementation, such plans do not automatically result in sustainable change and reduction in mortality (12).

For the past thirty years, maternal mortality has been on the global agenda and gained particular attention when maternal mortality reduction became the target for one of the eight Millennium Development Goals (MDGs) (13). MDG 5, 'improve maternal health', did not include recommendation of specific strategies but rather promoted achieving high coverage of antenatal care and skilled attendance at birth. Such indicators track care contacts and not content of care, and focus on these indicators has masked the lack of investment made to ensure facility capacity to deliver quality maternity care (9). Global political support to, comprehensively, address the issue of maternal mortality remains limited. Maternal mortality in terms of total number of deaths is low compared to other conditions (such as for HIV, malaria) and maternal mortality measurement is complex and highly unreliable. Interventions necessary to prevent maternal deaths are not simple and evidence about the effect of interventions is often poor. Ultimately, those at risk, primarily poor women in low-income countries, have little political power to demand action (12). Health workers tresating women in low-income countries under difficult circumstances, and dealing with maternal deaths and women that barely survive, seldom forget these women and circumstances (14,15).

After graduating as a medical doctor in the Netherlands in 2012, I anticipated a future working with obstetrics in sub-Saharan Africa. This interest developed during my medical studies, when I had an opportunity to engage in a research internship in Somaliland and participate in clinical rotations in South Africa. During my three months in Hargeisa, Somaliland in 2008 I was able to observe the maternity ward and witnessed, for the first time, a maternal death:

A mother of 8, Ahsa (pseudonym), was now pregnant for the 9th time. She received an elective caesarean section because she was pregnant of, what was thought to be, twins that were positioned in such a way that a normal birth could be difficult. I remember her smile when she stepped on the operating table. The operation started smoothly and the first of the twins was born within minutes and was doing fine. The second baby however, was a stillborn. Soon after the birth of the second baby the surgeon raised his voice screaming, 'there is a third baby!' We were all excited and trilled when this baby was born alive. The following hours and evening, I was closely involved in the care for the newborns. They were struggling at times, but the good care of the nursing staff ensured they received the care they needed. The following morning, I quickly went down to the ward, asking how the twins were doing. The nursing staff said they were fine, but that the mother was not. I felt instantly guilty. I had been so thrilled with the two newborns that I had forgotten about the mother. How was she? It turned out she had been bleeding the entire night, and hospital staff had done everything in their power to stop the bleeding. The only remaining option to save her life would be a hysterectomy. Unfortunately, such a decision required consent of several of the men in Asha's family, which required extensive talks and deliberation. . When was finally on the operating

table to receive her potential life-saving procedure, it turned out to be too late. She died, within 24 hours after giving life to two beautiful new-borns. Together with their 8 siblings they were now motherless.

I was left with numerous questions after Asha's death. What was really the cause of her death and how could it have been prevented? Was it her numerous pregnancies? The fact that she carried triplets? Insufficient attendance to antenatal care? Was it due to cultural challenges and her lack of power to decide over her own body? Or was it as simple as lack of sufficient available blood for transfusion?

To increase my knowledge about maternal health and make sense of the questions that Asha's story raised, I started working with a small Dutch NGO 'the African Woman Foundation' in 2012, to plan and establish a maternal health project in Magu District, Mwanza Region, Tanzania. At the end of 2013, I moved more permanently to Tanzania, where I would live until the end of 2016. During this time, I became more fluent in Kiswahili. Activities for the project required regular visits to rural dispensaries, health centres and the district hospital, which was my first exposure to the health system in Tanzania. These visits mainly took place at antenatal clinics. From early 2014, I started to volunteer in two urban health facilities in Mwanza to gain some exposure on maternity wards to see, learn and try to understand what care during birth in Tanzania practically entailed. For more than a year, I spent on average one day a week teaching medical students, doing joined ward rounds and with increasing regularity assisted nurse/midwives on the labour ward. I decided to gain some experience working in the 'doctor role' at a faith-based health centre in the outskirts of Mwanza city. For 6 months, I joined in rotations at the outpatient department and was responsible for out and in-patients including the maternity and labour ward. I worked closely with the nurse/midwives when a woman was admitted for birth and through this gained first-hand experience of labour management in a less than ideal setting while being responsible for the decisions made.

This time on the maternity wards gave me first-hand experience in having to deal with numerous patients with only few staff and resources available. The stress of this experience heightened my awareness about the lack in basics of care provision. I noticed many evidence-based routines and interventions, essential for the provision of quality care during birth, were not being used. Women were often left alone until the final moments of pushing, and this was not only when there was a shortage of staff. I did not perceive this as being primarily a lack of knowledge or skills. Health workers were often very knowledgeable, and I was impressed with their skills, in particularly when dealing with complications and unexpected situations. I was acutely aware of great shortages in resources, including lack of water and electricity. I also, however, observed situations where resources were available, but were not used. My exposure to facility conditions in Tanzania and witnessing sub-standard care, including instances of disrespectful and abusive treatment, triggered me to sympathise with women opting to give birth at home. I too would not want to give birth in many of the facilities I visited. Similar to Campbell et al, I questioned why Tanzanian women are encouraged to give birth in facilities that have little expertise and resources to offer. Additionally, I questioned to what extent facility experiences actually influenced women's decisions to seek care for birth.

After all, if women had never been exposed to quality care, they might not realise they deserve better nor know that better quality care actually exists (16).

With this thesis, I assess and describe the quality of care during pregnancy and birth in a rural setting in Tanzania and explore to what extent women's exposure to sub-standard quality care influences their decision making for care seeking during birth.

Outline

The thesis consists of an extensive summary followed by three published articles and one article submitted for publication. To place the study in relation to important global developments with regards to Safe Motherhood I present in chapter 2, background information about the Safe Motherhood Initiative and how this has changed in the past 30 years. To ensure the findings of this thesis can be positioned within the geographical, social and economic context, chapter 3 provides general information about Tanzania and the health system, including a historical overview of the development of maternal health services since colonial times. Chapter 4 describes the research framework that guided the data collection, analysis and interpretation. This includes a reflection on the definition of quality of care and the different elements within the quality of care framework that should be considered including structure, process and outcome factors. After presenting the specific study objectives in chapter 5 I elaborate on the methodology in chapter 6. In addition to presenting the study design, use of methods, tools and analysis approach I reflect on my own role as a researcher, and how this influenced the research approach and interpretation of findings. Results of the study are summarized in the chapter 7 with reference to the full articles included in this thesis. In chapter 8, I provide an interpretation of the study findings in relation to global and national developments since the beginning of the Safe Motherhood Initiative. This is followed by a discussion of methodological considerations. I conclude my thesis with some key-messages and recommendations in chapter 9.

Chapter 2: Background

Policies and practices for maternal and child health in Tanzania are greatly influence by developments at the global level. Therefore, in this chapter I present an overview of the Safe Motherhood Initiative and how it has evolved over the past 30 years.

Safe Motherhood: Putting maternal mortality on the global agenda

The Global Safe Motherhood Initiative was launched in 1987 during a conference in Nairobi, Kenya, funded by the World Bank, World Health Organization (WHO), and the United Nations Population Fund (UNFPA). Although it is often referred to as the start of global interest in Safe Motherhood, maternal health was already acknowledged as a key priority prior to the conference. In 1975 the United Nations (UN) declared the period 1976-1985 as the United Decade for Women in an effort to raise international attention for the health, rights and development priorities of women (17, p18). The Alma Ata conference in 1978 promoted primary health care, through the slogan 'Health for All by 2000' and advocated an integrated approach to health and socioeconomic development including active community participation in health care and health education at every level (18). The premises underlying the Alma Ata conference was the realization that simple transfer of medical models from industrialized countries to low resource settings was not going to work. Countries made explicit commitments to develop comprehensive health strategies that would focus on the main problems in the community, including maternal and child health (19). A year later the Alma Ata goals were revised to 'Selective Primary Health Care', because some individuals, countries and institutions thought the original vision was not realistic (20, p67). Selective primary health care evolved to include a practical set of technical interventions better known under the acronym "GOBI" (Growth monitoring to fight malnutrition in children, Oral rehydration techniques to defeat diarrheal diseases, Breastfeeding to protect children, and Immunizations). With this global health agenda, including funding priorities, the focus for quite some time was predominantly on the child, rather than the mother. Additional packages were included in the next few years, specifically targeting women: FFF (Female education, Family Spacing and Food Supplements). However, these were also primarily phrased for the purpose of increasing child survival (19,21) .

It was not until 1985 that an article in the Lancet by Rosenfield and Maine sparked attention to the neglect of 'the M in MCH'. They highlighted that of the 'FFF' components, then known as the basic MCH (Maternal and Child Health) package, only family planning directly contributed to a reduction of maternal mortality, however other major causes of maternal death were not addressed. The authors called for investment in a system of comprehensive maternity care, but recognized the lack of political will to achieve this (22). The Nairobi conference was thought to change this. The conference issued a specific goal for maternal mortality reduction (a reduction of 50% by the year 2000) and the strategies reflected

some of the original Primary Health Care aspirations, including situating maternal health within the context of improving women's status in economic, social, and political spheres (17, p9). The conference called for an integrated, multisector approach through stronger community-based care, strengthening and expanding core elements of maternal health services both at the community level and referral level and establishing alarm and transport systems for referral of emergencies (23). In the aftermath of the conference several comprehensive frameworks were developed to support researchers, program managers and policy makers for analysing determinants and contributing factors for maternal mortality (5,24). The International Conference on Population and Development (ICPD) in Cairo in 1994 and the Fourth World Conference for Women (FWCW) in Beijing in 1995 resulted in global recognition of the importance of social, cultural and gender-based determinants of health and development. This positioned Safe Motherhood within a more comprehensive reproductive and women's health and rights context (19,25). Within the dominant public health spheres of prioritizing vertical community-based preventative intervention, however, only two specific interventions were actively promoted: antenatal care (with a focus on screening for women at high risk) and training of traditional birth attendants (TBAs) to improve care at birth (26, p1130). The first decade successfully placed the problem of maternal mortality on the global agenda, resulting in several international and national conferences on Safe Motherhood (27,28). There was, however an increasing need to achieve a shift from advocacy to action, which called for more information on country/state specific and global mortality figures, measurement of impact of interventions, efficiency of resource use and evaluation of progress (29).

Safe Motherhood: Evidence-based prioritization of interventions

Evaluation of the evidence of the effectiveness of antenatal care to reduce mortality raised substantial doubts (30). Limitations of the risk approach and early identification of women at risk for developing complications, had been known for much longer (31) and had also been addressed by Rosenfield and Maine in their 1985 publication (22). Quality of the evidence-base was, however, not so strong. Not only were there limited studies available, many studies did not report the content of antenatal care and general challenges emerged regarding lack of agreement as to how often, and what exact content of antenatal care would be necessary (30). Generating reliable evidence on the impact of any intervention on maternal mortality encountered several well described, methodological challenges (29,p28). Training of traditional birth attendants and its effect on reducing mortality went through a similar review process, with similar conclusion. As a single intervention it was not considered useful, and although benefits of inclusion of traditional birth attendants (TBAs) was acknowledged, such as providing empathy, cultural competence and psychosocial support to women, these were seen to be of inferior importance compared to the benefits of providing women with access to medical care by skilled staff (32). For these interventions to be effective, authors conclude, that a functional health system is necessary, with quality obstetric care, a functioning referral system and services delivered based on a broader concept of women's health (30,32,33). The Safe Motherhood Initiative originally promoted a need for such a comprehensive and

integrated approach. Nevertheless, many donors and governments began to de-emphasise training of traditional birth attendants and instead prioritized increased access to professional medical care, especially for life-threatening complications (26, p1130). The failure of TBA training and antenatal care to reduce mortality was fairly quickly translated to equate with failure of the Safe Motherhood Initiative, despite the fact that the initiative never promoted isolated implementation of these two interventions (34). It was the selective prioritization that led to unfavourable progress.

The success of the first decade (1987-1997) to achieve global attention for maternal health issues was quickly overlooked when the approach to Safe Motherhood was reduced to a 'numbers game' (36). Furthermore, preoccupation with maternal death equated women's health with an important, yet limited, concern of mere survival as measurement of progress (19,29,35). The second decade (1997-2007) was spurred by an increasingly complex health arena with emerging public health challenges such as HIV, and thus increasing burden on health systems in low-income countries. Simultaneously structural adjustment policies further strained national health budgets (36). Competitiveness for funds and priority setting for health interventions was increasingly based on economic, cost benefit, analysis (37). Evidence-based decision making for health emerged rapidly which led to development of instruments such as the 'burden of disease' and 'disability adjusted life years' estimates, which although beneficial, risks underestimating the disease burden of women by not considering structural social gender inequalities (38). Renewed focus on the need for scientific evidence for prioritization of health interventions gained momentum through the establishment of the Gates Foundation in 2000 and the launch of the Millennium Development Goals in the same year. Although the inclusion of a separate goal for maternal health (MDG 5) was a win for advocates of the Safe Motherhood Initiative, again focus was on promotion of narrow interventions rather than the integration of social and technical approaches (39). Considerable attention and resources were used to, on the one hand, criticise the narrow and insufficient focus on maternal mortality, and on the other hand the development of more sophisticated tools and ways of collecting data to estimate maternal mortality (37).

Within the Safe Motherhood arena, the second decade witnessed an increasing proliferation of difficult issues such as family planning, abortion and female genital mutilation, resulting in increased political polarization of several international conferences and their outcomes (19). Although broadening of the Safe Motherhood agenda within a more comprehensive reproductive and woman's health context was reflecting the original initiatives mandate, it also became increasingly politicised as a whole, and did not necessarily benefit the initiative. This challenge continues and large funding streams risk termination if programs in any way imply support for abortion care (40). As a result, the initiative was increasingly blamed for being too complex with a lack of clear strategic focus (26). Combined with methodological challenges and lack of reliable data to establish mortality trends and evaluate effectiveness of programmes, this again led to neglect of maternal health as a priority issue (37). The shift from antenatal- to intrapartum care as well as shift from traditional- to skilled birth attendant was justified by the observation that most deaths occur around the time of birth (41). A professionalization of birth care became the new hope to reduce maternal

mortality including three integrated elements: skilled attendance at birth, basic and comprehensive emergency obstetric care (EmOC) and effective transport systems (42). This also strengthened the involvement of physicians, specifically obstetricians, who assumed a more important role through providing and generating expert knowledge on the required content of interventions and translation of this knowledge to doctors in low-income settings (43). The clinical, biomedical, approach became a new tool for Safe Motherhood advocates generating renewed commitments of institutions and governments to pay attention to maternal mortality (19).

Safe Motherhood: Continuum of care and a human rights-based approach

The shift to focus on intrapartum care introduced a new tension between the maternal and child health movement about focus of where interventions need to take place and whether this should this be at community or health facility level (44,45). Although few people argued against the importance of strengthening obstetric care, the perception was that this was challenging to achieve in low-resource settings. Some authors called for urgent short-term community-based single interventions in the interim (46). This argument had been used before, to advocate for Selective Primary Health Care (20). The argument was supported by increasing evidence that community-based strategies could have considerable impact on neonatal survival in settings with weak health systems (47). Competing claims for maternal and child health needs had, for the past decades, led to detachment of the maternal and child health agenda from each other, but this was slowly changing (45, p88). Strengthened by an international debate on aid-effectiveness and the need for combatting fragmentation, the Partnership for Maternal, Newborn and Child Health was found in 2005 (34). The partnership advocated for a continuum of care framework to strive for improved health outcomes for women and children. Continuum of care was understood both in terms of a life cycle approach (spanning sexual and reproductive health needs and rights of women and adolescents, pregnancy care, safe delivery, the first weeks and early years of life) and places of care giving (from community to facility-based care) (48). One particular aspect, which bound the movements more closely together, was the realization that perinatal issues had been largely neglected on the global agenda (49). Newborn deaths and stillbirths contributed to a significant number of total child deaths, and at the same time were closely bound to intrapartum care which had come more to the forefront (50). For the Safe Motherhood initiative, the partnership with its focus on continuum of care finally seemed to draw interest in a more comprehensive approach to reduce maternal deaths, including attention for cross-cutting health system issues such as human resources, supply systems and infrastructure (33).

The third Safe Motherhood decade (2007-2017) began with repetition of phrases such as ‘getting on with what works’, ‘stripping away the complexities’ and ‘simplification of the issues’ (51). Comprehensive became equivalent to suggestions for ‘packages’ of evidence-based single interventions, effective to tackle maternal mortality (10,47,52,53). This was greatly strengthened through the use of the Lives Saving Tool (LiST): a computer-based model that estimates the impact of scaling up key interventions to improve

maternal, newborn and child health outcomes (54). In this decade antenatal care received renewed interest, through promotion of the Focused Antenatal care model, including a minimum of four visits with a specifically determined number of single evidence-based interventions (55). The evidence for this model was based on a large multicentre randomized controlled trial, although the trial did not include low-income countries (56). Additionally, with increasing coverage of women attending antenatal care in low-income settings, antenatal care became a place to address more popular disease specific issues such as HIV and Malaria (57). Skilled attendance at birth (also referred to as the health centre intrapartum care strategy or first level care) was strongly promoted as a priority solution (51,58). Effectiveness of this strategy alone, however, to reduce mortality was limited and dependent on the accessibility and availability of 'back-up' referral care (58,59). Additionally, there were considerable measurement challenges as it remained far from clear which providers were considered skilled and which single actions this strategy included (37,60,61). On the contrary, the EmOC strategy and the seven signal functions, were backed by an increasing quality evidence base, although there was limited research in low-income settings (62,63). With comprehensive EmOC in place it was estimated that most deaths, including maternal deaths, newborn deaths and stillbirths, could be averted (62,64,65). Consequently, the message to prioritize EmOC was clear, simple and directly targeted the time when most deaths occur. This was thought to allow for quick results and thus would appeal to donors and governments (66, p74).

In the final years of the Countdown to 2015 a parallel scaling up of more or less disease specific interventions remained, now through antenatal care (with focus on a package of selective single interventions) and skilled attendance at birth (primarily EmOC). Although maternal health advocates had won considerable ground to have maternal mortality and maternal morbidity again as a priority issue, much of the Safe Motherhood Initiatives focus on addressing the social determinants of health seemed to have been lost (34). In many ways, it was hoped the Human Rights Approach would revive the original aims of the Safe Motherhood Initiative (19), namely, failure to address maternal mortality and morbidity was a result of injustices and women's cumulative denials of their human rights (67, p5). During the World Conference on Human Rights in Vienna in 1993, and the Cairo and Beijing conferences in 1994 and 1995, initial steps were laid out to form an agenda around women's sexual and reproductive health and rights, including attention for the role of poverty, gender inequality and structural violence against women (67,68). During the time of the MDGs, largely because of the political climate, rights perspectives on maternal health were more or less ignored, and only became marginally included when in 2005 goal 5B was added 'universal access to reproductive health' (68). It wasn't until 2012, when the UN adopted a ground-breaking resolution regarding a human rights-based approach, in the context of Safe Motherhood, that it was firmly established that 'states have a human rights obligation to guarantee women of all racial and economic backgrounds, timely and non-discriminatory access to appropriate maternal health services' (69, p79). Since then the human rights-based approach to Safe Motherhood is increasingly operationalized and functions as an important instrument to: provide policy guidance to implementation of Safe Motherhood programs; hold states and institutions accountable; mobilize grassroots movements to demand

reproductive health care; and ultimately to enable women to be treated with dignity and respect for their rights (68). The practical implementation of the human rights approach was, and still faces numerous obstacles (70). As a result of gross social inequalities in many countries with high maternal mortality the ability of individuals to claim their rights and hold the right people or institutions accountable remains severely compromised (14,71).

Safe Motherhood: Crisis of poor quality maternity care

The case of Alyne da Silva Pimentel Teixeira versus the government of Brazil is the first time a national government was held accountable for a maternal death. Her case is of significance because not only had the government failed to ensure appropriate services, the ruling also focused on the violations which occurred in ensuring quality of care, with reference to both provision of sub-standard care according to clinical guidelines, as well as the neglect and discrimination contributing to her death (72). In 2011, a charter for Respectful Maternity Care was developed. This followed an increase in publications of women experiencing disrespect and abuse during facility-based childbirth (73). At the same time, towards the end of the MDG era, progress evaluations revealed that despite increasing availability of and access to skilled care at birth including EmOC, the Maternal Mortality Ratio (MMR) in many countries did not reduce as expected (6). A 'mismatch between burden and coverage' exposed 'a crucial gap in the quality of care' (9). The Lancet Midwifery Series, in 2014, drew attention to the impact of focussing on lifesaving interventions (e.g. EmOC) and how this led to a neglect of the important role of midwives in improving health outcomes for women and newborns (74). Renfrew et al presented strong evidence, which if adhered to, could avert 80% of maternal and newborn deaths, including stillbirths. The evidence highlighted the essential role of midwives in the provision of the listed interventions. The series called, yet again, for a shift from identification and treatment of pathology for the minority to integrated skilled care for all (11). Although the midwifery series strongly advocated for increased attention for improving childbirth practices from a more holistic perspective, focus of the suggested interventions we predominantly biomedical, evidence-based clinical interventions. Attention for the 'blind-spot' of disrespect and abuse in childbirth, signalling a 'health system in crisis' lead to a strong call to confront the harsh local realities of resource constrained settings and the lack of value given to 'what women need and want' (75).

At the start of the Sustainable Development Goal (SDG) era, the estimated number of women worldwide dying in childbirth significantly reduced from 532.000 in 1990 to 303.000 in 2015 (1). Despite this reason for optimism, poor maternal health is highly inequitable between and within populations and the burden falls disproportionately on the most vulnerable in areas where health systems are the weakest (76). Increase in coverage of one or more antenatal visits from 65% to 83% and birth with a skilled attendant from 57% to 74% and the (77, p30) mask the harsh realities of the experiences of poor women seeking care in health facilities. For many years the global community pushed women to reach the health facility in time, only to realize the health facilities women arrive at, often have little to offer (9, p11). Paradoxically, the complex

indicator ‘skilled birth attendance’ was for many years followed up with single interventions, such as cash incentive schemes, or banning traditional birth attendants, to encourage more women to give birth in inadequate institutions (78–81). There is increased recognition that globally formulated strategies not only have ignored larger social structures that shape health systems and the social contexts in which women live, but also that these same strategies have drowned the voices from those it claims to serve, women and their health providers (82). The WHO recently released updated guidelines for provision of antenatal care (83), intrapartum care (84) and standards for improving quality of care (85). Although the developments of these, and several other guidelines, followed the traditional path of grading of quantitative studies, there is an increase in formal inclusion of qualitative evidence in the development of recommendations, if these studies fill gaps in evidence (86).

Recent decades have witnessed an increase in research activities with regards to maternal health and attention has swung back and forth from striving for comprehensive approaches to Safe Motherhood, to prioritization of selective interventions or a package of those. It is hoped the SDGs will function as a catalyst to connect maternal health with education, gender inequity and poverty reduction, circling back to the Safe Motherhood Initiative. Considering the instability and fluctuations of global goals and targets, failing to significantly improve lives of the most vulnerable, it seems fair to be sceptical. It is tempting to say yet again ‘we know what works’ and promote global recommendations at national and local level, as they have recently been updated by the WHO. It is clear, however, that knowledge of ‘what works’ does not provide sufficient guidance as to ‘how’ it could work in different settings. To provide the right care, at the right time, in a respectful manner (7), it is imperative to understand the context in which care is provided and factors contributing to provision of quality care during pregnancy and birth, or the failure to do so.

Chapter 3: Study country

Maternal health remains a challenge in sub-Saharan Africa, including in Tanzania where my research took place. In this chapter, I present background information about Tanzania, including details about the health system and a historical overview of the establishment of maternal health care services.

Tanzania country profile

The United Republic of Tanzania is in East Africa and formed by Tanzania Mainland and Zanzibar. Tanzania Mainland was previously called Tanganyika. Tanganyika was under German rule from 1891 until the end of World War II in 1918 after which Tanganyika came under British rule. Tanganyika became independent of British colonial rule in December 1961 (87). On April 26th 1961, Tanganyika and Zanzibar united, forming the United Republic of Tanzania. The country lies south of the Equator, and borders eight countries: Kenya and Uganda to the north; Rwanda, Burundi, the Democratic Republic of the Congo and Zambia to the west; and Malawi and Mozambique to the south (See figure 1).

Figure 1 Map of Tanzania (88)

Administratively, the mainland of Tanzania is divided in 26 regions. Each region is subdivided into districts. The population of Tanzania has grown rapidly from an estimated 12.3 million in 1967 to 50.1 million in 2016 (89). Despite the fast-growing population, population density remains low and the majority of Tanzanians live in rural areas. However, the proportion of urban residents increased from 6% in 1967 to 30% in 2012 (90).

Tanzania has more than 120 distinct ethnic groups and tribes of which the largest is the Sukuma tribe who predominantly live in the North-Western part of Tanzania. Tribes in Tanzania all have their own language, however, Kiswahili is the official national language and the main language in primary schools. From secondary school to university level English is the main language. Nevertheless, many of the daily interactions also at professional level occur in Kiswahili, or the tribal languages. Tanzania's first president, Julius Nyere, introduced Kiswahili as the national language to foster national unity, believing that language is essential in bonding people together. Under President Nyere's rule the nation took several measures to ensure that ethnicity and religion would not jeopardize national unity. This is partly why Tanzania is often proclaimed to be a peaceful and stable country (91). Estimates on religious demography are unavailable as religious surveys were eliminated from government census reports after 1967. It is estimated that the Christian and Muslim communities each account for roughly half of the population. Although practitioners of other faiths, indigenous religions, and atheists do exist. Claiming to be part of a formal, organized, religion does not mean that people have completely given up traditional spiritual believes (92). Such believes influence people's decisions and actions in every day live. Many people seek protection against bad spirits either through certain believes and practices they have learned through generations or by actively seeking assistance from traditional healers (93, p90). The relationships between the Muslims and Christians have largely remained good, often members of both faiths are part of the same family and the country celebrates both major religious holidays. There have however been increasing reports of conflicts and tensions between Muslims and Christians over the past two decades (94).

Tanzania's poverty rate declined from 34.4% to 28.2% between 2007 and 2011/12, based on the national basic needs poverty line of TSh 36,482 (US$15 USD) per adult per month. Compared to the international poverty rate (US$ 1.25 per capita per day) the national poverty rate is 15% points lower. Due to population growth it is estimated that around 12 million Tanzanians still live below the poverty line, the majority of whom reside in rural areas (95). Although poverty is more noticeable in rural communities, most Tanzanians have access to land and farming, which is an essential way for people to ensure their daily needs are met. Agriculture is a major source of livelihood for the majority of the rural population. The main food crops are maize, rice, wheat, sorghum, cassava and beans and the majority of agricultural production is consumed by local households (96, p1). Unreliable and unfavourable weather conditions of the past years resulted in poor performance, affecting both crops and livestock (97).

Literacy and schooling have played a vital role in Tanzania's development, which is evident in the governments increasing budget and financial commitment, allocated to education. The waiving of fees for primary and, more recently, secondary schools, has drastically increased school enrolment. Secondary school enrolment increased from 6.7 per cent in 2003 to 33.4 per cent in 2016. This has reduced inequality in access to education for girls and boys; however lower enrolment of girls remains persistent in secondary school and higher education. Furthermore, adolescent pregnancy is a major contributing reason for school dropout. In 2016, this led to almost 3.700 girls dropping out of primary and secondary education (98).

Tanzanian Health System

The health care system in Tanzania is organized along a referral pyramid with primary health care services provided at community level. Community based health activities focus on health promotion and prevention. Dispensaries are the first formal health unit at primary level, providing preventative and curative out-patient services. Health centres provide similar services but are also able to admit patients and sometimes provide medical and surgical services. District hospitals provide health care to referred patients and provide medical and basic surgical services. Regional and zonal hospitals function as referral hospitals to provide specialist medical care and function as teaching hospitals for medical, paramedical and nursing training (99). The Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) has the overall responsibility over the health services and defines priorities. Most government functions have been decentralized, placing responsibility for planning, delivering and overseeing health services with local government authorities. This decentralization combined with an introduction of cost-sharing was part of the health sector reform after introduction of structural adjustment policies in the early '90s (100). Over the past decade, government expenditure for health has not reached the target of allocating at least 15% of their annual budget to improve the health sector as set by the Abuya declaration. Between 2013 and 2015, Tanzania spent up to 9% of its budget on health. Consequently, the health sector as a whole remains heavily dependent on foreign funds and household contributions (101, p22).

Tanzania suffers a major health worker shortage, with both an imbalance and inequitable distribution across cadres and regions. The total health workforce declined over the past decades, in particular after the government imposed an employment freeze between 1993 and 1999, resulting in a loss of one third of the health workforce in the public sector (102, p2). In 2014 the total shortage of staff across health facilities was estimated to be 56% (103, p1). Shortages are particularly marked for district hospitals and dispensaries and are more severe in rural areas (104, p7). The shortage of medical doctors in rural areas is covered by assistant medical officers and clinical officers, and medical attendants perform much of the nursing care activities in rural areas (104). It is estimated that to achieve 80% coverage rate for births, assisted by a skilled provider, countries need at least 25 health professionals per 10.000 populations (105). Even if all health worker cadres providing patient care in Tanzania are combined, the density is less than 50% of the minimum required (106). This health workforce crisis is fuelled by insufficient government spending on health, poor quality of training institutions, insufficient recruitment and challenges in retaining of available health staff, in particular in rural areas (103). This is further complicated by lack of sufficient equipment and supplies, insufficient supervision and poor transportation and communication infrastructure (104). All of which is deterring health workers motivation, leading to absenteeism, corruption practices and risk of burn-out (107,108).

Table 1 presents some of the most recent basic health indicators for Tanzania mainland. Despite severe health system challenges, Tanzania has some positive achievements. The total fertility rate has declined from 5.7 children in 2004/5 to the current 5.2. Noteworthy is also the downward trend in under-5-mortality (from 147 deaths per 1000 live births in 1990 to 67 deaths per 1000 live births in 2015) (88). This was likely a result of major attention for immunization, malaria and prevention of mother to child transmission of HIV through the Expanded Program on Immunization and the Integrated Management of Childhood Illness (109). There is however insufficient progress towards reducing the number of maternal deaths. Recent estimates indicate the MMR has not changed substantially in the past decade (88). There was also insufficient progress in reducing the number of neonatal deaths and stillbirths (109). Additionally, due to reporting issues, current figures of newborn deaths and stillbirths are likely severely underreported (110). Poor progress in improving maternal and neonatal survival despite continued nationwide commitment to the Safe Motherhood Initiative, is likely due to insufficient large scale implementation, lack of clear global strategies and poor funding priority for maternal health (109).

Table 1 Tanzania health indicators (88,103)

Indicator	Figure	Year
Life expectancy at birth (male and female)	61	2012
Total fertility rate	5.2	2015
HIV prevalence (male and female, 15-49y)	5.3%	2012
Unmet need for family planning	22%	2015
Contraceptive use (any method, among married women 15-49y)	38%	2015
Neonatal mortality rate (per 1000 live births)	25	2015
Perinatal mortality rate (per 1000 live births)	39	2015
Infant mortality rate (per 1000 live births)	43	2015
Under five mortality rate (per 1000 live births)	67	2015
Maternal mortality ratio (per 100.000 live births)	556	2015
Medical doctor density (per 10.000 population)	0.25	2014
Nurse/midwife density (per 10.000 population)	3.03	2014

Historical development of maternal health services

To understand current challenges in delivery of maternal health services in Tanzania it is relevant to reflect on the history of the development of maternal health care services both during colonial times (1891-1961) and post-independence (1961-2006).

Pre independence (1891-1961)

Under German rule, medical services in Tanganyika primarily served the European population living in urban areas and were less concerned with indigenous populations living in predominantly rural areas. The health of ‘the natives’ was only considered when disease also threatened Europeans (e.g. malaria, the plague), or when treating ‘the natives’ was of economic or political interest (111, p87) or to enhance

‘African’ acceptance of German rule (112, p10). The colonial administrations concern with women and children’s health was triggered by low population levels early 1900. Concern about this increased under British rule after World War I. Low fertility (partly ascribed due to spontaneous abortions induced by venereal diseases) and high infant mortality were considered to contribute to the declining population, a concern for the colonial administration. The administration attempted to address high infant mortality by promoting the improvement of hygiene and changing feeding practices, often through offering education alongside large vaccination campaigns (111, p98). Medical missions provided much of the care for the majority of the population including children, both during German and later during British rule. The missions focus was, while inspired by evangelization, on the ill and suffering of the individual, and was often committed to meet the needs of their communities (114, p38). The missions and colonial administration attempted to change, what they perceived as, backward and ignorant ways of living and encouraged indigenous women to raise their children according to European civilized standards (111, p96).

Medical missions led the way, addressing women and children’s welfare and dominated the field after the 1920s-1930s. From the 1920s missions were increasingly supported by the colonial administration to expand their work with women and children. The colonial administration could not afford to support this sector, yet realised maternal and child welfare was essential to improve population levels (114, p228). The missions undertook most of the work, organising child education clinics, home visits, introducing midwifery care in health facilities and lead the way in training of African health personnel. Following developments in Europe, hospital births were encouraged alongside provision of antenatal care. Unhygienic circumstances, during and after birth, supported by untrained birth assistants were believed to be causes of high mortality for both mother and child. Medical missions increasingly trained traditional birth attendants in certain Western principles of hygiene and cleanliness, which were later adopted by the state (114, p237). In contrast to the success of getting women to attend woman and child welfare clinics, few women gave birth at the health facility. In Tanganyika, as in many other African countries, women were not alone while giving birth and family members or neighbourhood women would often assist labouring women. Their presence however was not allowed in the mission clinics, which possibly explains the lack of success in encouraging women to come for a facility birth (93,111).

Nevertheless, by the end of the 1930s women were increasingly comfortable with the notion of giving birth in the health facility (93). The Tanganyika Medical Report 1927-1938 reported an increase of total recorded facility births from 507 in 1927 to 3.532 in 1939 at maternal and child welfare clinics across the country (114, p235). Increasing awareness of the risks associated with childbirth and successful medical achievements in hospitals, which had developed more fully from a technical and surgical basis, helped in gaining peoples trust, but success was mainly attributed to the few mission hospitals, as it proved particularly difficult to encourage women to come for birth in government facilities. Women who once delivered at a clinic, did not always come back for a following birth, or only came after being traced in the village, or when their husbands were punished for not bringing their wives to the clinic on time (114). The

maternal and child welfare clinics of the missions were used as a model by the colonial state when designing for such services in government facilities, however, these failed to gain the level of trust and acceptance within the surrounding community (114). Missions had often attached themselves to local communities for years before they introduced biomedical treatment for women and children. The missions spent time to build trust and acceptance from the communities, while offering education, health and evangelical services through a holistic vision encompassing both bodily and spiritual well-being (93,113). It is partly the role of medical missions in maternal and child welfare, which during the post-war period resulted in greater integration of their services and increased state grants for mission activities. This also resulted in increased state control (114). The success of maternal and child welfare clinics combined with lack of systematic funding and human resource challenges, however, led to overcrowding of maternity wards. This result guided the colonial medical department in reassessing their policy and promoted a shift of uncomplicated births away from the hospital and training of village midwives to provide services at home in rural areas (93, p32).

Post-independence (1961-2006)

After independence the new administration of what would be called Tanzania continued largely on the same path that was laid out at the end of the colonial time. Before 1990 there was no explicit maternal health policy. The government presented their health objectives in three subsequent five-year plans for economic and social development between 1964 and 1981 (17, p75). Health accounted for only 4% of the budget in the first five years after independence (115, p38) and the policies were initially largely orientated to urban centres and economically advanced areas. Urban hospital-based services were prioritized by the central government and left rural health for local authorities to deal with (115). Following the Arusha declaration in 1967 the Tanzanian government committed to make rural health services a top priority resulting in expansion of the number of rural health centres from 22 in 1961 to 90 in 1971 and similar increases in rural dispensaries (115, p39). There was also a shift from focusing on training of high cadre of health personnel to lower cadre staff, including nurses and auxiliaries. The first Maternal and Child Health Plan, launched in 1974, paid specific attention to ensure integrated services for women and children, through a chain of dispensaries and health centres. During this period emphasis was on a multi-sectoral approach to primary health care (17). A new cadre of rural health workers, MCH aides were to be trained to provide the majority of maternal and child health services in rural areas and to replace the village midwives (17, p76). Focus of maternal and child health services during this time was increasingly on family planning with attention for child spacing and access to contraceptives.

1970s witnessed a major influx of foreign aid. Donors provided over 70% of the budget for health during this decade. Most of the funds were allocated to vertical projects, building of health facilities and training different cadres of rural health professionals (116, p95). By the end of the 1970s about 90% of the population lived within 10 kilometres of a health facility, communities increasingly embraced the benefits of biomedical care and services were offered for free (117, p5). Efforts to improve health of

the rural population were successful and from independence to the end of the 1980s there appeared to be a downward trend in maternal mortality (117, p12). However MMR estimates from different sources in the mid-eighties ranged between 197 to 770 per 100.000 and was prone to large margins of error (118,119). By the end of the 1970s through to the early 1990s economic decline, and the health sector reform which followed, there was a serious health worker shortage, a lack in most basic supplies and equipment and deterioration of staff morale (100,115,116). The number of midwives declined by 24% countrywide (120, p11) and women were increasingly disappointed with the quality of services in facilities including lack of drugs, insufficient staff and poor staff attitude (121). By the early 1990s, 44.7% of births in rural areas were estimated to take place in health facilities and the remainder of women gave birth at home or with a traditional midwife (122, p84). Poor hygiene and harmful practices during these home births were thought to contribute to high mortality rate of both women and their babies (123–125). Training of these lay midwives was suggested as a possible solution by the international community; although the ministry of health remained suspicious these efforts would diminish the already scarce resources from the facilities (126, p38).

Tanzania was one of the first countries to endorse and adopt the Safe Motherhood strategy. Following the Safe Motherhood Initiative, the government strove to train 32.000 TBAs, which was part of the WHO promotion of TBA training as part of achieving ‘Health for all by 2000’(126, p37). The Safe Motherhood Initiative triggered national focus on maternal and child health resulting in the development of National Safe Motherhood Policy documents (1992, 1995-1997) and Strategy for Reproductive Health and Child Survival (1997-2001), which were greatly influenced by the outcomes of the International Conference on Population and development in Cairo in 1994, and with a major focus on family planning. Although these strategies had ambitious goals, including aiming to reduce the maternal mortality ratio by 50%, implementation was poor and little progress was made towards the indicators (17). From the year 2000, in line with the promotion of the MDGs, the Tanzanian government developed the National Package for Essential Interventions with specific attention for reproductive and child health. TBA training was still an important component; encouraging uncomplicated births should take place outside of the health facility. Additionally, the strategy promoted education on danger signs, emergency transport and strengthening of primary obstetric care at dispensaries and health centres. District hospitals were intended for treatment of emergencies including caesarean sections and provision of blood transfusions (127). The follow up document, Reproductive and Child Health Strategy 2005-2010, included action on implementation of focused antenatal care, skilled care during birth (moving away from training of TBAs), obstetric emergencies, postpartum care and family planning, as well as attention for prevention of harmful practices (such as FGM) (17). During this time other policy guidelines integrated elements of relevance for provision of maternal health services, focussing on health system strengthening including attention for human resources, quality improvement and procurement of essential supplies and medicine (118).

Current state of maternal health

The National Road Map Strategic Plan to Accelerate Reduction of Maternal and Newborn Mortality in 2006, followed by the One Plan (2008-2015) and the recently updated Sharpened One Plan II (2015-2020) guided policy direction for maternal health in Tanzania throughout the past decade and remain important in reference to the current state of maternal health (128–130). Table 2 presents some of the basic maternal health indicators, taken from the recent Demographic and Health Survey (DHS) 2015-2016. Although Tanzania has made significant progress between 1999 and 2015 in increasing facility births (from 47% to 63%), the MMR remains the same (from 578 in 2000 with CI 466-690 to 556 in 2015 with CI 446-666). Current reduction rates and wide confidence intervals suggest it is unlikely Tanzania will reach the 2030 target MMR of 140 maternal deaths per 100.000 live births (88). Availability of supportive policy has not resulted in significant improvements for maternal health since the Safe Motherhood Initiative. Despite growing political attention for maternal health, implementation has been variable and inconsistent. In contrast, child health achieved programmatic progress as well as substantial funding which resulted in consistent implementation of high impact interventions at lower levels of the health system, while maternal health interventions were targeted at higher levels of the health system and at a much smaller scale (109, p403).

Table 2 Maternal health indicators 2015-2016 (88)

Indicator	Figure
Coverage of 1st ANC visit	98%
Coverage of 4 or more ANC visits	51%
Timing of ANC visit <4 months	24%
Coverage of facility birth	63%
Coverage of skilled birth attendance	64%
Caesarean section rate	6%

Mid-term review of the 'One Plan' by the Ministry of Health and Social Welfare in 2014 revealed an increase in the number of facilities across the country offering maternal health services, however, staff shortages and supply stock-outs have compromised quality of care. The report mentions that 'cross-cutting bottlenecks (…) include mismatch between policies/guidelines and implementation with gaps in accountability, inadequate resources, medicines, safe blood supplies and other essential commodities, equipment and infrastructure to support quality of services (129, p8). In addition, there are growing inequities in socioeconomic status and women in rural areas are severely disadvantaged (109). This is likely a consequence of unequal distribution of resources with concentration of services in urban areas (129). The 2016 updated One Plan II does not paint a better picture, with additional challenges risking poor quality of care. Compared to 2012, it appears the proportion of hospitals capable of providing comprehensive EmOC has reduced from 73% to 59% and basic EmOC availability has reduced in health centres (from 39% in 2012 to 28% in 2015) and dispensaries (from 20% in 2012 to 13% in 2015) (130).

Additionally, there is been a spike in authors raising concerns regarding women's experiences of disrespectful and abusive treatment during childbirth (75,131,132).

One Plan II outlines renewed commitment of the government to maternal health and aims: "to promote, facilitate and support in an integrated manner, the provision of comprehensive, high impact and cost effective RMNCAH (Reproductive, Maternal, Newborn, Child and Adolescent Health) services, along the continuum of care, to accelerate reduction of maternal, newborn and child morbidities and mortality" (130, p24). Several challenges remain for the government to achieve the new targets and strategies, particularly with regards to the expected remaining shortage of staff and lack of allocation of necessary funds (133). Analysis of Tanzanian health finances over the past 10 years suggest it is unlikely there will be a substantial increase in funds allocated for maternal health. For the overall health budget there is great dependency on foreign assistance, with HIV programs receiving most of the external funding. Maternal health funding relies heavily on government funding and out-of-pocket payments and it is unlikely this pattern will change in the near future (109).

Chapter 4: Quality of Care framework

Due to of the repeated call for increased focus on quality of care, both at global level, as well as in Tanzania, a quality of care framework (figure 2) guided this research study. The framework was used to structure the study objectives, data collection process and data analysis as well as my broader discussion of findings. In this chapter, I describe elements of the framework and how they relate to the individual papers and the thesis summary.

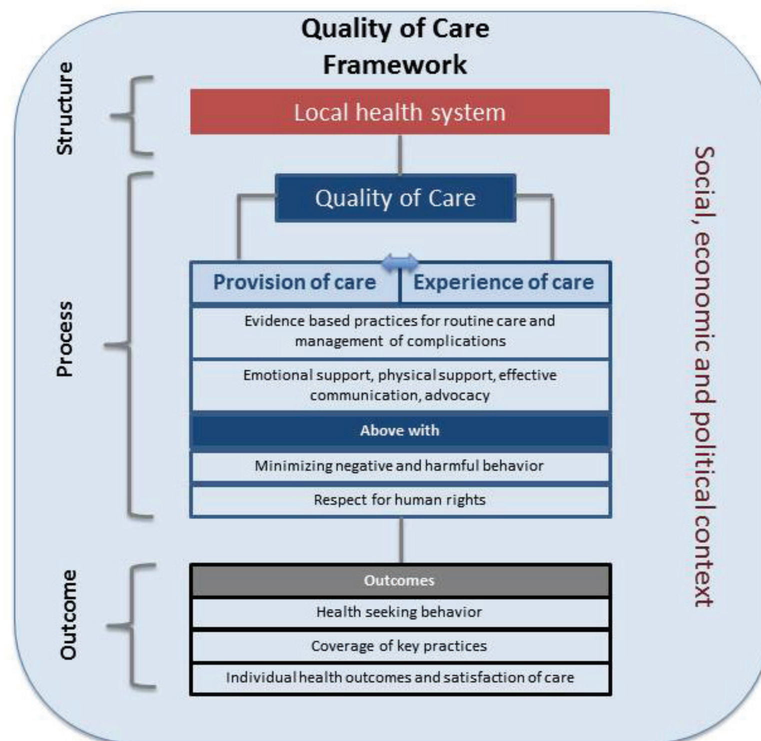

Figure 2 Quality of Care Framework

The framework is based on the WHO Framework for the quality of maternal and newborn health care (85,134) and is a combination of the Donabedian approach (135) to quality of care with elements of 'structure', 'process' and 'outcome' and the Hulton Framework (136) specific for maternity care distinguishing 'provision' and 'experience' of the process of care.

Definition

A general definition of 'quality of care' was carefully developed by the Institute of Medicine in the United States (137):

> 'The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge'.

Such a definition however is not easily operationalized and therefore several studies have attempted to define quality of care according to separate categories or dimensions (138,139). The WHO determined to achieve desired health outcomes, care should be: 1) safe, 2) effective, 3), timely/accessible, 4) efficient, 5) equitable, 6) and acceptable/people centred (85,140). These six dimensions (Box 1) are key characteristics of quality health care.

Box 1: Six dimensions of quality of care

- **Safe** - delivering health care that minimizes risks and harm to service users, including avoiding preventable injuries and reducing medical errors
- **Effective** - providing services based on scientific knowledge and evidence-based guidelines
- **Timely/accessible -** delivering health care that is timely (reducing delays), geographically reasonable
- **Efficient -** delivering health care in a manner that maximizes resource use and avoids waste
- **Equitable** - delivering health care that does not differ in quality according to personal characteristics such as gender, race, ethnicity, geographical location or socioeconomic status
- **People-centred/acceptable** - providing care that takes into account the preferences and aspirations of individual service users and the culture of their community

Which dimensions are selected or prioritized have profound influence on which methods are employed to assess the quality aspects of care one is interested in (141). Although each dimension on its own can provide partial information about quality, it is the combination, which matters to achieve good outcomes. Focus on a selected set of indicators needs to recognize what aspects of care are not being measured (142).

Structure

Structure refers to the health system in a particular setting that enables care processes to take place. This includes the attributes of human resources (such as the number and qualifications of personnel), material resources (such as facilities, equipment and medicines), and organizational structure (such as governance, finance, protocols, referral- and information systems) (135). The organizational structure of a health system is determined by a strategic policy framework at national governance level ensuring a strategic policy framework is in place striving to improve population health. Health finance strategies aim to raise adequate funds for these policies and determine the allocation of resources in relation to the effectiveness of health services delivered to the population (143). Based on the strategic framework, national guidelines (inspired by international recommendations) are developed that should be implemented and revised at regional and local district level by the respective authorities. For maternity care this includes guidelines for example for antenatal-, intrapartum-, and postpartum care.

Although structural aspects are not static they rely on availability of sufficient investments of resources, which in the case of Tanzania is not likely to change much over time as described in chapter 3. Due to resource constraints compromises are made, sometimes these are included in official policies, but often they occur for pragmatic reasons. For example, insufficient health professionals of higher cadres can promote task shifting. In Tanzania, the majority of caesarean sections are performed by Assistant Medical Officers, a task which should otherwise be performed by fully trained medical doctors or specialists (144). The government has officially recognized such task shifting for caesarean sections. Notably, however, unofficial task shifting frequently happens in rural areas. In the absence of available doctors, nursing staff take over diagnosis and prescription practices, while medical attendants take over nursing duties including bedside care practices and birth attendance (145). Another example relates to the official policy in Tanzania that health services during pregnancy and childbirth are free of charge. However it is well documented that frequent stock depletion and general supply shortages lead to out-of-pocket expenditures for women and their families; for example the need to purchase examination gloves, syringes and essential medicines (146,147). All the attributes at structural level are part of the institutional context in which care is provided and received. It is important to assess quality of care within the context of structural health system challenges and compromises made within it. In this thesis, chapter 3 (Study Country) and chapter 6 (Methodology; section on Study Setting) include information about the structural element of the quality of care framework in the study context.

Process

The primary focus of this thesis is related to the process of care, which can be described as'…what is actually done in giving and receiving care' (135, p1745). In addition to the role of the health professional in providing care, Hulton et al. (136) added the importance of the receiver's experience of the care provided. This means that the process of care includes 1) the provision of care by health professionals and 2) the experience of care by the patient. Sub-categories under the process of care provision can be divided into 'technical' and 'interpersonal' quality of care. Often technical quality of care is accorded only to the 'provision of care' category, and interpersonal care to the 'experience of care' category. However, even though technical medical elements are indeed primarily part of the provision of care and individual patients generally lack the scientific medical knowledge to judge this care; this does not mean they are unable to reflect on these technical actions. Similarly, patients can judge whether communication was effective or not, but this is also part of the process of care provision on part of the provider. Overlaps occur, but for this thesis the following is understood as part of technical and interpersonal quality of care:

- **Technical quality of care (Paper I and II):** Internationally and nationally recognized good practices of care including provision of routine care during pregnancy and birth and emergency care in case of complications. Detailed standards against which quality is judged in this study are based on international guidelines as promoted by the World Health Organization (e.g. the

Integrated Management of Pregnancy and Childbirth) (148) and country guidelines as developed by the Ministry of Health and Social Welfare.

- **Interpersonal quality of care (Paper III)**: Interaction between health workers and the pregnant woman are distinguished into four categories: 1) emotional support, 2) physical support, 3) effective communication and 4) advocacy. These categories are based on studies done by Ross-Davies (149) and Moore (150).

Health workers should ensure *negative behaviour or harmful practices are minimized*. This includes harmful traditional practices, abuse and disrespect, as well as medicalization and overuse of interventions. Disrespectful and abusive practices include for example verbal aggression, physical violence, abandonment, privacy violations and non-consented care (151). This is assessed in Paper III. Excessive medicalization and overuse of interventions are increasingly recognized as problematic in low-income countries, in particular with regards to care during birth, for example the excessive use of episiotomies, caesarean sections and oxytocin to induce or augment labour (8,152). This aspect of the process of care provision is touched upon in paper II. Care provision should also be with *respect for human rights.* This includes respect for dignity, autonomy, security and equality. This is given specific attention from the perspective of the users of care, in a previous publication (153) and will be reflected upon in relation to the study findings in chapter 8 (Discussion).

Outcome

According to Donabedian: 'outcome denotes the effects of care on the health status of patients and populations' (135, p1745). For this study three outcome elements are considered: 1) health care seeking behaviour (Paper IV) 2) coverage of key practices (Papers I and IV), 3) individual health outcomes (Paper IV) and satisfaction of care (Papers I and III). A broad definition of health status includes the improvements in patient's knowledge and health behaviour (135). For many years, *health seeking behaviour* during pregnancy (antenatal care attendance for 1 or 4 visits) and birth (skilled birth attendance or facility birth) has been used as a proxy measure for adequate delivery of needed care to a population (154, p180). During the MDG era these were also the main indicators against which country progress was monitored, assuming increase in coverage would lead to reduction of mortality. Limitations of such indicators as an isolated measure for quality of care are well known because it does not provide information about the actual content of care received (9). Nevertheless, review of women's care seeking is an important element of quality of care, in particular because women's perception of quality of care affect their decisions to seek care. Much less is known how perceptions of quality of care affect care seeking, because this is influenced by multiple environmental and individual factors complicated by continuously changing social circumstances (5,155,156). This is assessed and discussed in paper IV of this thesis.

In an attempt to increase knowledge on the actual content of care provided to women during pregnancy and

birth, there is increasingly a focus on assessment of the *coverage of key practices*. Coverage of key practices refers to the measurable outputs of service delivery, such as, measurement of blood pressure, assessment of foetal heart rate, use of the partograph to monitor labour progress and oxytocin provision for prevention of post-partum haemorrhage (85). Such assessments are now widely performed to measure the extent to which health interventions for maternal health are being delivered to populations, for example through national surveys such as the DHS. Paper I assess the coverage of key antenatal care practices from a population perspective and Paper IV includes reflection on coverage of key practices for a number of individual women during their entire pregnancy and birth.

Individual health outcomes for women and children primarily include measurement of mortality and morbidity. MMR has been the main target for global goals (MDGs and now SDGs), however, measurement of the MMR is complex and, due to several challenges, not always reliable (29). Health outcomes beyond mortality are of equal relevance including maternal morbidity or near miss events, other complications, long term disabilities, as well as self-reported ill-health (58,157). Consequences of pregnancy and birth can be substantial for women and her family. The long-term consequences are not only physical (e.g. obstetric fistula, infertility), but also psychological (e.g. depression, birth trauma) social (e.g. stigmatization, social isolation), and economic (e.g. accumulation of debts, poverty) (157). Some aspects of these are reflected on in Paper IV and in the Chapter 8 (discussion). Patient *satisfaction of care* is considered as one of the desired outcomes and an element of health status (135). Women's satisfaction or dissatisfaction with care is often perceived to be limited to their experience of the interpersonal aspects of care. However, improvements in women's knowledge of what to expect during pregnancy and birth, as well their cumulative experiences with multiple pregnancies, increases women's ability to form opinions and reflect on technical aspects of care. I address women's satisfaction of care in Papers I and III.

Context

Social, economic and political contexts drive and determine the functioning of the health system in which individuals seek care. Global and national political and economic transitions significantly influence the functioning of a healthcare system, its policies and practices. Chapters 2 and 3 provide contextual description of the Safe Motherhood Initiative from global and national perspectives. Important social and economic factors affecting maternal health include poverty and gender issues, and are of specific relevance in this study. Poor maternal health particularly affects marginalised women, '…who are vulnerable by virtue of where they live or who they are' (76, p1). Women residing in rural areas in Tanzania and many other low-income countries are most at risk because they are poor, voiceless and female (158, p9). The importance of context with regards to care provision, including implementation and evaluation of interventions, in complex local settings is often neglected (159). Health service delivery however does not occur in a vacuum, therefore social, economic and political determinants are considered in all four papers and the thesis summary.

Chapter 5: Study objectives

The Tanzanian government continues to face challenges of insufficient resources and funding. Despite renewed commitment to improve health services for women and children, there is a need to identify areas where improvements can be achieved despite these constraints. Identifying these areas demands more knowledge regarding the current implementation gap existing between desired levels of care and what really happens when women seek care. It is vital to ensure women receive support from a skilled attendant during pregnancy and birth and that care is provided with respect for a woman's dignity. Accounts of poor quality of care, including disrespectful and abusive situations, are a strong disincentive for women to return to the health facility. Little remains known, however, how experiences and perceptions of quality of care, across the continuum, and throughout women's reproductive lives, influences women's decision making for care seeking.

Main objective

To describe and assess the quality of care provided by facility based health workers during pregnancy and childbirth in rural health facilities in Tanzania and explore how this influences women's decision making for care seeking.

Specific objectives:

1. To assess the quality of antenatal care provision in a rural Tanzanian district through a mixed methods approach. **(Paper I)**
2. To describe the quality of routine care for uncomplicated childbirth through participant observation in rural and semi-urban health facilities. **(Paper II)**
3. To study and describe underlying structures that can explain the occurrence of disrespect and abuse by health workers during maternity care in a rural district in Tanzania. **(Paper III)**
4. To explore and follow individual women's reproductive pathways to identify factors that influence women's decisions making for care seeking during birth. **(Paper IV)**

Chapter 6: Methodology

Study setting

The study took place in the Lake Zone of Tanzania. The Lake Zone region is one of the lowest performing regions in terms of maternal and newborn health indicators. The region is marked by a high total fertility rate 6.4, a median birth interval of 29.6 months, high unmet need for family planning (30%) and low coverage of facility births (50%) (88). Data collection took place in Magu District, one of the districts in the Mwanza Region, bordered in the north by Lake Victoria and to the west by the city of Mwanza, the second largest city in Tanzania (Figure 3). The estimated population in 2016 was 341.167 where with 23% women are of childbearing age (160). This PhD study was developed as part of the Woman Centered Care Project (WCCP), a project of the African Woman Foundation (AWF). The project ran from 2014 to 2016 and employed a multi-intervention strategy, targeting different barriers promoting maternal and child health at several levels of the health system. More information can be found on their website (www.africanwomanfoundation.com).

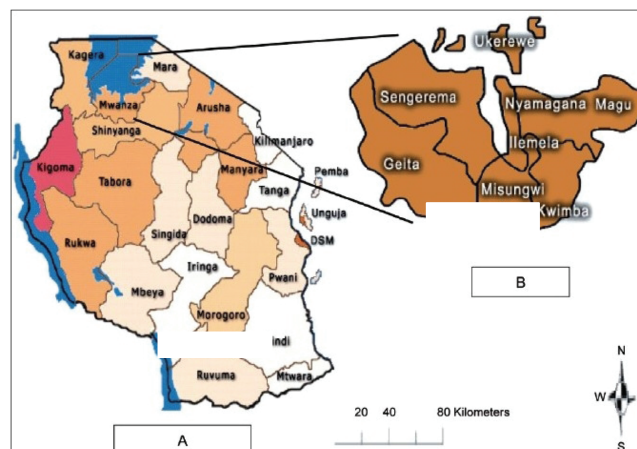

Figure 3 Map of Mwanza Region and Districts (161)

At the time of the study Magu district had 31 government health facilities providing antenatal services including a district hospital, four health centres and 26 dispensaries. The district hospital is located approximately 65km from the city of Mwanza where there is a regional referral hospital and a consultant hospital. From 2011 to 2015, health statistics in Magu district remained stable. Antenatal attendance rates for the first visit have been above 95% every year since 2011. The proportion of births in health facilities was estimated to be 65% in 2013. Over the years the total number of maternal deaths in the district has been relatively constant; 22 in 2009, 21 in 2010, 22 in 2011, 17 in 2012 and 22 in 2013 (162). Government policies recommend, all health facilities are expected to provide basic EmOC. Additionally, the district hospital is expected to provide Comprehensive EmOC (128).

A situational analysis of the availability, use and quality of EmOC in Magu District, took place at the end of 2014 (163). The study was guided by the methodology and tools of the handbook 'Monitoring

Emergency Obstetric Care' (164). Focus of the study was to assess the EmOC signal functions that facilities should offer for women to receive prompt, adequate treatment for complications of pregnancy and childbirth. Data are from 2013. The results are presented in table 3 and reveal inadequate provision of basic EmOC services at hospital and health centre level in the district. Results should, however, be taken with caution as the quality of the data collected was limited due to problems with quality documentation and reporting of all the assessed facilities.

Table 3 District wide EmOC assessment: Indicators, results and interpretations (163)

	Indicator	Results	Interpretations
1	Availability of emergency obstetric care: basic and comprehensive care facilities	3 health centres deliver 5 out of 7 (71%), 1 health centre delivers 2 out of 7 (29%) of the signal functions of basic EmONC; the hospital delivers 7 out of 9 (78%) of the signal functions of comprehensive EmONC	None of the health institutions in Magu District delivers the full package of basic or emergency EmONC
2	Geographical distribution of emergency obstetric care facilities	The 4 health centres are geographically equitably distributed over the district	The 4 health centres are geographically equitably distributed over the district
3	Proportion of all births in emergency obstetric care facilities	Population 300,000; Crude Birth Rate (CBR) 40/1000; expected deliveries 12,000. Hospital births 2504 (21%); hospital + HCs 5035 (42%); all facilities 7817 (64%).	Health facilities are underutilized; the majority of women give birth outside facilities expected to provide EmONC.
4	Meeting the need for emergency obstetric care: proportion of women with major direct obstetric complications who are treated in such facilities	Registered direct obstetric complications: 196 Caesarean sections (CS): 192 (assumption that CSs are done to treat or prevent direct obstetric complications) Expected number of direct obstetric complications: 15 x 12,000 = 1800 Met need = (192+196)/1800 x 100% = 22%	Health facilities are underutilized. 78% of women with complications are not seen in the facilities expected to provide EmONC services
5	Caesarean sections as a proportion of all births	All births: 12,000; Caesarean sections: 192 CS-%age = 192/12,000 x 100% = 1.6% of all births Hospital-based CS %age: 192/2504 x 100% = 7.7%	Health facilities are underutilized; many women who should have needed a CS did not get one, as a result of poor accessibility
6	Direct obstetric case fatality rate (CFR)	Direct obstetric complications: 196 Maternal deaths: 22 Direct obstetric CFR: 22/196 x 100% = 6%	Worries about quality of care in the facilities
7	Intrapartum and very early neonatal death rate	Fresh stillbirths (FSB) + very early neonatal deaths: 51 Facility births: 5035 Death rate: 51/5035 x 100% =1%	Low numbers of FSBs and early neonatal deaths are registered.
8	Proportion of maternal deaths due to indirect causes in emergency obstetric care facilities	Maternal deaths: 22; notification forms available: 16; maternal deaths classified: 15; indirect causes: 5 Proportion of indirect MD: 5/15 x 100% = 33%	Non-communicable diseases like malaria and HIV infection are prevalent in the district, are important contributors to maternal mortality and are possibly inadequately prevented or treated during ANC

Study design

Data for this thesis was collected over several periods during 2012 to 2016. Study designs included in this thesis are descriptive and analytic. A qualitative approach was chosen to gain an in-depth understanding of the complex care processes which take place when women move through the system from their first antenatal care visit until after birth. A considerable amount of research has been done to assess the current state of maternal health, and measurement of indicators is the golden standard to measure progress, evaluate effect of interventions and determine priorities for policies. Measurements are important for assisting decision-making and providing recommendations about what works to achieve desired outcomes

at a population level. However, these 'metrics' provide limited answers for understanding human behaviour, particularly for complex social behaviour, such as care seeking and care provision (165). Qualitative methods are necessary for understanding why quality of care during pregnancy and birth in low-resource settings remains substandard and how this can be improved.

Concepts of quality are normative, and value driven, therefore, performing qualitative research enhances understanding through descriptive narratives about how care is provided and experienced and what this tells us about the quality of care. The study design of this thesis evolved gradually and was steered by my long-term involvement in the setting. The research perspective was pragmatic, at the start, believing that quantitative and qualitative studies are complementary in addressing the research question (166, p15). This does not mean, however, that examination of philosophical assumptions and logics of inquiry guiding the research process can be avoided or bypassed. Although used in retrospect Blaikie and Priest's (167) 'road map' was followed to describe and justify the research perspectives that helped to address the problem and research questions as presented earlier. Through this thesis I attempt to address the issue of quality of maternity care from a holistic perspective, which lends itself for a multi-paradigm research approach (table 4).

Table 4 Research paradigm(s) (167)

	Neo-Positivist	**Interpretive**		**Critical Reasoning**
Paper(s)	Paper I	Paper II	Paper IV	Paper III
Purpose	To assess the quality of antenatal and identify areas of suboptimal care.	To understand the quality of routine care for childbirth	To understand women's choices made in care seeking for childbirth	To describe underlying causes for disrespect and abuse in maternity care
Assumptions	Ontology: Cautious realist Epistemology: Falsificationism	Ontology: idealist Epistemology: constructionism	Ontology: idealist Epistemology: constructionism	Ontology: depth realist Epistemology: neo-realism
Researcher's stance	Outsider	Insider/outsider	Insider	Insider/outsider
Logic of inquiry	Deductive	Inductive	Abductive	Inductive and Retroductive
Research questions	*What* is the quality of antenatal based on structure, process and outcome components? *What* aspects of the process of antenatal provision are suboptimal and *why*?	*What* routine care interventions can be distinguished across the stages of labour and how do they take place? *Why* are routine care interventions not implemented according to evidence-based guidelines?	*What* are women's experiences with health care for pregnancy and birth throughout their life course? *How* did women's experiences across their reproductive pathway influence their care seeking for childbirth?	*What* is the form of association between structural violence and women's exposure to disrespect and abuse in maternity care? *Why* and *how* does this relation exist?
Research methods	Mixed methods	Participant observation	Narrative research	Narrative research

Researcher role

To enhance credibility of the findings it is important to reflect on my background, personal characteristics, experiences, biases and roles attained while conducting the research, as these have shaped the research process, the data collected and the analysis (168, p357). In chapter 1: The introduction, I outlined my personal background and experiences which motivated me to start this PhD research. No one comes to

research as a ‘blank slate’, all experiences have shaped and influenced study objectives and processes. Retrospectively, some personal experiences during the years prior to official enrolment as a PhD student in 2015, were integrated into material collected for this thesis, particularly for papers I and II. Early in 2016 I became pregnant, and this had an impact on the research, as well as my interactions with women and health staff participating in this study. My pregnancy gave me a certain legitimacy to ask women more personal questions and discuss bodily experiences and rationales for care seeking. Furthermore, by this time my Kiswahili had much improved and I was able to conduct the interviews with women independently without a translator. This helped significantly to improve my relationships with women in this study (including the health workers), and was of particular relevance for papers III and IV.

Additionally, because of my own pregnancy I was able to have a better understanding of women’s experiences and decision-making. In preparation for the delivery, I read more literature from midwifery science and realized my own ‘medical gaze’ limited my understanding of the physiology of birth and what constitutes routine and supportive labour care, to achieve a ‘natural’ birth. I realized I had only been exposed to medicalized births during my studies, and this significantly influenced my perception of the birth process and the role of the birthing woman and birth attendant. Naturally, as a medical doctor my perspective on pregnancy and labour care was primarily biomedical, informed by evidence-based guidelines. I became increasingly aware of the limitations of the current evidence-base for care provision, particularly in my study setting in rural Tanzania. This insight enriched my critical reflections of the reality witnessed during my field observations and enabled me to ask different questions and conduct more targeted observations and interviews.

Research Team

The research was conducted with help of research assistants that were recruited via the WCCP and included both Tanzanian and international (medical and health science) students. Students were supervised by me, other project coordinators and partners at the Catholic University of Health and Allied Sciences - School of Public Health in Mwanza. One of the international students returned to Tanzania in 2015 to work in a coordinative function at WCCP. During this time, she also assisted with many of the research activities for this PhD project. A list of all people that contributed to this PhD project and their individual research projects is provided in Appendix 1. Due to the sensitive nature of the research and the need to ensure understanding of the findings in the social context, a local expert team was established. The team included a male Tanzanian obstetrician/gynaecologist, a female nurse/midwife and a young mother with positive and negative birth experiences. Through regular meetings with this team research findings were discussed and interpreted. Analysis and data collection took place simultaneously and this helped redefine our data collection approach.

Data collection approach

A variety of data collection methods were used. Each data collection approach is described below including for which paper the method was primarily used.

Semi-structured interviews and Focus Group Discussions (Paper I)

Semi-structured interviews and focus group discussions were held as part of exploratory research prior to establishment of the WCCP. They were conducted with women, men and health workers to identify their perspectives and experiences regarding availability, accessibility, acceptability and quality of care during pregnancy and birth and took place during the following dates: June – August 2012; April – June 2013; Sept 2013 – February 2014. Interview guides were structured according to attributes of 'availability, accessibility, acceptability and quality (AAAQ)' (166) that health services should consider to ensure the highest attainable standard of health. Interview guides were developed specific to each target group. Focus group discussions complemented findings of the semi-structured interviews, and facilitated understanding of social norms and values related to pregnancy and childbirth (169), specific to each target group. Focus group discussions helped to increase understanding of the findings of the semi-structured interviews, in particular to gain some understanding of social norms and values related to pregnancy and childbirth (170). Participants for interviews were selected through convenience sampling with help of the village executive officers and health workers in the study area or during clinic hours at the antenatal clinics. Participants included women of reproductive age, pregnant women and women who recently gave birth (N = 48), men, including partners of pregnant women (N = 26) and health workers (N = 26). Additionally, focus group discussions (N=19) were held with women (N = 4), men (N = 4), mixed gender (N = 4) and with health workers (N = 7). On average eight participants participated in each focus group discussion. Interviews took place in the following locations: the home of a participant; the health facility or another location chosen by the participant. Focus group discussions were organized at a convenient location for all participants. All interviews and focus group discussions were held in Kiswahili with help of a translator who translated to English.

Facility survey (Paper I)

Facility readiness to deliver maternal health services for antenatal care and care during birth was assessed by collecting information on facility infrastructure, available services and staff, equipment and essential medicines. This information was used to evaluate the supply side of care provision. Purposive sampling was used to select health facilities and villages in nine of 18 wards of Magu district, based on population size (three heavily, three average and three lightly populated areas) and inclusion of different geographical locations in the district covering areas close to the lake, in-land and close to the main tarmac road. Health facilities included 13 dispensaries, one health centre and one district hospital. The health facilities were visited from April-May in 2014 and 2015 together with representatives of the district medical officer. Facility visits included a walk-through (e.g observing facility infrastructure, work and patient flow and equipment) and interview with a nurse or clinical officer in-charge. In 2014 the survey was conducted

while facilities were waiting for their quarterly supplies. In 2015 the survey was done two weeks after receiving new supplies. Facility statistics were collected using the Health Management Information System, registers of 2013 and 2014. These were later compared to the District Health Information System.

Direct Observations (Paper I)

From August to September 2014 and 2015 direct observations of antenatal care consultations took place at 13 dispensaries, one health centre and one district hospital. Direct observations were used to observe behaviour and care processes within the setting of care provision of the antenatal clinics (166). The antenatal clinics at the selected facilities were visited on at least two different occasions to ensure observations at different clinic days during the week. All women visiting the health facilities for antenatal care during these days were eligible for inclusion, including women attending their first visit or re-visits. Observers made use of a checklist (see below, section on data collection tools) and intended to be as unobtrusive as possible, although interaction with women and health workers could not be avoided. A sample size was calculated to be 422 with OpenEpi, version 3, open source calculator with a confidence interval of 95% including an expected refusal rate of 10%. Due to logistical circumstances the sample size was not reached in 2014 (N=250). In 2015 the survey was conducted for a second time (N=414).

Structured interviews (Paper I)

Structured interviews were held from August to September 2015 in the form of exit interviews with women attending antenatal care. The purpose of these interviews was to review documentation of services on the antenatal card, assessment of knowledge related to birth preparedness and complication readiness including danger signs and evaluation of women's satisfaction of care. After antenatal care observations all women were approached and asked if they wanted to participate in the interview. Of all women, 69% (268 women) agreed to participate. Although it is possible some women did not feel comfortable to talk about their visit, the main reason given for not participating was lack of time. Interviews were held at the health facility and were conducted in Kiswahili by the same researchers that observed the care provided.

Participant observation (All papers and specifically for paper II)

Throughout the study period (from 2013-2016) participant observation formed an important part of the research approach. Participant observation was performed by me and a research assistant (a nurse) and took place in a selected number of rural and semi-urban health facilities, particularly at antenatal clinics and maternity wards. As medical professionals we were able to engage in the activities over a long period of time at the different health facilities. Through this we gained an 'inside perspective' which allowed for increased awareness of behaviour, activities and processes, which ordinary participants in that setting (e.g. nurses, midwives, doctors) are not always consciously aware of. Simultaneously, we remained an 'outsider', allowing us to view the setting and activities from a distance (171, p75). The data collected for this PhD thesis is based on more than 1300 hours of participant observation and reflection on my personal experiences while visiting and joining nurse/midwives at the antenatal clinics between 2012-2014.

Additionally, I volunteered and worked alongside nurses/midwives and doctors in two urban and semi-urban health facilities in antenatal clinics and the maternity wards from 2014-2015 and carried out more focused observations in two rural health facilities in the study area from 2015-2016. The data consists of observation notes, notes of informal conversations with health workers, women and their families and personal reflections. In addition, clinical notes, handover books, staff schedules, reporting books and clinic cards were reviewed while being present at the facilities.

Our focus for participant observation was on the perspective of the health worker. During observations, activities and timing of care provision for women were documented using key words if the situation allowed for it. This usually started with description of the situation in the antenatal clinics or maternity wards after arrival. Health workers were followed in their particular stations or women were followed as they went from one place to the next. The research role of observing versus participating fluctuated and shifted depending on the situation. Beyond participating in care provision, there were situations where I would intervene in normal care if I felt capable to do so. For example, if the situation was interpreted to potentially endanger the woman (either physically or psychologically) or cause unnecessary harm. Intervening in normal care included active discussion with providers about the course of action, giving solicited or unsolicited advice or taking action. Taking action, would always be in agreement with the women, the health workers and/or their seniors. For practical reasons observations only took place during the daytime and occasionally in the evenings.

Follow-up study: direct observations and in-depth interviews (Paper III and IV)

Over 2015-2016, a research assistant and I, closely followed 14 women throughout their pregnancy, birth and in the post-partum period. We carefully observed the care they received and performed multiple in-depth interviews with these women over time. Women were included gradually during our observations at the antenatal clinics to ensure we did not follow more than 4 women each at the same time. Women were purposefully selected with different obstetric backgrounds, age groups and poverty levels. After the inclusion process we organised our observations at the clinics to match with the women's scheduled clinic visits. In total, 25 antenatal visits were observed and notes were taken of the services provided. Additionally, we scheduled observation days at the maternity wards during women's expected date of delivery. We observed aspects of the birth process of 3 of the 7 women who gave birth in the health facility. A total of 92 interviews were conducted (5-8 with each woman), scheduled within one or two weeks after each of their clinic visits and after birth. Additional interviews were held if we needed further clarification. Interviews lasted between 1-3 hours and took place at the women's home, or a location of their choosing. Interviews were performed in Kiswahili, a translator (either for translation of Kisukuma or Kiswahili) assisted where necessary. Every interview started with a focus on description and reflection of the previous antenatal visit, or birth experience (whether at home or in the health facility). Sometimes we prompted women based on the antenatal card with documentation of the services received due to our own

observations. Over time, as women became more familiar with us, we discussed their reproductive history, starting with their first pregnancy experience.

Data collection tools

The following data collection tools were used for this study. All tools were pre-tested in a health facility outside of the study area.

- *Facility survey tool:* A survey tool was developed based on the Johns Hopkins Program for International Education in Gynaecology and Obstetrics (JHPIEGO) manual for monitoring birth preparedness and complication readiness to assess facility readiness to deliver maternal health services (172). The tool was digitalized using Magpi Data Collection Software (173). The tool is provided in Appendix 2.
- *Structured observational checklist for antenatal care:* A checklist was developed for direct observations of Antenatal Care based on Focused antenatal guidelines by Kearns et al, the Maternal and Newborn Quality of Care Survey ANC Observation Checklist developed by the Maternal and Child Health Integrated Program (MCHIP) and the current antenatal card from the Ministry of Health and Social Welfare in Tanzania (174–176). Based on experience from 2014 minor changes were made to the observation tool for assessment in 2015. The tool was digitalized using Magpi Data Collection Software (173). The tool is provided in Appendix 3.
- *Structured observational checklist of care during birth:* As a reference to standards of care we made use of a modification based on the Maternal and Newborn Quality of Care Survey Labour and Delivery Observation Checklist developed by the Maternal and Child Health Integrated Program (MCHIP) (177) and provided in Appendix 4.
- *Observation guidelines for observation of interpersonal interaction*: We developed observational guidelines for interpersonal care based on previous studies of direct observation of labour care by Ross-Davie (2011) and Moore et al. (2002) (149,150). The aim with these guidelines was to provide some abstraction to the interpretation of the observed behaviour and to reduce the influence of personal judgment. Categories and sub-dimensions for both supportive and non-supportive behaviour were distinguished. The guidelines are provided in Appendix 5.

Data management and analysis

Facility survey's, Direct observations and exit interviews

Data entry for the facility surveys and antenatal observations occurred digitally with the Magpi data collection software on mobile phones or tablets. After each day of data collection, data was uploaded to the server. For analysis the data was exported to Excel (version 14.5.7) and SPSS (version 22). Exit interviews were entered in Excel manually. Overview of supplies and materials across facilities were entered manually to Excel. For antenatal observations and exit interviews descriptive analysis was performed using SPSS.

Semi-structured interviews and focus group discussions

Semi-structured interviews and focus group discussions were conducted with help of a translator, were audio recorded and transcribed in English. For some, the Kiswahili was transcribed and back-translated to verify the quality of the translation. Transcripts were initially analysed using different frameworks depending on the main aim of the sub-studies (see Appendix 1). For the purpose of the PhD study the data was re-analysed using the quality of care framework as presented in chapter 4.

Participant observation

Full observation reports were written after each observation day. In addition, personal reflections were written down in the same reports or in personal diaries. Preliminary analysis of findings took place throughout the observation period. The observation notes were separated for observations that informed about the operation and organisation of the health facility (such as staffing information, working hours, supply delivery, etc.), observations during antenatal care and observations of care during birth. Observations at the antenatal clinic provided context to the quantitative findings, collected through direct observations, and increased understanding and interpretation of the care processes, in particular where findings deviated from evidence-based guidelines (Paper I). The observations notes from maternity wards were assessed with reference to standards of care based on the structured observational checklist as described above. Detailed analysis was done after completion of the data collection using an ethnographic analysis approach as described by Spradley (171). After general description of observations, with reference to the three stages of labour (see box 2), I identified sub-categories for each stage of labour identifying how procedures and actions were organized to facilitate understanding of behaviour of the women and health workers in the different stages and how they relate to each other. This was followed by identification of contrasting dimensions and its attributes. Recurrent patterns in the previous steps led to the development of overarching themes. An example of the different steps is provided in annex 6 (Paper II).

Box 2 Stages of Labour (WHO 2015)

Latent phase

Presence of contraction which can be regular and irregular; cervical dilatation < 4 cm

Active phase

First stage: Presence of frequent and regular contractions; cervical dilatation > 4 cm

Second stage: Full cervical dilatation and urge to push; birth of the baby

Third stage: After birth of the baby; placental separation and expulsion

Follow-up study

Information about the women included in the follow-up study were summarised in a spread sheet to keep

track when women were expected for their next visits, what their estimated date of delivery was and approximately when we needed to schedule a new interview. Observations that were specific for the women in the follow-up study were extracted from the full observation reports and saved separately. All in-depth interviews were recorded and transcribed in Kiswahili and translated to English. All transcripts and observation reports were used to develop a coherent narrative for each woman. Through dialogue with the women we placed the events in chronological order. Stories began with our first meeting with the women, usually during their first clinic visit. This was followed by details about their childhood, marriage(s), current living situation and previous pregnancies. After this, the story continues, following women through their current pregnancy and interaction with the health care system.

The data enabled us to make an overview of the care received by women during their current pregnancy and birth. Information was triangulated based on observations of the visit, women's antenatal cards and women's report of the services that were provided. If there were discrepancies we made a note of this, for example, if services were recorded on the antenatal card but not observed or experienced as such by the woman and vice versa.

- *Quality of antenatal care:* A score was calculated for the technical quality of antenatal care women received based on 8 specific routine services: assessment of the gestational age (GA), fundal height, foetal heart rate, blood pressure measurement, testing of HIV, haemoglobin (Hb), rapid plasma reagin (RPR) for syphilis, Urine analysis, and provision of Iron/folic acid tablets, Sulfadoxine-Pyrimethamine (SP) and mebendazol. Calculation was based on expected practice in relation to the number of visits of the woman. Gestational age scored '1' if during all visits the GA was correctly filled in on the antenatal card compared to the GA we assessed based on the woman's last normal menstrual period, with a range of 2 weeks. Fundal height, foetal heart rate measurement, blood pressure measurement, testing of urine, provision of Iron/Folic Acid and SP was '1' if measured/provided at all visits. If this was only provided in 1 of 3 visits the score would be '1/3' and so on. HIV testing was scored '1' if it was tested on the first visit, otherwise only half a point was provided. Hb and RPR received a score '1' if tested at any visit. An average score was based on total score divided by 11 categories. We followed what was documented on the antenatal card, with exception for services, which were documented but according to the woman, or in line with our observations, was not done. We observed this occasionally happened, either intentionally or through misunderstandings.
- *Socio-economic status*: Socio economic status was determined by the number of household items (cooking fuel source, assets such as television, motorcycle or bicycle, personal phone, sleeping arrangement, couch, clothing) and living conditions (house ownership, roofing, floor material, type of toilet, availability of electricity, water source) and combined with women's highest attained education and if women had their own personal income. The maximum score attainable was 27, however, none of the women scored more than 20. We grouped women in a poverty level from 1 (score 0-4), 2 (score 5-9), 3 (score 10-14) and 4 (score 15-20).

Data validity

In this section I reflect on measures taken to ensure the data collected holds credibility and can be seen as valid in relation to the aims of the study (178,179). For reflection on researcher bias and how my own views and stance influenced the research I refer to Chapter 1 (Introduction) and Chapter 3 (Methodology section on researcher role). The following strategies were employed to avoid or minimise possible validity threats:

1. *Long-term involvement*: Although I can never grasp the full reality of life in Tanzania for rural living pregnant women, or to completely comprehend what it is like to work in the Tanzanian health system, my long-term presence in the study area positively contributed to the ability to complete data collection and interpretation. Observations were performed repeatedly, and health staff became accustomed to my presence. I developed positive relationships with some of the nurse/midwives, and sometimes visited their homes. The regular visits to pregnant women at their homes increased familiarity, confidence and mutual trust. Women increasingly shared personal details they initially had left out and seemed to offer less socially desirable answers.
2. *Rich data*: Several hundred hours of observations while volunteering in the different health facilities led to detailed field notes regarding care provision during antenatal care and birth (Papers I and II). Holding between 5 to 8 interviews with the same woman (Papers III and IV) allowed us to revisit previously discussed issues, gain clarification and further explore questions that arose during writing of the narrative. Additionally, time between the interviews allowed the researchers and the women to reflect and deepen the subsequent discussions. We were able to conduct many of the interviews in Kiswahili and this helped remove the challenges of working with a translator, including the risk of losing the meaning of what was being said.
3. *Member checks*: To reduce the risk of misinterpretation of the data and increase reflection on our findings in relation to the local context we consulted our findings with an expert team. This was primarily done for Papers III and IV, although it was informative also for understanding of the findings of paper I and II. For information on the expert team please see Chapter 3 (Methodology).
4. *Intervention*: My presence and working alongside the nurse/midwives sometimes resulted in my deliberate or undeliberate intervention in care provision (See section on participant observation above and ethical consideration below in this chapter). For example I would sometimes actively give examples or refer to certain guidelines, which were then taken up by the staff. By doing this it helped to understand why nurse/midwives made certain decisions during both antenatal care and birth. Through this I was able to make sense of why they sometimes avoided the use of certain tools or guidelines. For example in one of the clinics I provided a new blood pressure machine for use at the antenatal clinic on behalf of AWF. I sometimes offered to collect certain supplies from other locations which would be needed or I would give suggestions for monitoring or interventions (Paper I and II). In order for women to be reflective in their description of experiences with their interaction with the health system I encouraged interpretative reflection of the interpersonal

behaviour of health workers in relation to norms and values of social interactions in daily life (Paper III).

5. *Searching for discrepant evidence/negative cases and comparison:* The data on which this study was based was collected in different health facilities, in terms of location and level of care as well as over different periods of time (Paper I and II). The follow-up study included women with different background to allow for a variety of cases. I was able to capture women that both gave birth at home and in the health facility which allows for reviewing discrepancies and comparison between the women's background characteristics, their experiences and choices made (Paper III and IV).
6. *Triangulation:* Summarizing some of the above descriptions, I approached this study, by using a variety of methods, at different levels in the health system as well as at community level and over a longer period of time. The study was also approached from different perspectives (See chapter 3, section on research approach) both with an outsider as well as an insider view. Quality of care should ultimately be understood at the level of the individual patient-provider interaction. By reviewing women's individual needs and experiences through different research traditions over long period of time it enhanced the completeness of the data. Clinical reasoning, interpretation of findings and decisions making are elements of what Donabedian refers to as the 'art' of care provision (135) and are not easily understood by those who are not in the medical profession. My medical background and clinical skills therefore were important for this study to ensure a thorough understanding of the care process at individual provider level in the context. Through this approach of 'complex' triangulation I was able to generate a comprehensive reflection on quality of maternity care in practice in Tanzania.

Ethics

Approvals

Ethical approval for the research conducted as part of this PhD thesis was obtained from the National Institute for Medical Research (MR/53/100/103-349-399) in Tanzania. The VU University Amsterdam in the Netherlands (2013/135) provided ethical clearance for the research activities that were part of the African Woman Foundation. The Regional Committee for Medical and Health Research Ethics, Section A, South East Norway (2015/1827), and the Norwegian Social Science Data Service (44482/3/MHM) both reviewed the PhD study and found research activities in accordance with the Norwegian Personal Data Act. Research clearance was acquired from the Tanzania Commission For Science and Technology (No.2015-255-ER-2013-32) and I was also registered at the Medical Council of Tanganyika as a medical practitioner from 2015-2017 (Reg.no 5533).

Informed consent

Prior to the commencement of the PhD the district authorities were involved in the planning and implementation of the project of the AWF. At the start of the data collection for the PhD study the district

authorities were informed and the District Medical Officer assisted to notify relevant health facility staff members and request for the possibility to have one fieldworker participate in the daily activities of the clinics. Written informed consent was obtained from health workers and women that were selected for the follow up study. Verbal informed consent was obtained from pregnant woman prior to antenatal observations, exit-interviews, where possible prior or during labour observations and for focus group discussions. Example consent forms are provided in Appendix 7. All participants were explained on the purpose of the study and that they were free to withdrawal their participation once enrolled without affecting their health care services at the specific health facility. Consent forms were provided in Kiswahili and read together with the participants. As soon as the research role became more apparent we decided to request informed consent from those likely to be observed. Health workers were asked for consent for the total duration of the presence of the researcher and not per observed situation. All participants were informed about: the purpose of the research; what was expected from them; the estimated amount of time likely to be required; expected risks and benefits (including psychological and social); the fact that participation was voluntary and that they could withdraw at any time with no negative repercussions; that confidentiality would be protected and they were provided with the name and contact information in case of questions or problems related to the research.

Data handling

Because of the sensitivity of the subject we ensured anonymity in note taking and for this reason some of the papers do not mention the district or facility names. Data was stored on a laptop. All recordings were deleted after transcribing was completed. Reports or quotes of women's narratives are presented in a way that these cannot be traced back to the individual women.

Ethical difficulties

During the fieldwork, I ran into some ethical difficulties and it is important to reflect on this in light of the study findings. These difficulties are primarily related to the role of the researcher in participant observation and in relation to the follow up study. During observations at the health facilities I faced difficult decision whether to intervene in the process of care or not. Situations occurred where women were prepared for a caesarean section without proper indication or where women received harmful treatment or practices, which went against most standards of care. When I intervened this sometimes resulted in clashes or arguments with some of the staff. When I did not intervene, and remained in the observer role, feelings of guilt for allowing things to evolve gave internal conflict.

For the follow-up study, we visited women regularly at their homes. Visits never happened unnoticed. There were often situations where neighbours or other family members came to greet us or were just curious about our presence. Surrounding communities often expressed that they thought we provided the women with money and sometimes this led to women being asked for support 'msaada' by others. Also, communities have not always been equally happy with foreign visitors, in particular in the name of

research. One participant was confronted with rumours from the communities thinking that my presence would cause 'bad luck'. It took several conversations to understand these rumours and ensure the participant remained comfortable to continue with the research. Due to the nature of our close involvement with the women, we naturally influenced aspects of care seeking and care provision, and this is included in the narratives. Many women were in vulnerable circumstances, which meant that we sometimes became advocates for women to seek and receive care. We provided women with medical advice; and supported women to access necessary medication or transport if they could not afford this. In such circumstances the objectives of the research were secondary to safeguarding the health of the participants within possible means.

Chapter 7: Summary of findings

I present the summary of findings in three parts. Part one presents findings with regards to the technical quality of care provided during antenatal care **(paper I)** and birth **(paper II)**. The interpersonal quality of care is addressed through description of women's exposure to disrespect and abuse throughout their pregnancy and birth **(paper III)**. Outcome of care is described with regards to women's health care seeking behaviour for birth **(paper IV)**.

Part I: Technical quality of care (papers I and II)

Assessment of the quality of antenatal care was done at 13 dispensaries, one health centre and one district hospital during two different years (2014 and 2015) making use of mixed methods (Paper I). Antenatal care services were provided at all these facilities. Women with uncomplicated pregnancies are recommended to attend a minimum of four antenatal visits. The antenatal card is filled in by the health workers during each visit, and includes essential services that need to be provided based on the focused antenatal care guidelines. The number of antenatal care visits varied between dispensaries, ranging from 9-49 new first antenatal visits per month. Women could spend between 5 minutes and an entire day at the health facility to receive services with a mean duration of 11 minutes in 2015. None of the facilities had all equipment and medication needed to provide quality antenatal care. In addition, due to lack of equipment many facilities were unable to perform essential blood tests. Observations of antenatal care consultations were done for 250 women in 2014 and 414 women in 2015. In 2014, the majority of health workers asked some medical and obstetric history to all women, however, in 2015 this rarely included risk identification, assessment if women had any complaints (20%), if women experienced danger signs (6%) or if they felt foetal movements (3%). During both years clinical examination included for all women assessment of weight, fundal height and foetal heart rate. Assessment for pallor and oedema differed between the two years: 60% in 2014 and 20% in 2015 for pallor and 83% in 2014 and 21% in 2015 for oedema. Lack of supplies influenced services provision. For example, HIV tests were done in 33% of the first visits in 2014, and 92% of the first visits in 2015. Similarly, anti-malaria tablets were provided in 28% of the consultations in 2014 compared to 91% in 2015. Blood pressure was measured in 53,4% of the consultations in 2014, and 28% in 2015. Presence of a functioning blood pressure machine did not guarantee they were used. Few women were identified as high risk or referred and abnormal findings rarely had any consequence in terms of follow-up visit. During exit interviews with 286 women (69%) in 2015 the majority was satisfied with the services received.

Quality of care during birth was assessed by focussing on two essential evidence-based interventions (use of the partograph and active management of third stage of labour), based on participant observations in four facilities (Paper II). During admission at the health facility for birth, women moved between the waiting room and the birth room. Monitoring included prioritization of routine assessment of cervical dilatation, leaving other parts such as blood pressure measurement, foetal heart rate or assessment of

contractions. Partographs were often not filled in resulting in lack of documentation of the birth progress. Poor monitoring resulted in nurse/midwives being unprepared for in-facility 'sudden' births or complications. Nurse/midwives expressed an expectation that most women would give birth without problems. Early documentation on the partograph could lead to 'too many' women reaching the action line. Contextual circumstances limited provider ability to take immediate appropriate actions (e.g. due to lack of available supplies, supervision or unavailability of referral options) and therefore provider rather allowed women more time to progress without intervention. In the birth room, however, nurse/midwives appeared to have a sense of urgency to intervene even if there was no indication to do so. If women did not give birth soon after arriving to the birth room, nurse/midwives would fear for poor foetal outcomes, requiring active management. In the birth room there was also poor monitoring and prioritization of some actions over others. For example, active management of third stage of labour often included provision of oxytocin and controlled cord traction, but the placenta was rarely checked for completeness. Uterine tonus was often assumed to be insufficient even if the uterus was well contracted. Uterine massage and manual expression to empty the uterus of blood clots was done on many occasions, without proper indication to do so.

Part II: Interpersonal quality of care (Paper III)

Interpersonal quality of care was assessed based on follow-up of 14 women throughout their pregnancy and birth including observations of care (25 antenatal visits, parts of 3 births) and in depth interviews (92 interviews, 5-8 interviews with each woman). All women were exposed to both supportive and non-supportive care, the latter including instances of disrespect and abuse, throughout their pregnancy and birth. Examples of supportive care include receiving swift services, being informed of the condition of the baby, comforted if examination was painful, consideration for women's privacy and request for consent. Much of the care provided however was not supportive. Women and health workers often interacted in complete silence, including a lack of greeting. Women were rarely informed of findings of examination and their concerns, opinions and knowledge were frequently ignored or dismissed. Even if women disagreed with health workers they remained silent, to avoid attracting unwanted attention or being scolded at. Women (in particular those who were younger and less experienced) were sometimes reprimanded, scolded at or disciplined if they did not do as they were told or if they did not behave according to expectations of the health worker. During antenatal care women could be refused services for not complying with the general rule to bring a husband during a first visit. At birth, women could be left unattended or could experience forced vaginal examination or other harmful practices to speed up birth. Such behaviour was considered normal and often justified by women themselves. Even if women disapproved of how they were treated at a facility, they often referred to services being 'normal' or 'good'.

Part III: Outcome of care (Paper IV)

The data collected through follow-up of 14 women throughout their pregnancy and birth (see part II) lead to development of detailed narratives of women's reproductive lives. The linking of women's live events,

including first pregnancy, marriage and subsequent pregnancies and births if any, in relation to their social context were linked to women's decision making and individual choices made for care seeking during childbirth. Four different story plots were distinguished: an expected home birth, an expected facility birth, an unexpected facility birth and an unexpected home birth. Two women, Flora and Paulina (pseudonyms) were both HIV positive, lived in remote areas and relied on farming to secure enough food. Their husbands were both fishermen and their support was not consistent and unpredictable. Both lived more than 10km away from the nearest health centre. Paulina was a grand multipara, with 7 previous births of which the majority were born at home without major complications. Flora had lost her previous twin pregnancy that was born at home and was now pregnant for the second time. For both women home birth was considered the only realistic option, however, Flora eventually gave birth at the health facility. In contrast to Paulina, Flora was insecure about giving birth at home; she required social support, which she did not have nearby. She relied on her neighbours' help, which eventually was a young 16-year-old girl who escorted her to the health facility. Paulina was confident she would give birth at home without problem, and could describe in detail what she would do during and after birth, which is exactly what happened.

Diana and Maria both lived in the town centre on short distances to the health facility. Diana had a stable marriage, while Maria had left her first husband and was now pregnant of her boyfriend. Both have their own independent income in addition to the support of their partners. Diana had successfully given birth at the health facility three times previously and it was expected she would give birth in the same facility again, which she did. In addition to faithfully attending to all her routine visits, she left home together with her husband as soon as contractions started to enter the maternity ward. Maria had also planned to give birth in the health facility, even though her mother attended her first birth at home several years back. In contrast to Diana, Maria was slightly more reluctant and uninterested in the health facility, already during antenatal care. It seemed she was less serious about her antenatal care visits, even though she explained it was important for her to know how she and her baby were doing. When her contractions started, it was late at night and she did not want to bother her neighbours. She waited it out, but when she started to feel pushing urge she prepared herself at home. After birth, she contacted her neighbours who helped her to call a nurse that lived nearby. She voluntarily gave the nurse some money to thank her for her assistance.

Chapter 8: Discussion

This study has tried to understand the quality of care provided by facility based health workers during pregnancy and childbirth in a rural setting in Tanzania and how this influences women's decision-making for care seeking. In this chapter, I discuss the findings of the study in the context of global and national developments of Safe Motherhood policies and practices, followed by a section on methodological considerations. With the four papers, I attempt to present a holistic perspective on what maternity care looks like on the ground, considering the complexities of both care provision and care seeking, and how these influence each other. In this chapter, I argue that quality of maternity care requires a paradigm shift where quality is redefined at the individual patient-provider level. This requires consideration for the dynamic local context and a purpose of care provision beyond achieving survival. Furthermore, normalization and justification of sub-standard care, including disrespectful and abusive treatment, can be considered as symptoms of structural violence. This is partly a result of the lack of action at global level to ensure the complex needs of women and those who care for them are met. Listening to the voices of people at the front lines, including both pregnant women and health workers, gives us insights into the thought processes behind their decision-making. Respect for women's dignity and worthiness requires a true comprehensive approach to improve the health of women and newborns.

Quality at the individual patient-provider level

Futile attempts to achieve full coverage of Safe Motherhood interventions in the past thirty years have nevertheless led to repeated prioritization and implementation of narrow framed interventions during both antenatal care and childbirth. Although several specific interventions launched are evidence-based, the evidence it relied on has been dominated by a biomedical only view of maternal health, and sometimes based on research performed primarily in high-income settings. The technocratic model of care has resulted in an `assembly line` of care provision (180, p6) where vertical implemented interventions are provided on checklist basis during antenatal care (antenatal card) and the birth process is approached as a linear process (partograph). Many routine services that are considered an essential part of care during pregnancy and birth have been neglected. At the same time, some services that were consequently provided were often performed more out of habit than instrumental for clinical reasoning and decision-making (Papers I and II). Working guides, such as the antenatal card, were often used primarily for documentation purpose of the prioritized indicators and did not guarantee that women received all the necessary services based on their individual needs, as was found in other studies as well (181,182). Coverage of key practices loses its meaning for individuals if information is not used or acted upon to ensure individual women receive the right services at the right time. Health workers experienced the partograph as too stringent, which resulted in their reluctance to timely initiate its. Recent evidence suggests that uncomplicated births indeed can progress beyond established boundaries for active labour, on which the partograph is based (85). However, this does not mean individual women's progress does not need to monitoring.

Health system challenges, including insufficient qualified staff and lack of essential medicines and supplies mitigate poor quality of care during pregnancy and birth. Chronic staff shortages; increasing number of women that are seeking care; increasing expectation of performance; and also an increasing number of interventions is severely overburdening health workers (107,108). Similar to other studies, the findings illustrate that health workers cope by prioritizing where they invest their energy and time (181,183,184). Such prioritization during antenatal care for example (Paper I) included choosing to perform interventions that were easy (such as weight measurement), or that women expected to receive (provide certain medication or treatment). Use of narrow indicators to evaluate performance of care can also result in health workers prioritizing only those actions that feed into these same indicators, for which they will be held accountable. For example, health workers prioritized administration of oxytocin for AMTSL (Paper II), neglecting other important actions (e.g assessing the placenta for completeness). Lack of adaptation of interventions to the local context might result in health workers avoiding its use altogether. For example, avoiding use of the partograph. Monitoring of birth remains difficult in an ineffective health system, where care provision can become highly unpredictable when findings deviate from the accepted norm (9). The lack of monitoring during birth can result in poor preparedness of health workers for both normal birth and complications (Paper II). The combination of selective implementation of elements of interventions, lack of monitoring and increasing culture of 'blame and shame' can lead to health workers assuming a 'worst case' scenario, risking over medicalization (185–187).

Health policies and guidelines shape service provision and the global prioritization of narrow technical interventions focused on prevention and treatment of complications seems to have disproportionally influenced local practice (34). Global guidelines and progress indicators are focused on those activities for which there is sufficient evidence it improves outcomes at population level. This includes consideration for fairness of distribution of care, while gaining the greatest health improvements at the lowest costs (139,142). Prioritization of resources based on what matters from a population perspective might conflict with what matters for individuals (142). For example, based on population studies, access to Basic and Comprehensive EmOC has the greatest potential to reduce maternal mortality, prioritizing resources for higher-level facilities. However, this steers resources away from peripheral facilities where women lack basic, safe, hygienic and respectful birthing environments. In order to provide the highest attainable care for all, compromises need to be made for individual care. It is however at the individual-provider level where the concept of quality of care is most meaningful (142). If care is not improving the health status of women (beyond their survival), then what is the point of offering it, or for women to seek it (9)? The question lays in what aspects of care matter the most, to whom and who gets to decide on priorities? How far can we compromise on quality before we can speak of care being unsafe or undignified? How can we balance what is ideal and desirable for individual patients (within a range of what is considered possible with reference to population needs) versus what is realistic and achievable for providers, within the given context? A paradigm shift is needed to redefine quality maternity care and increase understanding of what is 'good-enough' quality, at the individual patient-provider level in low-resource settings.

The structural violence of mistreatment of women

The deplorable physical state of many health facilities, the inconsistent and unpredictable availability of (human) resources and provider demoralization contributes to the dehumanization of care in health facilities in low-income countries (151,188). This can result in women being exposed to disrespectful and abusive treatment by health workers in the facilities where they seek care (Paper III). Growing recognition of the problem of disrespect and abuse in facility birth has resulted in an increase in research attempting to define it (189); to identify the prevalence (132,190); factors which cause it (151); and development of interventions to reduce factors that mitigate disrespect and abuse in childbirth (191). Women's exposure to disrespect and abuse in this study were however not limited to childbirth. Women also experienced abusive and disrespectful treatment during antenatal care (Paper III). And some women experienced abuse and disrespect also in other aspects of their lives such as through physical punishment in schools and domestic violence, which is not uncommon in Tanzania (192,193). Normalization of abuse in everyday life can lead to equal normalization and justification of abuse in health facilities (194, p230). The findings illustrate this through the seeming acceptance of in particular more subtle 'non-supportive' practices: such as the absence of greeting by health workers when women arrived at the health facility and women's justification of receiving harsh and belittling comments of the health workers if they didn't abide by the facility rules (Paper III). Disrespect and abuse is a violation of women's fundamental human rights and can be seen as symptom of structural violence (195,196). Also other authors have called for a reframing of abuse and disrespectful care within a broader framework of structural social, economic and political forces that create and maintain inequalities (197–199). Oversimplifying the issue of disrespect and abuse as a problem occurring during childbirth alone can result in misleading dichotomies. This devalues the everydayness of women's suffering (200, p16) and risks ignoring the underlying structural violence and neglect of women (201).

Although intentional mistreatment including neglect and withholding of care by health workers does occur, for which individuals should be held accountable (202), I have no doubt that the majority of health personnel I have seen and met during my fieldwork intended to provide good care, aiming for good outcomes. Disrespect and abuse of women by health workers is indeed a signal of a health system 'in crisis' (75, p1). Health workers may act as oppressors, but at the same time are oppressed by the same social forces that maintain structural violence. Structural violence does not only affect poor and vulnerable pregnant women but also those that are employed as service providers, who are also predominantly women. They have themselves gone through the same abusive educational system and are within their work subjected to degrading and disrespectful working conditions compromising their ability to provide quality care. This includes working conditions with severe lack of safe water and sanitation (203), lack of essential resources and support system, increased feeling of demoralization (204) and risk for burnout (107). In many cases female health workers, also don't have the power to change their situation because they themselves are also confronted with hierarchal power structures and gender inequality (108). Female

nurse/midwives in Tanzania cover the majority of the lowest ranking order of the health system, while men dominate other cadres including positions in decision making power (99). Governments in Tanzania, both during and after colonial times have consistently deprioritized the nurse/midwifery profession and the care for pregnant women, in particular in rural areas (See also chapter 3). Structural violence and neglect of women is also visible in the lack of action at global level to truly create a platform of comprehensive action to ensure the complex needs of women are met (See also chapter 2). Health systems and societal aspects that mediate mistreatment of women in low-income countries are often acknowledged but tend to be left aside because of the challenges of resources; cultural constrains to change behaviour; and lack of political will (84, p24).

The increased attention for disrespect and abuse through the Respectful Maternity Care agenda is a welcome development and achieving universal definitions and clear typologies of what disrespect and abuse includes is useful for scientific and advocacy purposes (202). Respectful Maternity Care is currently positioned as an element of the interpersonal aspects of the quality of care framework. Interpersonal care is concerned with the management of the social and psychological interaction between patient and provider (135). The latter includes communication, patient-provider relationship, and patient involvement, including virtues such as privacy, confidentiality, informed choice, empathy, honesty, tact (135,142). Care policies, guidelines and assessments of quality in low-middle income countries have until recently devalued and not prioritized interpersonal aspects of quality (205). The recent WHO guidelines on intrapartum care include four specific recommendations that, if implemented, could contribute to improving the interpersonal quality of care (84). The antenatal care recommendation however remains focused on technical interventions, despite acknowledging the importance of ‘women’s values’ (83). In clinical practice the interpersonal and technical aspects of care do not operate in parallel as they are presented in the quality of care framework. They are both in combination an essential part of care provision, for identification of problems, needs, diagnoses and management of conditions or diseases. Mistreatment of women in health facilities is therefore not limited to the level of interpersonal care only. Also from a technical point of view, substandard care, including care that is absent, inadequate, unnecessary or not adhering to evidence-based guidelines should be seen as a form of mistreatment (7,202,205)

Voices at the front lines

Barriers for care seeking during birth are well described and multifactorial. Women are dependent on their social networks, often need considerable financial resources and are hindered to access care due to lack of transport or large distances (5,206,207). Additionally, perceptions and experiences of poor quality of care in health facilities may form as an important disincentive to seek future care (208), as this study also has shown. The findings presented in Paper IV illuminate the individual variations in rural women’s decision making for care during birth and the importance of prevailing social and political conditions that impact on their lives. Ultimately, within the complex social circumstances, women’s decision making depends on their agency (209). Women exert agency through their selection or construction of the environment and

their reflection of risk, which depending on the woman can result in birth at home or in the health facility (93). Lack of care seeking for birth cannot simply be attributed to their insufficient knowledge and limited awareness of medical risks. Nor are women necessarily subjected to decisions made for her, by husbands or mothers in law. Poor and vulnerable women in low-income countries are often portrayed and represented as passive, submissive and powerless (210–212), also with regards to their childbirth experiences (213). However, within the constraints of women's lives, women are often resilient and make decisions based on what they perceive to be in their, and their families, best interest and what is within their realistic capabilities (153,214). The global discourse promoting facility birth as the best option for women in low-income setting does not have merit in settings where care access and social conditions are unpredictable. Nor when the services women expect to receive are sub-standard, and possibly disrespectful.

The need to improve quality of care, particularly in rural low-income setting, is not a new realisation. There have never been sufficient investments in maternal health to allow for high quality care in countries such as Tanzania (Chapters 2 and 3). The past decades, deteriorating systems have exhausted nursing morale, further reducing their ability care for their patients. Health workers are experiencing a pressure of responsibility for outcomes of care processes they perceive to be out of their control. As a result, care provision for women during pregnancy and birth can appear meaningless (Paper II). Health workers should not be blamed for not using the tools they are provided with if they do not actually help them in the setting in which they work. Barriers to partograph use for example can be attributed to challenges beyond individual knowledge and lack of skills (Paper II). These include lack of adaptation of the partograph to the local context, insufficient supplies and lack of supportive professional environment (215, p5). It is important to acknowledge that also health workers express agency in their decision to use, or not use, some of the well-intended interventions or recommendations. As much as it is unethical to push women to give birth in institutions that have little to offer, it is equally unethical to expect health workers to provide quality care while the working conditions are gravely insufficient (9). Listing to health workers can reveal they are intrinsically motivated, passionate and committed to provide good patient care, but fail to do so because of their complex working conditions, as I also observed in this study (216–218). Improvements in providers' working live, including inter-relation aspects between staff and across hierarchies, effective supportive supervision and supportive workforce policies will likely results in improvements of the quality of care at individual-provider level (191,219,220).

By providing a view from the ground, this study attempted to present some of the voices at the frontlines, to increase understanding of women and health workers' decisions made for care seeking and care provision. Lessons learned from women and their providers revealed there is a need for a transition towards a more humanistic approach of maternity care in low-income settings (188). Promoting respectful, woman-centred care throughout pregnancy and childbirth will likely strengthen the interpersonal relation between women and health workers, improve quality of care and ultimately also health outcome. However,

this will only be possible if facility and policy conditions are conducive to ensure such care is realistically achievable (221). Lack of political will, resource challenges or limited evidence base is no excuse for inaction at global and national levels. The importance of social, cultural, emotional and psychological support throughout pregnancy and a conducive birth environment to ensure the wellbeing and dignity of the woman has been well documented (222,223). Studies in high-income countries have shown that women value comfort, safety, quite dark spaces, control over decision making and trusted people around them during birth (149,224,225). Although expectations and desires of birthing women vary between and within cultures, women in low-income countries also prefer to give birth in a place where they know it is safe and they will be supported (226–228). Nevertheless, several low-cost evidence-based interventions that can make a significant difference to women's birth experience have long been recommended but are rarely implemented, such as: continuous support during birth; a birth companion of choice; encouragement of free movement; birth position of choice (11,84). In addition to ensuring availability and access to essential biomedical evidence-based care, maternity care should ensure women's individual emotional, social and cultural needs are met, also in low-income countries.

Methodological considerations

The strength of this study lies in the comprehensive approach to understanding issues of quality of care both during pregnancy and childbirth from the patient as well as the provider perspective. By conducting several in-depth interviews with women over a longer period of time I was able to create thick descriptions of their lives, experiences and choices made (Paper IV). This also contributed significantly to understanding the findings of the other studies (Papers I and II). Additionally, the frequent interviews were essential to get a good picture of women's reproductive pathways, something which would have been difficult to discuss at length in short, single interviews. Although I will always remain an outsider in Tanzania, my long term involvement, ability to speak Kiswahili and to an extent full integration in the local society has given me an important insider view. Additionally, by being a medical doctor myself I was personally able to review clinical findings. This allowed me to ask more practical questions to understand decision making and thought processes of health workers while managing patients in a low resource setting. This was in particularly important for the objectives regarding technical quality of care aspects (Papers I and II). Realizing that interpretation of behaviour is subjected to personal bias I frequently consulted with the expert team, research assistants, and supervisors. All of whom also have had long term involvement and exposure to clinical care settings in sub-Saharan Africa. Although qualitative studies are per definition not intended to be generalizable, I believe that my observations and findings are representative of the situation for Tanzania at large and other rural areas in sub-Saharan Africa.

Inter-observer differences occurred during the direct observations of antenatal care, which was a limitation of Paper I, but provided useful information about the challenges when performing such quality assessments. This illustrated the importance of qualitative methods for understanding quality issues in maternity care. Although I have attempted to present perspectives of health workers, I have not

systematically included their voices. In particular with regards to the Paper III about disrespect and abuse it would have been valuable to reflect on health workers' perspectives of the care they provided, in addition to women's views and our observations of care. Participant observations and informal conversations risk understanding health workers' opinions and perspectives through my subjective view of the situations. Additionally, my internalized idea about care standards sometimes gave me an urge to intervene, which will have influenced the data collected and how it was understood. More formal inclusion of health workers, perhaps also through a narrative approach would have further strengthened the study. However, by working as a health worker in the study context I feel I was able to capture important elements of the complexities of working in maternity care in Tanzania. Furthermore, because I do not have a social science or anthropological background, it is likely that the thickness and depth of description of observations and interviews could have been of better quality. I am nevertheless confident that my long term presence and involvement in people's lives in Tanzania, both in urban and rural settings has generated rich accounts about people's local realities.

Chapter 9: Conclusion and Recommendations

The quality of care provided by facility based health workers during pregnancy and childbirth in the study setting was sub-standard, both from a 'technical' and 'interpersonal' perspective. Continuous exposure to sub-standard care, throughout women's reproductive lives, contributed to women's delay in care seeking or decision-making to stay at home. The study findings suggest that if quality of care improves, both during pregnancy and birth, women are more likely to plan for a facility birth, despite resource and transportation challenges. However, insufficient staff, resources, referral options and supervision, limit health worker's ability to provide quality care. Some of these challenges are not easily addressed and require significant strengthening of the health system. This study identified there are opportunities for improvement, even in the absence of enormous influx of resources, by 'remembering what healing is all about' (188, p63). Beyond achieving health outcomes, and saving lives, maternity care should ensure women, and their families, have a positive pregnancy and childbirth experience. In order to achieve this, and based on the research conducted for this thesis, I have three main recommendations. Firstly, striving for quality of routine care for uncomplicated pregnancy and childbirth needs to be prioritized, both at policy level and in practice. Secondly, existing guidelines and tools need to be adapted to fit the local context in which they are used. Thirdly, sub-standard care should be holistically tackled, throughout the continuum of care, with recognition for structural inequalities that maintain women's poor health status and outcomes.

A global focus on mortality during the past decades has influenced maternity care in rural settings such as in Tanzania. Resulting in a neglect of essential practices, which are required to monitor natural processes and safeguard women's well-being. We cannot expect health workers to timely identify and tackle complications if they are unable to recognize what constitutes a normal pregnancy and birth process. Similarly, we cannot expect health workers to provide high quality interpersonal care, if they have never seen such care enacted during their training or in their work and if the surrounding environment and working conditions continue to demoralize health staff. Tools and guidelines, intended to support health workers, should provide assistance in care provision for all women, not only to identify those women that potentially can develop complications. Health workers should be re-trained in midwifery skills, beyond dealing with complications alone, with more attention for strengthening their clinical competence and problem solving skills. Furthermore, health workers should attempt to meet women's emotional, social and cultural needs. Ultimately interventions that respect the dignity and worthiness of the pregnant and birthing woman should be prioritized (e.g allow for a birth companion, freedom of movement during birth, birth position of choice). Some of these interventions are now firmly promoted in the new WHO intrapartum guidelines, which is an important step to ensure quality of care for all (84). This will only be realistic, however, if health worker's needs are met as well. Including restructuring of facility infrastructure, fairness in salary scales and remuneration, ensuring continuous and respectful supervision and attention for knowledge development and career prospects (216).

Guidelines need to be developed that allow for contextual and local adaptation, and evaluations should be done with consideration of the same. This means goals for care provision need to be realistic and achievable. Maxwell (138) proposed the use of different levels of performance standard where the 'theoretical optimum' is the highest attainable, based on current technologies, followed by 'known attainable level', which is achievable under realistic conditions. If tools, guidelines and supervision for quality improvement are based on local realities, this would allow for incremental improvement of quality (159). At global and national level this means quality of maternity care is redefined to ensure care provision becomes meaningful at the individual patient-provider level in low-income countries. This requires agreement on what 'good enough' care in low-income setting looks like. Allowing people at the frontline to be included in decision-making will help to ensure maternity care meets the needs of both providers and the women they care for. Women need to be included to ensure decisions made, including priority setting, reflect women's values and needs. Health workers need to be included to ensure care provision is within the range of what is feasible in their setting. Politicians and facility managers need to be included to ensure what is required for individuals, is balanced with what is realistic for the population, with consideration for constrains of resources and political climate.

Reducing inequalities is the corner stone of the SDG agenda, which provides an opportunity to revive the Safe Motherhood Initiative to its old mandate. It is questionable if such global goals and targets will translate into national and local change without attention for the structural inequalities that underlie poor performance of countries such as Tanzania. This includes acknowledging the 'global intellectual hegemony' which underlies the existence and continuous renewal of global goals and targets as a means of steering international development (229). The struggle of the Safe Motherhood Initiative to make lasting contribution to the women it intends to serve clearly shows how ideals and big plans, remain just that. Ideals lose out when confronted with the harsh realities national governments, local communities, heath workers and women are faced with (230, p31). Normalization and justification of mistreatment of women in health facilities is a consequence of women's lives not being valued by larger social, economic and political structures. Making recommendations on how to address these forces is beyond the scope of this thesis. However, as a starting point further research should be encouraged to move form a predominant narrow focus to a more holistic approach, where quality of maternity care is addressed across the continuum of women's reproductive lives, with purpose beyond improving survival. After all, we cannot speak of quality maternity care, if we are able to save women's lives, but mistreat them in the process.

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Appendices

Appendix 1 International and Tanzanian students' individual research projects

MSc/MD4 Projects		
Name	**Project details**	
Mante Sliepem	Title	Explortatory research: 'Dissemination of Reproductive health and rights Information'
	Date	June – Aug 2012
	Supervisors	Prof. dr Cees Hamelink (PhD), Andrea Solnes Miltenburg (MD)
Evelien Rijkers	Title	Exploratory research: 'Determinants of maternal health services and use' (research is published)
	Date	June – Aug 2012
	Supervisors	Prof. dr Cees Hamelink (PhD), Andrea Solnes Miltenburg (MD)
Sandra van Pelt	Title	Interpersonal Relationships In Maternal Health Facilities in Tanzania: An observational study on the interpersonal quality of care delivered by healthcare workers to women coming for Maternal Care in Magu District, Tanzania.
	Date	April – June 2013
	Supervisors	Theo.P. Groen (PhD), Andrea Solnes Miltenburg (MD)
Maaike Droogers	Title	Possibilities for an E-Health intervention in Antenatal Care in Magu District, Tanzania
	Date	April – June 2013
	Supervisors	Mariette van Amstel (PhD), Andrea Solnes Miltenburg (MD)
Kirsten van der Vleuten	Title	The influence of gender roles on women's health care seeking behavior during pregnancy and delivery in Magu district, Tanzania
	Date	April – June 2013
	Supervisors	Prof. dr Cees Hamelink (PhD), Andrea Solnes Miltenburg (MD)
Fleur Lambermon	Title	Human Rights Approach to Maternal Health: an exploratory study on women's perceptions of institutionalized maternity care in terms of human rights principles – Magu District Tanzania (research is published)
	Date	April – June 2013
	Supervisors	Prof. Dr. Cees Hamelink (PhD), Andrea Solnes Miltenburg (MD)
Hanneke Bakker	Title	Mapping community structures and decisions surrounding childbirth in Magu district
	Date	June – Sept 2014
	Supervisors	dr. Marianne van Elteren (PhD), Andrea Solnes Miltenburg (MD)
Emma Vermeulen	Title	Male involvement during pregnancy in Magu district, rural Tanzania (research is published)
	Date	Sept 2013 – March 2014
	Supervisors	Dr. Marianne van Elteren (PhD), Andrea Solnes Miltenburg (MD)
Audrey Mwashilemo	Title	Integration of Traditional Birth Attendants in Provision of Antenatal Care and the Emerging Challenges in Magu District, Northern Tanzania
	Date	August – October 2014
	Supervisors	Elias C. Nyanza (ESM, MPH), Basinda Nyamanya (MD)
Titus Sese	Title	Community Perception and Practice on Antenatal and Intrapartum Care in Magu District-Mwanza
	Date	11th of august to 3rd of October
	Supervisors	Elias C. Nyanza (ESM, MPH), Basinda Nyamanya (MD)
James Mabila	Title	Assessment of Antenatal Human Care Quality in Magu District
	Date	11th of august to 3rd of October
	Supervisors	Elias C. Nyanza (ESM, MPH), Basinda Nyamanya (MD)
Emanuel Mkonyi	Title	Assessing quality of antenatal care with focus on health education, clinical skills and laboratory investigations provided in Magu district, Mwanza, Tanzania.
	Date	Aug – Oct 2015
	Supervisors	Elias C. Nyanza (ESM, MPH), Pendo Ndaki
Abdallah Hamduni	Title	Assessment of quality of antenatal care in primary health care facilities in Magu district, Mwanza, Tanzania.
	Date	Aug-Oct 2015
	Supervisors	Elias C. Nyanza (ESM, MPH), Pendo Ndaki

Appendix 2 Facility Survey Tool

Facility ID Number [ ][ ][ ]

Name of facility manager____

Name of evaluator____

Name of facility____

Name of ward____

Type of facility

- [ ] Health Dispensary (1)
- [ ] Health Center (2)
- [ ] District Hospital (3)
- [ ] Regional Hospital (4)
- [ ] Private Clinic/Hospital (5)
- [ ] Nursing/Midwifery Teaching Institution (6)
- [ ] Other (7) (specify) ____________________________
  ____

Affiliation of facility

- [ ] Government (1)
- [ ] Religious/Missionary (2)
- [ ] Private (3)
- [ ] Quasi-Government (4) (specify)________________
- [ ] Nongovernmental Organization (NGO) (5)
- [ ] Other (6) (specify) ____________________________

No. of Staff

- [ ] Nurse/Midwife
- [ ] Enrolled Nurse
- [ ] Auxiliary nurse/nurse aid
- [ ] Clinical assistant
- [ ] Medical attendant
- [ ] Community or Village Health Worker
- [ ] Clinical officer

- [ ] Male
- [ ] Female
- [ ] Average years of experience

Date last supplies received __________

Date last supplies ordered: ____________

Method of ordering supplies: __________

Date(s) of assessment____

BASIC FACILITY DATA (Data from 2013, monthly or year report)			
ANC data			
No. of ANC visits		**No of 1st ANC visits**	
No. of ANC visits <20w (%)		**No. of ANC cards brought during 1st visit (%)**	
No. of pregnancies > 3 (parity >3) 2013 (%)			
No. of women >35y attending ANC (%)		**No. of women <20y attending ANC (%)**	
No. of women tested for HIV (%)		**No. of men tested for HIV with their wives. (%)**	
No. of women found HIV+ (%)		**No. of men found HIV+ (%)**	
No. of referrals during ANC (%)		**Main reasons for referral**	
Birth Data			
No. of births (%)		**No. of live births (%)**	
No. of assisted births (%)		**No of C/S (%)**	
No. of NVD (%)		**No of breech births (%)**	

No. of twin/triplets births (%)			
No. of natal and directly post partum referrals 2013 (%)		Main reason for referral 2013	
No. of Maternal Deaths		No. of Near Miss	
No. of stillbirths		No. of Neonatal death (within 7 days of birth)	

FACILITY SERVICES AVAILABLE

Instructions: Place an "X" in the YES column if the item/service is available and functions correctly. Place an "X" in the NO column if the item/service is not available or does not function correctly. Record your comments in the COMMENTS column, as necessary.

1. DOES THE FACILITY OFFER THE FOLLOWING GENERAL SERVICES?		**YES**	**NO**	**COMMENTS**
101	Is staff available to treat and refer clients 24 hours a day 7 days a week?			
102	Does the facility have an active health committee?			
103	Does the facility have a system for reviewing cases of maternal and prenatal deaths and/or complications on a regular basis?			
104	Does the facility have registration of stock (inventory)?			
105	Which other registration books are available?			
106	Does the facility have a hand washing policy or is every staff member thought about this?			
107	Which payments are required for services?			
108	Does the facility welcome family members (inc husbands) and labor companions?			
109	Does the facility offer women to join the SMS campaign 'Wazazi Nipendeni'?			
1. DOES THE FACILITY OFFER THE FOLLOWING EDUCATIONAL SERVICES		**YES**	**NO**	**COMMENTS**
109	Does the facility offer health education? If yes how?			
110	Which education is provided during ANC?			
110a	If birth preparedness was			

	mentioned in the previous question. What elements of birth preparedness are thaught?			
110b	If danger signs was mentioned in the previous question. What danger signs are thaught?			
111	Which education is provided during ANC?			
111a	If birth preparedness was mentioned in the previous question. Which elements of birth preparedness are thaught?			
111b	If danger signs was mentioned in the previous question. What danger signs are thaught?			
112	Are women counseled for HIV tests?			
113	Are women told to prepare supplies for delivery? If yes which kind of supplies?			
114	Are plans for post-partum care discussed?			
115	Is education also provided to men?			
116	Are there any educational leaflets that women can take with them?			
117	Is the woman informed about her (scheduled) return visit?			
2. WHICH STAFF MEMBERS IS PERFORMING THE FOLLOWING SERVICE (please indicate per staff member, if staff member not present let the other staff members provide the information on behalf of him/her)				
201	Providing ANC consultations of first ANC visits			
202	Providing subsequent ANC consultations (after the 1st visit)			
203	Providing ANC education?			
204	Providing counseling for HIV testing during ANC visits?			
205	Prescribing medicines?			
206	Referral during ANC or during delivery?			
207	Perform PV (per vaginum) assessment during ANC and/or delivery			
208	Conducting normal deliveries?			

209	Conducting deliveries if complications arise?			
210	Conducting assisted deliveries (vacuum delivery)?			
211	Performing episiotomy?			
212	Perform episiotomy (or tears) repairs?			
213	Conducting postpartum checkups?			
214	Provide counseling on Family Planning?			
3. DOES THE FACILITY OFFER THE FOLLOWING SERVICES?		**YES**	**NO**	**COMMENTS**
301	Client waiting area with shelter			
302	Exam room with adequate privacy			
303	Water source (if yes what kind)			
304	Power source (if yes, what kind)			
305	Strongest mobile phone provider in area			
306	Internet service provider			
307	Delivery bed (and mattress) available (If yes, provide number of beds)			
308	Beds (and mattress) available for post-partum care (If yes, provide number of beds)			
309	Toilet facility			
310	Staff accessibility of facility guidelines (diagnosis, treatment and complication management)			
4. DOES THE FACILITY OFFER THE FOLLOWING SERVICES?		**YES**	**NO**	**COMMENTS**
General equipments and supplies				
401	Fetoscope			
402	Stethoscope			
403	Blood pressure cuff			
404	Thermometer			
405	Antiseptics			
406	Sterile gauze			
407	Syringes			
408	Suture material			
409	IV solutions			
410	Urine catheters			
411	Ampoules of H_2O for inflating IDC balloon			
412	IV administration set			

413	Urinalysis dip sticks			
414	Maternal & neonatal scales			
415	Tape measure			
416	Oxygen supply			
417	(wall) clock			
Record Keeping				
418	ANC cards			
419	Clinic registers			
420	Partogram			
421	Vaccination record cards			
422	Apgar score cards			
Infection prevention				
423	Utility gloves			
424	Clean gloves			
425	Sterile gloves			
426	Chlorine			
427	Buckets			
428	Ability to boil water			
429	Sharp containers			
Childbirth Kit/Suture Kit				
430	Scissors			
431	Clamps			
432	Cord ties			
433	2 dry blankets/towels			
434	Ring forceps			
435	Needle holder			
436	Container for placenta			
437	Macintosh			
438	Protective wear			
439	Instrument to rupture membranes			
Vacuum extraction/Forceps				
440	Vacuum extractor			
441	Forceps			
Newborn Resuscitation				
442	Self inflating resuscitation bag			
443	Neonatal masks			
444	Suction equipment			
Manual Vacuum Aspiration				
445	Speculum			
446	Manual vacuum aspiration syringe			
447	Cannula			
448	Tenaculum			
Drugs				
449	Local anesthetic			
450	Oxytocin			
451	Magnesium sulfate			
452	Diazapam			
453	Misoprostol			
454	Ergomitrin			
455	Ampicillin			
456	Metronidazole			
457	Gentamicin			

458	Paracetamol			
459	Erythromycin			
460	Nevarapine			
461	ARV's			
462	Oral Polio Vacine			
463	BCG vaccine			
464	Tetanus toxoid			
465	Iron tablets			
466	Folate tablets			
467	Sulfadoxine-pymethamine			

5. HAS THE FACILITY PERFORMED BLOOD TRANSFUSION IN THE PAST 3 MONTHS?

YES ☐ NO ☐ 601 →

Are the following laboratory tests performed either at the facility OR off-site to screen blood for transfusion?

		YES	NO	COMMENTS
501	Type and crossmatch			
502	Rhesus			
503	HIV			
504	Hepatitis B			
505	Syphilis			
506	Hb			
507	Malaria			

6. HAS THE FACILITY PROVIDED CESAREAN SECTION IN THE PAST 3 MONTHS?

YES ☐ NO ☐ end →

↓

Type(s) of Anesthesia Provided in the Last 3 Months				
601	Spinal			
602	Local			
603	Ketamine			
604	General			
605	If the facility provides general anesthesia, does the anesthesia machine work?			
Cesarean Section Infrastructure				
606	Does the facility have an operating room?			
Availability of Staff to Provide Cesarean Section				
607	Are all key staff necessary to provide a cesarean section available 24 hours a day, 7 days a week?			
Cesarean Section Kit with the Following Supplies:				
608	Scalpel			
609	Scissors			
610	Artery forceps			
611	Needle holder			
612	Needle			
613	Doyen's or pelvic retractor			
614	Self-retaining retractor			
615	Forceps, toothed			

616	Forceps, non-toothed			
617	Suction system			
618	Kidney basins			
619	Gallipots			
Comments:				

Appendix 3 Structured observational checklist for antenatal care

<table>
<tr><th colspan="2">Data collection tool: Checklist ANC observation
* Data will be collected with Magpi, digital data collection tool</th></tr>
<tr><th>Category</th><th>Procedures/activities</th></tr>
<tr><td>1. Basic info</td><td>1. Date of observation:_______
2. Name of data collector:________
3. Name of facility:_______
4. HCW ID:________

5. Ask consent from health worker (Y/N) and pregnant woman (Y/N)

Before observing the consultation, make sure to obtain permission from both the service provider and the client. Also make sure that the provider knows that you are not there to evaluate him or her and that you are not an ‘expert’ to be consulted during the session.</td></tr>
<tr><td>2. Basic consultation info</td><td>6. No of visit (1,2,3,4,5,6,7)
7. ANC card available or received during visit (Y/N)
8. Accompanying person during visit Husband/Other family/Friend/None

9. Start time […] and end time […]

10. Location of activity :_______</td></tr>
<tr><td colspan="2">ANC visit</td></tr>
<tr><td colspan="2">Record whether the provider asked the following questions or if the client mentioned any of the facts below</td></tr>
<tr><td>1. Registration</td><td>11. Registration takes place
▪ Individually (Y/N)
▪ As mass action (Y/N)

12. The following items are asked or mentioned
▪ Clients name (Y/N)
▪ Clients age (Y/N)
▪ Clients work (Y/N)
▪ Clients place of residence (Y/N)
▪ Husband’s name (Y/N)
▪ Husband’s age (Y/N)
▪ Husband’s work (Y/N)</td></tr>
<tr><td>2. History</td><td>Did the health care worker ask about or did the client mention any of the following facts?

[Listen and record woman’s numbers mentioned, enter ‘0’ if no previous and ‘99’ if number not mentioned)

13. Total no of pregnancies [Ever pregnant inc this one] __
14. Total no of prior deliveries number not mentioned)__
15. Total no of living children__
16. Prior abortions __
17. Prior neonatal death__
18. Prior stillbirth__

19. Date of 1st day last menstrual period (LNMP)___
20. Mentions the following items:
▪ Gestational Age (Y/N)
▪ Calculates through 1) pregnancy circle (Y/N), 2) by formula (Y/N)
▪ Mentions EDD (Y/N)

21. Asks about or mentions:</td></tr>
</table>

- Heart disease (Y/N)
- Diabetes (Y/N)
- Tuberculosis (Y/N)
- Operations (Y/N)

22. HIV/PMTCT discussed
    - HIV status asked if known Y/N (if yes continue, if no next question)
    - Asked about if on medication (Y/N)
    - Asked about CD4 count (Y/N)
    - Asked about CTC clinic (Y/N)
    - Nutrition advice baby (Y/N)
    - Asked about adherence of drugs(Y/N)

23. History of complaints or current complaints during this pregnancy
    - Vaginal bleeding (Y/N)
    - Fever (Y/N)
    - Headache or blurred vision (Y/N)
    - Swollen face or hands (Y/N)
    - Convulsions or loss of consciousness (Y/N)
    - Severe difficulty breathing (Y/N)
    - Persistent couch for two weeks or longer (Y/N)
    - Severe abdominal pain (Y/N)
    - Foul smelling discharge (Y/N)
    - Frequent or painful urination (Y/N)
    - Decrease or stop of fetal movements [if >20weeks] (Y/N)
    - Any other problems (Y/N)
        i.
24. Primigravida Y/N
    - If yes continue to section 3, if no continue with questions below

25. Information about previous pregnancy/delivery
    - Date of last delivery (Y/N)
    - Previous *C/S* (Y/N)
    - Multiple pregnancies [*Twins or more]* (Y/N)
    - Prior Stillborn [*Baby born dead does not breathe or cry]* (Y/N)
    - Prior neonatal death [*Baby born alive, died after birth]* (Y/N)
    - Heavy bleeding during or after previous delivery (Y/N)
    - Placenta problems (stuck) (Y/N)
    - Previous pre-term birth (Y/N)
    - Prolonged or obstructed labour [*Did labour take too long, did she hear from doctors the baby was too big or passage to small?]* (Y/N)
    - Anemia during pregnancy *lack of blood* (Y/N)
    - High blood pressure/convulsions (Y/N)

26. Previous pregnancy/delivery high risk factors present
    - > 10 years ago last birth (Y/N)
    - previous CS (Y/N)
    - Multiple pregnancies (Y/N)
    - Prior Stillborn (Y/N)
    - Prior neonatal death (Y/N)
    - Heavy bleeding during or after previous delivery (Y/N)
    - Placenta problems (stuck) (Y/N)
    - Prolonged or obstructed labour [*Did labour take too long, did she hear from doctors the baby was too big or passage to small?]* (Y/N)
    - Anemia during pregnancy *lack of blood* (Y/N)
    - High blood pressure/convulsions (Y/N)

Record whether the provider carried out the following steps and/or examinations

3.Clinical examination	27. Examination done: ▪ Individual (Y/N)

	▪ Mass action (Y/N) 28. Checked the following: ▪ Pallor *checked the eyes and hands* (Y/N) ▪ Edema *both at the ankle and hands* (Y/N) ▪ Breast (Y/N) ▪ Lung & Heart (Y/N) ▪ Temperature (Y/N) ▪ Pulse (Y/N) ▪ Blood Pressure (Y/N) ▪ Weight(Y/N) ▪ Height(Y/N) ▪ Fundal height (Y/N) ▪ Fetal presentation and engagement [if applicable] (Y/N) ▪ Fetal heart sound [if applicable] (Y/N) ▪ Vaginal Examination performed [Y/N/DK]
4. Laboratory investigations	*Document if the health worker performs these tests* 29. *Test done* ▪ Haemoglobin test(Y/N) ▪ Grouping and rhesus factor (Y/N) ▪ RPR *syphilis*(Y/N) ▪ Malaria(Y/N) ▪ Urine (Y/N) ▪ *Voluntary counseling and testing for HIV/PMTCT:Y/N* 30. Referred for test ▪ Haemoglobin test (Y/N) ▪ Grouping and rhesus factor (Y/N) ▪ RPR *syphilis* (Y/N) ▪ Malaria (Y/N) ▪ Urine (Y/N) ▪ *Voluntary counseling and testing for HIV/PMTCT:Y/N*
5. Drug administration and immunisation	*HCW gave the following treatments or advised to get them from pharmacy (or checked if already received in case of TT)* 31. Treatment given ▪ Iron (Y/N) ▪ Folic Acid (Y/N) ▪ Antimalaria (SP) (Y/N) ▪ Tetanus toxoid (Y/N) ▪ Mebendazol (or other anthelmintic) (Y/N) ▪ Other medication given Y/N (after this fill in if yes)______ 32. Informed about purpose/side effects/use of all above (All, Some, None)
6 Education and counseling	33. The following education was given in group: ▪ Process of pregnancy and its complications (Y/N) ▪ Diet and nutrition (Y/N) ▪ Rest and exercise in pregnancy (Y/N) ▪ Personal Hygiene (Y/N) ▪ Danger signs in pregnancy (Y/N) ▪ Use of drugs in pregnancy (Y/N) ▪ Effects of STI/HIV/AIDS (Y/N) ▪ Care of breasts and breast feeding (Y/N) ▪ Symptoms and signs of labor (Y/N) ▪ Plans for delivery (Y/N) ▪ Plans for post-partum care (Y/N) ▪ Family planning (Y/N) ▪ Harmful habits (smoking, drug abuse, alcoholism)) (Y/N)

	▪ PMTCT if applicable (Y/N) ▪ Schedule of return visit (Y/N) 34. The following education was given individually: ▪ Process of pregnancy and its complications (Y/N) ▪ Diet and nutrition (Y/N) ▪ Rest and exercise in pregnancy (Y/N) ▪ Personal Hygiene (Y/N) ▪ Danger signs in pregnancy (Y/N) ▪ Use of drugs in pregnancy (Y/N) ▪ Effects of STI/HIV/AIDS (Y/N) ▪ Care of breasts and breast feeding (Y/N) ▪ Symptoms and signs of labor (Y/N) ▪ Plans for delivery (Y/N) ▪ Plans for post-partum care (Y/N) ▪ Family planning (Y/N) ▪ Harmful habits (smoking, drug abuse, alcoholism) (Y/N) ▪ PMTCT if applicable (Y/N) ▪ Schedule of return visit (Y/N) 35. If danger signs were discussed, the following items: ▪ *Vaginal bleeding* (Y/N) ▪ *Convulsions* (Y/N) ▪ *Severe headache with blurred vision* (Y/N) ▪ *Fever and too weak to get out of bed* (Y/N) ▪ *Severe abdominal pain* (Y/N) ▪ *Fast and difficult breathing* (Y/N) ▪ *Swelling of fingers, face and legs* (Y/N) 36. If plans for delivery were discussed, the following items: ▪ Emergency preparedness *Discuss what items to prepare and what to do in case of emergencies* (Y/N) ▪ Asked where she will deliver (Y/N) ▪ Advised to use skilled worker during delivery (Y/N) ▪ Transportation *Discuss transportation to arrange* (Y/N) ▪ Financial arrangements *Money for transport and supplies* (Y/N) ▪ Purchase relevant items *Prepare gloves etc to take with for delivery* (Y/N)
7 Actions taken on abnormal or high risk findings **[Either mentioned or recorded on card]**	37. High risk identified (*If mentioned)* ▪ <1.50m (Y/N) ▪ Age <20 (Y/N) ▪ Age >35 (Y/N) ▪ >5 times pregnant (Y/N) ▪ Last birth >10years ago (Y/N) ▪ Previous stillbirth/neonatal death (Y/N) ▪ Previous C/S (Y/N) ▪ Previous bleeding/placenta problems (Y/N) ▪ Previous >3 times abortion (Y/N) ▪ Previous pre-term delivery (Y/N) Current High BP (>140/90 mmHg) (Y/N) ▪ Current Low Hb or clinically anemia (Y/N) ▪ Current GA >40w (Y/N) ▪ Current No FHR (Y/N) ▪ Current Malpresentation at >36w (Y/N) ▪ Current Danger sings present (Y/N) ▪ Current Twin pregnancy (Y/N) ▪ Current infection (Syphilis, UTI, other) (Y/N) ▪ Abnormal urinetest (Y/N) ▪ Other diseases (HT/Diabetes/TBC/HIV/Epilepsy/mental illness) (Y/N)

	38. High risk identified (*If on the ANC card)* ▪ <1.50m (Y/N) ▪ Age <20 (Y/N) ▪ Age >35 (Y/N) ▪ >5 times pregnant (Y/N) ▪ Last birth >10years ago (Y/N) ▪ Previous stillbirth/neonatal death (Y/N) ▪ Previous C/S (Y/N) ▪ Previous bleeding/placenta problems (Y/N) ▪ Previous >3 times abortion (Y/N) ▪ Previous pre-term delivery (Y/N) ▪ Current High BP (>140/90 mmHg) (Y/N) ▪ Current Low Hb or clinically anemia (Y/N) ▪ Current GA >40w (Y/N) ▪ Current No FHR (Y/N) ▪ Current Malpresentation at >36w (Y/N) ▪ Current Danger sings present (Y/N) ▪ Current Twin pregnancy (Y/N) ▪ Current infection (Syphilis, UTI, other) (Y/N) ▪ Abnormal urinetest (Y/N) ▪ Other diseases (HT/Diabetes/TBC/HIV/Epilepsy/mental illness) (Y/N) 39. Action taken ▪ Referral for ANC *Advised to go for ANC at a higher center* (Y/N) ▪ Referral for delivery *Advised to give birth at health center or hospital level* (Y/N) ▪ Treatment provided (Y/N) ▪ Additional investigations done or recommended (Y/N)
8. Check ANC card and Facility book	*Check the ANC card for the following items and confirm with observations* 40. Documentation ANC card ▪ High risk items filled in correctly (Y/N/DK) ▪ LNMP, EDD, GA and FH filled in correctly (Y/N) ▪ Lab results filled in correctly (Y/N) 41. Documentation Other ▪ 1st visit and re-visit are combined when applicable *If it is a re-visit the HCW has looked up the name of the client (unless this is re-visit but 1st visit at this facility)* (Y/N) ▪ Referral is documented if applicable (Y/N)

Appendix 4 Structured observational checklist for care during birth

Data collection tool: Checklist L&D observation * Data will be collected with Magpi, digital data collection tool	
Category	**Observation**
1. Basic info	1. Date of observation: _____ 2. Name of data collector: _______ 3. Name of facility: _______ 4. HCW ID: ____ 5. Ask consent from health worker (Y/N) and pregnant woman (Y/N) *Before observing labour, make sure to obtain permission from both the service provider and the client. Also make sure that the provider knows that you are not there to evaluate him or her and that you are not an 'expert' to be consulted during the session.*
2. Basic labour info	6. Time of arrival of client: _____ 7. Time of being attended by HCW: ____ 8. Client is eligible for observation: Y/N 9. Where is client coming from: Other health facility, ANC ward/OPD, Home
3. Introduction and history taking	10. Location of introduction/history taking:_____ 11. Asks for the following details ▪ Age (Y/N) ▪ No of pregnancies (Y/N) ▪ No of deliveries (Y/N) ▪ No of live births (Y/N) ▪ Length of pregnancy (gestational age (Y/N) ▪ Checks HIV status Y/N 12. Asks if woman has experienced any of the following for current pregnancy: ▪ Vaginal bleeding (Y/N) ▪ Fever (Y/N) ▪ Severe headache and/or blurred vision (Y/N) ▪ Swollen hands, face, feet (Y/N) ▪ Convulsions or loss of consciousness (Y/N) ▪ Severe difficulty breathing (Y/N) ▪ Persistent couch for 2 weeks or longer (Y/N) ▪ Severe abdominal pain (Y/N) ▪ Whether he client has felt a decrease or stop in fetal movement (Y/N) ▪ If there are any other problems the client is concerned about (Y/N) ▪ Not asked (Y/N) 13. Client has previous pregnancies (Y/N), *if Yes continue, if No go to no 14* 14. Asks about complications during previous pregnancies and deliveries: ▪ Heavy bleeding during or after delivery (Y/N) ▪ Anemia (Y/N) ▪ High blood pressure (Y/N) ▪ Convulsions (Y/N) ▪ Multiple pregnancies (Y/N) ▪ Prolonged labor (Y/N) ▪ C-section (Y/N) ▪ Assisted delivery (Y/N) ▪ Prior neonatal death (death of baby less than 1 month old) (Y/N) ▪ Prior stillbirth (baby born dead that does not breathe or cry (Y/N) ▪ Prior abortion (loss of pregnancy) (Y/N) ▪ Not asked (Y/N) ▪ If neonatal death/stillbirth/abortion asks about months of

	pregnancy Y/N/DK 15. Documents findings: ▪ On ANC card (Y/N) ▪ On plane paper (Y/N) ▪ Other (Y/N) ▪ No documentation (Y/N)
4. Examination	16. Location of examination_________ 17. Performs the following activities: ▪ Washes hands with soap and water or uses alcohol before any initial examination (Y/N) ▪ Takes temperature (Y/N) ▪ Takes pulse (Y/N) ▪ Takes BP (Y/N) ▪ Asks about condition of urine or checks it (dipstick) (Y/N) ▪ Checks for signs of anemia (Y/N) ▪ Checks for signs of oedema (Y/N) ▪ Checks fundal height (Y/N) ▪ Checks fetal presentation by palpation of abdomen (Y/N) ▪ Checks fetal heart rate (Y/N) ▪ Checks frequency of contractions (Y/N) ▪ Performs vaginal examination (Y/N) 18. Stage of labour ▪ Active labor (Y/N) ▪ Latent labor (Y/N) ▪ Unknown [if findings are not clear to the observer] (Y/N) 19. Action taken after examination/initial assessment: ▪ Is referred to non-active stage room (if applicable) (Y/N) ▪ Is referred to labour room (if applicable) (Y/N) ▪ Is referred home and told to come back later (Y/N) ▪ Remains on current location (Y/N) 20. Documents findings ▪ On ANC card (Y/N) ▪ On plain paper (Y/N) ▪ On partogram (Y/N) ▪ No documentation (Y/N)
ANC card documentation *Observer: check ANC card for information (If No ANC card, skip)*	21. Age____ 22. Pregnancy___ 23. Parity___ 24. Live births___ 25. LNMP____, 26. EDD___ 27. Complications during previous pregnancy/childbirth ▪ Heavy bleeding during or after delivery (Y/N) ▪ Anemia (Y/N) ▪ High blood pressure (Y/N) ▪ Convulsions (Y/N) ▪ Multiple pregnancies (Y/N) ▪ Prolonged labor (Y/N) ▪ C-section (Y/N) ▪ Assisted delivery (Y/N) ▪ Prior neonatal death (death of baby less than 1 month old) (Y/N) ▪ Prior stillbirth (baby born dead that does not breathe or cry) (Y/N) ▪ Prior abortion (loss of pregnancy) (Y/N) 28. Identifies if high risk Y/N/DK *(Yes if mentions it or documents it, No if not identified but is present, DK if unknown to the observer).*

5. Progress of labour	Monitoring and detection of abnormal findings on paper documents
6.Preparation of Labour	29. Location of preparing for labour 30. Preparation of essential equipment ▪ Oxytocin (Y/N) ▪ Self-inflating ventilation bag (Y/N) ▪ Newborn mask (Y/N) ▪ Suction bulb (Y/N) ▪ Catheter (Y/N) ▪ Cord-ties (Y/N) ▪ Delivery pack (Y/N) ▪ Gloves (Y/N) ▪ IV cannula's (Y/N) ▪ IV fluids (Y/N)
7. Delivery care	31. Location of delivery care________ 32. Performs the following actions: ▪ As baby's head is delivered supports perineum Y/N ▪ Waits for contraction for delivery of the shoulders if this does not come spontaneous Y/N ▪ Time of birth is checked and mentioned by HCW Y/N 33. Record time of birth:_______
8. Immediate care	*Record whether provider carried out the following steps and/or examinations (some of the steps may be preformed simultaneously or by more than one provider)* 34. Checks for another baby (Y/N) [*If second baby then stop observation]* 35. Record time uterotonics given___ *(999 if not given)* 36. Which uterotonic given ▪ Oxytocon ▪ Ergometrine ▪ Syntometrine ▪ Misoprostol 37. Record timing of cord-clamp____ ▪ Applies traction to the cord while applying suprapubic counter pressure Y/N ▪ Slowly delivers the placenta and membranes Y/N ▪ Performs uterine massage after delivery of the placenta Y/N ▪ If uterotonics were given was placenta delivered before uterotonics? (Y/N) ▪ Assesses completeness of placenta and membranes Y/N/DK (*If not complete stop observation)* ▪ Performs manual removal of clots Y/N 38. Tears ▪ Assesses for perineal and vaginal lacerations Y/N ▪ Repairs tears Y/N ▪ If repair: uses anesthesia for repair Y/N 39. Neonatal care (golden minute) ▪ Immediately places baby skin to skin Y/N ▪ In case of meconium applies suction prior to stimulation Y/N ▪ Immediately dries baby and stimulates Y/N ▪ Is the baby crying? Y/N (if yes continue to 37) 40. Resuscitation: Performs following procedures when needed ▪ Dries the baby/stimulation Y/N ▪ Clears the airway/stimulation Y/N ▪ Cuts the cord and brings to table Y/N ▪ Performs inflation breaths Y/N ▪ Calls for help Y/N ▪ Improves ventilation Y/N ▪ Checks for heart rate Y/N

	▪ Performs heart massage Y/N 41. Documentation ▪ Documents delivery process on ANC card Y/N ▪ Documents delivery process in notes and government books Y/N
9. Outcome	42. Neonatal condition after birth: Alive (to 43) /death (to 44) 43. If Alive: Condition; good, fair, not-good 44. If Death: Macerated stillbirth, fresh stillbirth, neonatal death 45. Maternal condition after birth: Alive (to 46) /death (to 47) 46. If Alive: Condition: good/fair/not-good (go to 44) 47. If Death: Cause of death:_______ 48. If Condition not good why:________

Appendix 5 Observation guidelines for interpersonal care

Table 1. Categories and sub-dimensions of supportive behaviour	
Category	**Sub-dimension**
Emotional support	Observes, identifies and responds to signs of emotion, stress, fatigue, pain. Makes statements to reassure and encourage woman. Is friendly, open and gentle. Introduces self, smiles, has a pleasant facial expression. Positive laughter, joking, social chitchat, humour. Uses words, phrases and non-verbal expressions to express concern and empathy. Relaxed calm demeanour, soft calm voice. Keeps company with no tasks being performed, showing undivided attention (eye contact, woman-direct gaze, leaning forward). Birth specific: Active engagement and encouragement during contractions, verbal- and non-verbal, expressions affirming woman's ability, praise.
Physical support	Assists patient gently and in a culturally sensitive way during examinations. Birth specific: Offers, checks, encourages and assists woman to take fluids/food, go to toilet regularly, changes clothing and linen, showers or bathes. Provides pain medications, encourages relaxation or other ways of support (counter pressure, assists in walking, assuming different positions). Coaches through labour such as with breathing and relaxation or touch (holding hand, massage).
Effective communication	**Gives explanations**: Explains to woman when to contact the midwife, explains what needs to be done in case a complication occurs. Explains procedures or treatment, what is done and why and informs of findings. **Gives information**: Provides update on progress of pregnancy and birth. **Gives instructions**: Instructs woman what to do during pregnancy including how to cope with normal pregnancy symptoms. Informs woman where to go if supplies are not available. *Birth specific*: instructs patient during and after birth how to participate to improve outcome, information on how to cope with pain, coaching during pushing. Advises patient to change position, walk around, breath in and out for comfort. Involves: Provides woman with options and involves in decision-making. Asks woman if she has questions and encourages her to ask questions.
Nursing proximity	Is accessible, comes quickly when woman or family member calls, expresses accessibility verbally, encourages woman to request assistance and express needs, faces the woman and position at the same level.
Privacy respected	Ensures privacy and confidentiality: uses curtains, sheets, and positions to avoid exposure, discusses privately with client or with colleagues or with family, minimises interruptions
Consent	Asks for permission before performing examination or medical procedures.

Table 2. Categories and sub-dimensions of non-supportive behaviour

Categories	**Sub-dimension**
Psychological abuse	Verbal aggression such as shouting/scolding, threats, insulting, laughter (negative belittling humour or sarcasm), name-calling. Dominant behaviour such as preventing woman from doing certain things she wants or forcing certain actions. Demanding woman to clean after delivery. Discriminatory behaviour such as not providing care for reasons related to race, gender, age, HIV status, marital status.
Physical abuse	Pinching, slapping, pushing, beating, poking, sexual harassment or rape. Forced (unnecessary) examinations, excessive and inappropriate medical interventions, episiotomy and stitching without anaesthesia.
Non-support	Includes behaviour which is not necessary harmful [in contrast to with physical or psychological abuse] but is also not supportive: ignoring of cues, ignoring contractions (talks, discusses, performs actions during contractions), loud/harsh/cold tone, undermining efforts, nervous restless demeanour, cold or angry facial expression, criticism of woman's behaviour, doubts expressed about woman's ability. Absent behaviour such as no introduction, no discussion of wishes of woman, no explanations or information given, no encouragement, no

	expression of empathy.
Abandonment	Woman is ignored when seeks or asks for care, neglected when asks for help, left unattended, gives birth alone. Delay in receiving intervention when needed, failure to provide supplies even if supplies are available, failure to offer services when staff are adequate and on duty.
Privacy violation	Medical information shared with other patients or family members (such as HIV status shown to others, discuss issues with other clients present). Being unnecessarily uncovered during clinical examination or labour, no use of available screens or lack of attempt to provide privacy. Sharing of beds with other patients. Frequent interruptions and attendance of different staff members.
Non consented care	No permission obtained before examination for medical procedures.

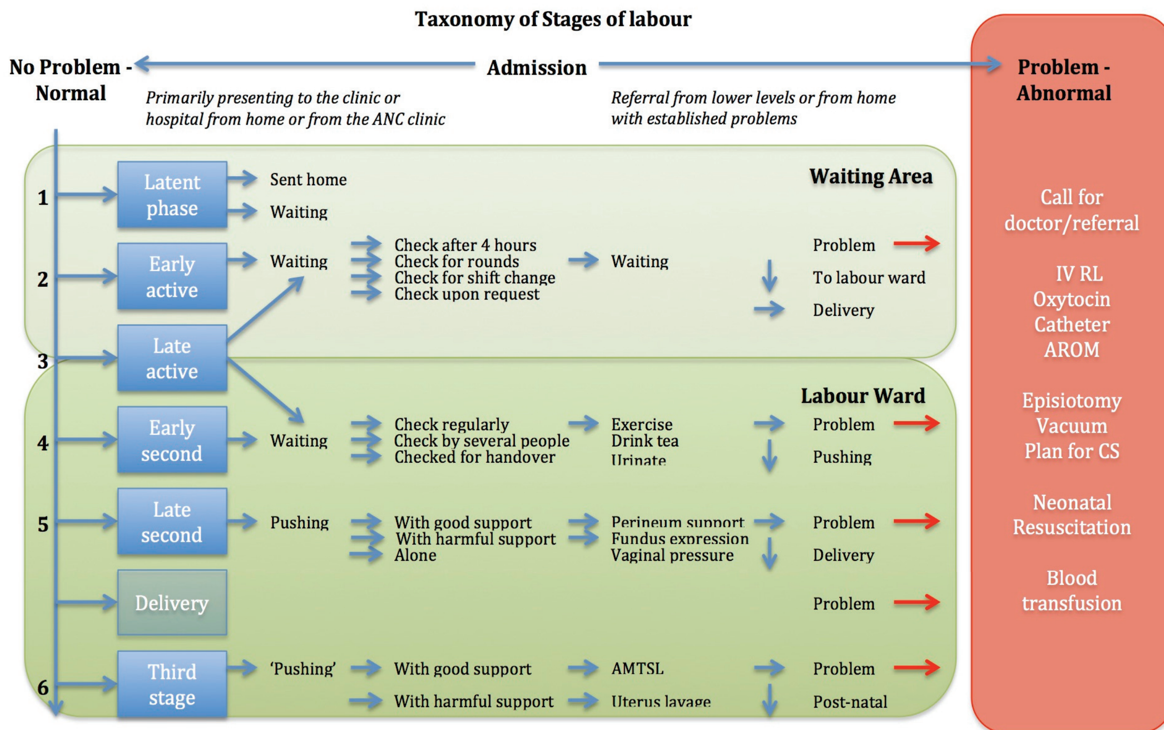
Appendix 6 Example of Ethnographic Analysis Approach

Step 1: Identification of Domains based on semantic relationships and cultural domains (examples)

Term	relationship	cover term
Kanga	Is a kind of	Clothing
Dirah	Is a kind of	Clothing
Underwear	Is a kind of	Clothing
Kitenge	Is a kind of	Clothing
a lot of blood'	is a reason for doing	Uterus lavage
uncontracted uterus	is a reason for doing	Uterus lavage
insufficiently contracted uterus	is a reason for doing	Uterus lavage
delay of the placenta	is a reason for doing	Uterus lavage
presense of cloths of blood	is a reason for doing	Uterus lavage
Fetal distress	is a reason for doing	Giving Ringers Lactate IV
To open the veins'	is a reason for doing	Giving Ringers Lactate IV
For rescussitation of either mother or baby	is a reason for doing	Giving Ringers Lactate IV
For poor contractions	is a reason for doing	Giving Ringers Lactate IV
Meconium	is a reason for doing	Giving Ringers Lactate IV
For delay in labor	is a reason for doing	Giving Ringers Lactate IV
Lack of available MO	is a reason for doing	Delay to take action
Orders by superior	is a reason for doing	Delay to take action
Fear for bad outcome	is a reason for doing	Delay to take action
Hope it will all be fine	is a reason for doing	Delay to take action
Request of family to wait	is a reason for doing	Delay to take action
Fear of referral	is a reason for doing	Delay to take action
Lack of car	is a reason for doing	Delay to take action
Lack of money	is a reason for doing	Delay to take action
Not understanding the urgency	is a reason for doing	Delay to take action
Problem not identified	is a reason for doing	Delay to take action
Baby and mother still fine	is a reason for doing	Delay to take action
Out of stock drugs	is a reason for doing	Delay to take action
One action must follow after another - fear for that	is a reason for doing	Delay to take action
Partograph/books need to be complete	is a reason for doing	To lie when documenting
Fear for repercussion	is a reason for doing	To lie when documenting
Personal/nurses weakness	is a reason for doing	To lie when documenting
lack of supplies to measure	is a reason for doing	To lie when documenting
orders of the supervisor	is a reason for doing	To lie when documenting
Neglect	is a reason for doing	Giving birth in waiting area
Delay	is a reason for doing	Giving birth in waiting area
Ignored when asked for help	is a reason for doing	Giving birth in waiting area
Left alone	is a reason for doing	Giving birth in waiting area
Full labour beds	is a reason for doing	Giving birth in waiting area

No nurse present	is a reason for doing	Giving birth in waiting area
Caring support	is a reason for doing	Giving birth in waiting area
Being close by	is a way to do	provide support
being approchable	is a way to do	provide support
hearing-seeing woman	is a way to do	provide support
explaining	is a way to do	provide support
encouraging	is a way to do	provide support
allowing women to push	is a way to do	provide support
assist with bags-supplies climbing up table	is a way to do	provide support
allow free movement and position in bed	is a way to do	provide support
Take action	is a way to do	provide support
praying	is a way to do	provide support
Busy labour ward	is a reason for doing	poor documentation
women coming in 2nd stage	is a reason for doing	poor documentation
no previous documentation by collagueas	is a reason for doing	poor documentation
Lack of a clock	is a reason for doing	insufficient monitoring with fetoscope
Not having a phone (lying in charger)	is a reason for doing	insufficient monitoring with fetoscope
Not wanting to use phone out of fear of contamination	is a reason for doing	insufficient monitoring with fetoscope
Lack of options when there would be distress	is a reason for doing	insufficient monitoring with fetoscope
Prioritizin presense rather than actual rate	is a reason for doing	insufficient monitoring with fetoscope
confidence in knowing when it is good	is a reason for doing	insufficient monitoring with fetoscope
Admission	is a reason for doing	checking women in labour
When women asked for it	is a reason for doing	checking women in labour
When there is a handover/shift change	is a reason for doing	checking women in labour
When women feel to push	is a reason for doing	checking women in labour
When relatives call	is a reason for doing	checking women in labour
When there is a concern-problem	is a reason for doing	checking women in labour
When there is an emergency	is a reason for doing	checking women in labour
Presense of many students	is a reason for doing	not trusting previous documentation
Irregular and diffeent people doing examination	is a reason for doing	not trusting previous documentation
Regular rounds of new interns, unexperienced	is a reason for doing	not trusting previous documentation
lack of supervision	is a reason for doing	not trusting previous documentation
lack of continuus staff	is a reason for doing	not trusting previous documentation

Step 2: Taxonomy analysis, identification of sub-domains



Taxonomy of Actions during normal labour (example)		
Waiting area		
Things	**Reasoning**	**Ways to do it**
Things which are said		
Move around/do exercise	To help speed up dilatation process	Instruction on admission / reminder on ward
Drink tea/eat	To get enough strength	
Urinate	To ensure empty bladder and prevent obstruction	
Asks who needs to be checked / or calls for names of those who need to be checked	4 hours have passed, there is handover / change of shift, there is a doctors round	Go to the waiting area to collect women, shout from nursing station for names, ask women to get others
Things which are done		
PV examination	To check dilatation and descend of the head, to plot on partogram	**Location:** Check on bed, called to labour ward or other room. **Supplies:** One or two pairs of gloves, mostly sterile gloves
FHR	To check how the baby is doing, to plot on partogram	Listen with fetoscope for 5 sec or more
Labour ward		

Things	**Reasoning**	**Ways to do it**
	Things which are said	
Lie on your side	No pushing time, lying on back is not good	
Lie on your back	Pushing time, only way to push is on your back	
Don’t push	Head is not down or not fully dilated, not time	Suggestion, direct instruction, said in passing, shouted from nursing station
Push	Head is down, fully dilated, it is time	
Don’t cry / keep silent	You will loose strength, you are not strong, you are embarrassing yourself, you are disturbing	

Step 3 Component analysis

Stages of labour								
	Component Analysis of Stages of Labour							
	Latent phase	Early active	Late Active		Early Second	Late second	Third stage	Problem
Location	Waiting area			Labour ward				
Labour	Not in labour	Beginning in labour	Beginning in labour	In labour	In labour	In labour	After birth	In any phase
Woman characteristic (expected)	Quiet, not demanding, walking around or confined to the bed, drinking tea, not visible, follows instructions, goes to the nurse when needed, clothing of choice (usually ‘Dirah’)			Quiet, not demanding, confined to the bed, visible, follows instructions, waits for the nurse to come, naked or wrapped in ‘khanga/kitenge’.				Making noise, seeking attention, visible, strange positions
Cervix	Tip of finger, closed, <3/ <4cm	Between 3 and 7cm	7 or 8cm	8 or 9 cm	Fully dilated but head high/far	Fully dilated head close	NA	Can be any
Care seeking	Woman à Nurse			Nurse à Woman				
Visitors	Allowed on set times	Allowed on set times	Allowed on set times	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not allowed
Birth	Later ‘Baado’	Later ‘Baado’	Birth not imminent	Birth nearly imminent	Birth imminent	Birth imminent	NA	Strive towards quick birth
Time allowed	Days	Up to 1 day	4-6 hours	2-4 hours	1-2 hours	1 hour	5-15min	Limited
Monitoring (Focus on PV, FHR)	None	4h, upon shift change, doctors round, upon request	4h, upon shift change, doctors round, upon request	Frequent, by different staff	Frequent, by different staff	None	None	Frequent, by different staff
Nursing proximity	Far	Far	Far	Hearing distance	Hearing distance	Close by	Close by	Hearing distance/Close by
Density of type of women (gross estimation)	40 %	10 %	10 %	5 %	5 %	5 %	NA	10 %
	An additional 15% is women admitted in this area/phase antepartum with problems (PROM, bleeding, stillbirth)			Women admitted with problems in labour or have become problems during admission and are in need for C/S or other actions or women coming post-delivery with neonates in need of care.				

Step 4 Identification of themes

Overview of themes major/minor (examples) *Any principle recurrent in a no of domains (tacit/explicit) occuring as a relationship among subsystems of cultural meaning (Spardley)*	
Themes	**Explanation**
Suddenness	Deviations from normal labour is often seen as a sudden onset. Similar to other situations where people feel they have no control over. The phrase 'amekufa gafla (he died suddenly)' is often used when people identify causes of death. There is no sense of control over the labour process and faith, or God is the one to decide on the outcome. This explains that there is no linerarity process which is followed when looking at labour, and perhaps why the partogram is not used for monitoring. Nobody can predict what the outcome will be.
Invisibility	Progress in labour is normal as long as women remain invisible, unseen, unheard, unnoticed. When women behave out of the ordinary (screaming loudly, asking for support or assistance, actively being present asking to be checked etc) there must be something 'wrong'. Women who end up 'too early' in the labour room, are constantly reminding nurses and doctors someone is 'still there' which must mean she is 'abnormal'.
Urgency (In time and place)	At the labour ward there is a sense of urgency which influences and determines actions. Either this is because there are problems or because birth is imminent. If women are in the labour ward without imminent birth, this sense of urgency is still there. This quickly means there 'must be' a problem in this process of labour.
Active management and passive monitoring	Imminent birth or problems require active (physical) processes. Nurses literally need to take action. This can be in terms of preparing oxytocing, giving perineum support, clamping the cord or insert IV lines, rupture membranes etc. Monitoring is a passive activity which often goes unnoticed. It has little satisfactory results for nurses, on the contrary it often brings confusion and discussions when it comes to documentation (the absense or presense of it). The first is clear and to the point, the second is vague and not well defined. Focus of attention is on the active management (both due to space, time and preference, reward which it gives).

Appendix 7 Consent forms

Informed consent ANC client

Good Morning/afternoon/evening. My name is _________________________, from the Woman Centered Care Project and I am a doctor/nurse/student/ research assistant. We are conducting a survey to learn about the services provided at this facility. The results of this survey will be used to help improve the healthcare services at this and other facilities.

I would like to ask your permission to observe your ANC visit today. Furthermore I would like to ask some questions about the ANC visit afterwards and copy some of the information from your ANC card. To ensure that your privacy is secured the name of yourself, your husband/partner and your village executive officer will not be copied. All information from your visit today is confidential and will not be discussed or communicated to anyone outside of this project. This study has been approved by the National Health Research Ethics Review Committee of the National Institute for Medical Research (NIMR) of Tanzania. Your participation is voluntary. You do not have to agree to let me observe your visit. If you choose not to participate, this decision will not affect the care you receive at this health facility today or at any time in the future.

There are no risks or direct benefits to you from participating in this survey but your participation will help to improve healthcare services.
Thanks in advance.

Kind regards,

Naomi Maselle
Woman Centered Care Project

Contact details for further information and complaints:

Mrs. N. Maselle
Principal Investigator
Woman Centered Care Project
Uhindini Street, Lupndije Bld Ground Floor
P.O. Box 314
Magu, Tanzania
TEL: 255 028 2530179

For other questions and reporting of complaints:

National Health Research Ethics Review Committee
NIMR
2448 Ocean Road
P.O. Box 9653
Dar es Salaam, Tanzania
Tel: +255 22 2121400

Consent form ANC client

I attest that I read the consent form to the participant and she has agreed to participate

Client agreed on ANC observations? Yes/No

Client agreed on ANC card review? Yes/No

Client agreed on interview? Yes/No

Name participant: ………………………..

Signature: …………………………..

Date: ……………………………

Name data collection team member: ……………………………..

Signature…………………………..

Date ……………………..

Principle Investigator:

Name : Naomi Maselle

Signature…………………………..

Date ……………………..

Informed consent ANC client (Kiswahili version)

HATI YA MAKUBALIANO KWA WASHIRIKI

Jina langu ni..kutoka shirika la WCCP. Mimi ni daktari/mwanafunzi/nessi/mtafiti msaidizi.

Tunafanya utafiti ili kujifunza juu ya huduma zitolewazo katika kituo hiki,majibu tutakayo yapata yatasaidia kuboresha huduma za afya zitolewazo katika kituo hiki na vituo vingine vya aina hii.

Hivyo ningependa kuomba ridhaa yako ili niweze kuangalia utakavyo kuwa ukihudumiwa leo,pia nitaomba niandike mawasiliano yako ili niweze kukutembelea na kukuuliza mabo machache kuhusiana na huduma ya mama ,baba na mtoto utakayo ipata leo.Jina lako halitaandikwa bali namba ya simu tu.

Taarifa zote utakazo zitoa zitakua za siri na hazita toka nje wala kutumiwa nje ya shirika.utafiti huu umekubaliwa na kupitishwa na tume ya maadili ya tafiti ya taifa kupitia taasisi ya tafiti ya taifa (NIMR).

Ushiriki wako ni wa hiari na hauta lazimishwa kushiriki,hivyo maamuzi yako hayata athiri huduma utakazo zipata leo au siku nyingine yeyote.

Hakuna madhara au faida ya moja kwa moja kwa weww kushiriki katika utafiti huu bali ushiriki wako utasaidia sana uboreshaji wa huduma za afya hapa na sehemu nyingine.

Je ungependa kuniuliza lolote?kama unakubali kushiriki naomba useme sasa na nitanukuu na kutia sahihi katika fomu hii ili uwe ushahidi wa makubaliano.

Mawasiliano kwajili ya
maelezo zaidi au malalamiko:

Mrs. N. Maselle

Mtafiti mkuu
Woman Centered Care Project
Mtaa wa uhindini, jengo la lupndije gorofa ya chini.
S.L.P 314
Magu, Tanzania
TEL: 255 028 2530179

kwa maswali zaidi
au taarifa za malalmiko:

Tume ya taifa ya utafiti na maadili ya afya
Taasisi ya taifa ya utafiti na tiba
2448 Ocean Road
S.L.P 9653
Dar es Salaam, Tanzania
Tel: +255 22 2121400

Informed consent ANC Healthcare Provider

Good Morning/afternoon/evening. My name is _________________________, from the Woman Centered Care Project and I am a doctor/nurse/student/research assistant. We are conducting a study to learn about the services provided at this facility including providers' skills in maternal and newborn care. If you decide to participate in the study, we will ask you to let us observe you while you perform routine ANC consultations.

The results of this study will be used to help improve the healthcare services at this and other facilities. The information we collect is confidential and will not be discussed or communicated to anyone outside of this project. No information about the ANC observations will be shared with your supervisor or colleagues, nor will it affect your job status. The study has been approved by the National Health Research Ethics Review Committee (NHRERC) of the National Institute of Medical Research (NIMR) of Tanzania.

Your participation in this survey is voluntary. If you choose not to participate, this decision will not affect your employment at this health facility in any way. There are no risks or direct benefits to you from participating in this survey. After the data collection is complete, we will provide some general feedback to the facility about aspects that are done well and suggestions for aspects that can be improved.

Would you like to ask me anything about the survey? If you agree to take part in the survey please state that now.

Kind regards,

Naomi Maselle
Woman Centered Care Project

Contact details for further information and complaints:

Mrs. N. Maselle
Principal Investigator
Woman Centered Care Project
Uhindini Street, Lupndije Bld Ground Floor
P.O. Box 314
Magu, Tanzania
TEL: 255 028 2530179

For other questions and reporting of complaints:

National Health Research Ethics Review Committee
NIMR
2448 Ocean Road
P.O. Box 9653
Dar es Salaam, Tanzania
Tel: +255 22 2121400

Consent form Healthcare Provider

I attest that I read the consent form/ that the consent form has been read to me and agree to participate

Name Healthcare provider:

Signature:

Date:

Name data collection team member:

Signature:

Date:

Name Principle Investigator: N. Maselle

Signature:

Date:

Informed consent ANC Healthcare provider (Kiswahili version)

HATI YA KUKUBALI USHIRIKI KWA WATOA HUDUMA

Naitwa ....kutoka WCCP ,mimi ni daktari/mwanafunzi/nesi/mtafiti msaidizi.Tunafanya utafiti kuhusu huduma zinazotolewa katika kituo hiki zikijumuisha utaalamu wa kutoa huduma kwa mama mjamzito na mtoto atakae zaliwa .Kama unakubali kushiriki katika utafiti huu nitaomba uniruhusu nikae pembeni na kuangalia unavyohudumia akina mama wajawazito waliokuja kliniki .

Matokeo ya utafiti huu yatatumika kusaidia kuboresha utoaji wa huduma za afya hapa pamoja na vituo vingine vya aina hii.Taarifa zitakazo kusanywa zitakua siri na hazitatoka nje ya shirika.hakuna taarifa itakayo pelekwa kwa kiongozi wako wa kazi au mwajiri wako au wafanyakazi wenzako na hivyo haita athiri kazi yako.

Utafiti huu umekubalika na kupitishwa na tume ya maadili ya tafiti za afya ya taifa (NHERERC) iliopo chini ya taasisi ya tafiti za afya Tanzania (NIMR).
Ushiriki wako katika utafiti huu ni wa hiyari na maamuzi yako hayata athiri ajira yako kwa namna yeyote.baada ya kumaliza ukusanyaji wa taarifa hizi ,ripoti ya jumla itarudishwa kwenye kituo hiki na vipengele vilivyofanywa vizuri pamoja na mapendekezo ya maboresho yatatolewa.

Je ,ungependa kuniuliza jambo lolote kuhusu utafiti huu?
Kama umekubali kushiriki tafadhali sema sasa.

Mawasiliano kwajili ya
maelezo zaidi au malalamiko:

Mrs. N. Maselle

Mtafiti mkuu
Woman Centered Care Project
Mtaa wa uhindini, jengo la lupndije gorofa ya chini.
S.L.P 314
Magu, Tanzania
TEL: 255 028 2530179

kwa maswali zaidi
au taarifa za malalmiko:

Tume ya taifa ya utafiti na maadili ya afya
Taasisi ya taifa ya utafiti na tiba
2448 Ocean Road
S.L.P 9653
Dar es Salaam, Tanzania
Tel: +255 22 2121400

Hati ya kukubali ushiriki kwa wahudumu wa afya

Ninathibitisha kua,nimesoma na kuelewa hati hii ya makubaliono na nimekubali kushiriki.

Jina la mtoa huduma:

Sahihi:

Tarehe:

Jina la mkusanya taarifa:

Sahihi: ....

Tarehe:...

Jina la mtafiti mkuu: N. Maselle

Sahihi: ....

Tarehe: ....

Request for participation in a research project

" Improve Maternal and Perinatal Health Outcomes in Sub-Saharan Africa by focus on Quality of Care"

Background and purpose

This is a request for you to participate in a research study that intends to learn about the services provided at this facility. The results of this study will be used to help improve the healthcare services at this and other facilities. I would like to ask your permission to observe your visit at the health facility today. If you agree we would like to contact you also after this visit for an interview. If you are eligible we might also ask you to join in a follow-up study where we will observe and interview you more frequently during your pregnancy and delivery.

What does the study entail?

The study is collecting information about the services being provided at this facility during pregnancy and childbirth. All information from your visit today is confidential and will not be discussed or communicated to anyone outside of this project. Your participation is voluntary. You do not have to agree to let me observe your visit. If you choose not to participate, this decision will not affect the care you receive at this health facility today or at any time in the future.

Potential advantages and disadvantages

There are no major risks or direct benefits to you from participating in this study, however in particular regarding the follow-up study; visits of researchers might raise questions from community members. For this reason we will make sure to inform the community leadership about this study.

What will happen to the information about you?

The data that is registered about you will only be used in accordance with the purpose of the study as described above. All the data will be processed without name or other directly recognisable type of information. A code number is given to your information. It will not be possible to identify you in the results of the study when these are published.

Voluntary participation

Participation in the study is voluntary. You can withdraw your consent to participate in the study at any time and without stating any particular reason. This will not have any consequences for your further treatment. If you wish to participate, sign the declaration of consent on the final page. If you agree to participate at this time, you may later on withdraw your consent without your treatment being affected in any way. If you later on wish to withdraw your consent or have questions concerning the study, you may contact A. Solnes Miltenburg (tel: +255 687 084 177)

Further information on the study can be found on the next page.

The declaration of consent follows after this information.

Thank you for your participation.

Dr. Andrea Solnes Miltenburg
Main researcher
contact: +255 687 084 177

Further elaboration of what the study entails

Study details
This study includes data collection through observations of your visit during pregnancy and childbirth. If you give permission, after the observation, you will be interviewed about your experience of the visit within 1-2 weeks after the visit. If you have been observed during your first clinic visit in this pregnancy, you will be requested to join in a follow-up study where we will contact you for interviews after each consecutive visit until after labour and delivery. You don't have to agree to participate in all parts of the study.

What can you expect as participant
The researchers will observe your visit without intervening in the normal care you receive. They will only sit in the same room with you and document what services you receive. When you agree to be contacted for an interview, the researchers will contact you by phone, if possible, or meet you at another location and ask you questions about your experiences with the care you have received.

Possible discomfort
During your visit you might want the observer to help you. However, not all researchers are medically trained. Therefore the researchers will not be able to assist you. They will only be present in the room. If however, some time during the visit you wish the observer to leave, you can request this at any time.

Compensation
In the event that we ask you to travel somewhere for an interview we will compensate your travel expenses. In most cases however the researcher will come to visit you or call you by phone. No other payments will be made and your participation is voluntary.

Privacy
Information that is registered about you during observations is the care you have received during your visit at the health facility and if applicable the outcome of your pregnancy. Documents will not include your name. Interviews will be regarding your experience of the care you have received. We will not influence your visit and we will respect your privacy. All information collected will be documented without your personal information.

Right to access and right to delete your data
If you agree to participate in the study, you are entitled to have access to what information is registered about you. You are further entitled to correct any mistakes in the information we have registered. If you withdraw from the study, you are entitled to demand that data are deleted, unless the data have already been incorporated in analyses or used in scientific publications.

Information about the outcome of the study
You are entitled to receive information about the outcome/result of the study and we will make sure the results are disseminated back to your community though the community leadership.

If you would like to ask anything about the study please contact the main researcher or ask the researcher present at your facility.

Dr. Andrea Solnes Miltenburg
Main researcher
Contact: +255 687 084 177)

Consent for participation in the study

I am willing to participate in the study.

Name:--Signature:---Date:--------------
(Signed by the project participant, date)

Particpant agreed for observations during antenatal care? Yes/No

Participant agreed for observation during labour and delivery? Yes/No

Participant agreed for interview? Yes/No

Participant agreed for follow-up study? Yes/No

Phone number: +255 __ __ __ __ __ __ __ __ __ __
If no phone number, address: __ __ __ __ __ ____ __ __ __ __ __

I confirm that I have given information about the study.

Name:----------------------------Signature:------------------------Position:----------------------Date:-----------
(Signed, role in the study, date)

Participant project ID:

____

Ombi kwa ajili ya ushiriki katika mradi wa utafiti

"Kuboresha matokeo ya afya ya wajawazito na mazingira ya kujifungua katika nchi za kusini mwa jagwa la Saharan kwa kujikita kwenye ubora wa huduma "

Historia Na Lengo
Hili ni ombi kwako kushiriki utafiti ambao unalenga kujifunza kuhusu huduma zinazotolewa katika kituo hiki. Matokeo ya utafiti huu yatatumika kuboresha huduma za afya katika kituo hiki na vituo vingine. Nigependa kuomba ridhaa yako ili kuangalia jinsi unavyopwea huduma, kwa siku ya leo na kila mara utakapohudhuria kliniki kwa miezi ijayo. Kama utakubali tungependa pia kuwasiliana na wewe baada ya huduma ya leo kwa mahojiano zaidi na kama utachaguliwa tungependa pia kukushirikisha kwenye mwendelezo wa utafiti huu ambapo tutaangalia na kufanya nawe mahojiano zaidi wakati wa ujauzito na wa kujifungua.

Je utafiti huu unahusu nini?
Utafiti huu unakusanya taarifa zinazohusu huduma zinazotolewa kwenye kituo hiki wakati wa ujauzito na wa kujifungua. Taarifa zote kuhusu huduma yako ya leo ni siri na hazitajadiliwa au kuwasilishwa kwa mtu yeyote nje ya mradi huu. Ushiriki wako ni wa hiari. Una hiari kunikubalia au kunikatalia kuangalia unavyotoa huduma. Na kama utakataa kushiriki, maamuzi hayo hayataathiri utoaji wako wa huduma katika hiki kwa siku ya leo na siku zijazo.

Faida na hasara
Hakuna hasara au faida za moja kwa moja utakazopata kutokana na kushiriki kwako kwenye utafiti huu. Hata hivyo, kutokana na mwendelezo wa utafiti, ziara za mara kwa mara za watafiti kwako zinaweza kuibua hisia au maswali mbalimbali kutoka kwa wanajamii. Kwa sababu hyo, tutahakikisha tunatoa faarifa kwa uongozi wa jamii unayoishi kuhusu utafiti huu.

Nini kitatokea kwa maelezo kuhusu wewe?
Taarifa ambazo zitachukuliwa na kuhifadhiwa kuhusu wewe zitatumika kwa madhumuni ya utafiti huu tu kama ilivyoelezwa hapo juu. Taarifa zote zitatumika bila jina au vitambulishi vingine vya moja kwa moja. Taarifa yako itapewa namba. Haitawezekana kukubaini wewe katika taarifa hii itakapo chapishwa kwenye jarida/makala.

Ushiriki wa hiari
Ushiriki katika utafiti huu ni wa hiari. Unaweza kujitoa kushiriki katika utafiti huu wakati wowote na bila kutoa sababu yoyote. Hii haitakuwa na madhara yoyote kwenye matibabu yako kwa siku ya leo na siku zijazo. Kama utapenda kushiriki, tia saini kwenye tamko la ridhaa, ukurasa wa mwisho juu. Kama utakubali kushiriki kwa sasa unaweza badaaye kujitoa kwa ridhaa yako bila kuathiri matibabu yako kwa namna yoyote ile. Kama baadaye utataka kujitoa kwa ridhaa yako au kuuliza maswali yoyote kuhusu utafiti huu, unaweza kuwasiliana na A. Solnes Miltenburg (tel: 255 687 084 177).

Habari zaidi juu ya utafiti wanaweza kupaipata kwenye ukurasa unaofuata.
Tamko la ridhaa yako litafuata baada ya taarifa hii.
Asante kwa ushirikiano wako.
Dkt. Andrea Solnes Miltenburg
Mtafiti Mkuu
Mawasiliano: 255 687 084 177
Kwa ufafanuzi zaidi ya yale yanayohusu utafiti huu.

Maelezo zaidi kuhusu utafiti huu

Maelezo ya utafiti
Utafiti huu unajumuisha ukusanyaji wa taarifa (data) kupitia ufuatiliaji wa huduma zako hapa, wakati ukiwa mjamzito na wakati wa kujifungua. Kama utakubali baada ya ufuatiliaji huu, utafanyiwa mahojiano kuhusu uzoefu wako ulipohudhuria hapa kati ya wiki moja au mbili. Kama umefanyiwa uangalizi/ufuatiliaji ulipohudhuria kliniki kwa mara ya kwanza kwenye zahanati au kituo cha afya kwa ujauzito huu, utaombwa kujumuika katika mwendelezo wa utafiti huu ambapo tutawasiliana na wewe kwa ajili ya mahojiano, kila utakapohudhuria kliniki hadi wakati wa uchungu na baada ya kujifungua. Una hiari ya kukubali au kukataa kushiriki katika vipengele vyote vya utafiti huu.

Je unaweza kutarajia nini kama mshiriki?
Watafiti watafuatilia jinsi unavyohudumiwa kila uhudhuriapo kliniki bila kuingilia au kuathiri huduma unayopewa. Watakuwepo tu kwenye chumba cha huduma na kuchukua taarifa muhimu za namna unavyohudumiwa. Ukikubali kushiriki kwenye mahojiano, watafiti watawasiliana na wewe kwa njia ya simu, au kukutana na wewe sehemu tofauti na kukuuliza maswali yatokanayo na huduma ulizopewa.

Usumbufu unaoweza kujitokeza
Wakati unapewa huduma, unaweza kumuomba mtafiti/mwangalizi akusaidie. Hata hivyo, si watafiti wote wenye taaluma ya ukunga/uuguzi; kwa sababu hiyo hawataweza kukusaidia, kumbuka wao watakuwepo kama waangalizi tu. Ikitokea huhitaji au hujisikii watafiti/waangalizi waendelee kuwepo unaruhusiwa kuwataka waondoke/watoke nje.

Fidia
Ikitokea tukakuomba usafiri hadi sehemu fulani kwa ajili ya mahojiano, nauli/gharama ulizotumia utarejeshewa. Hata hivyo tunatarajia kuwa mtafiti atakufikia hapo ulipo au kukupigia simu. Hapatakuwa na malipo mengine yatakayotolewa kwani shiriki huu ni wa hiari.

Faragha/usiri
Taarifa zitakazochukuliwa na kuhifadhiwa ni zile zinazohusu namna ulivyohudumiwa ulipohudhuria kliniki kwenye kituo, na zile za matokeo ya ujauzito wako tu. Taarifa hizi hazitajumuisha jina lako. Mahojiano yatahusu tu uzoefu wako kuhusu huduma uliyopata. Hatutaathiri huduma yako na tutaheshimu faragha yako (usiri wa mambo yako). Taarifa zote zitahifadhiwa bila taarifa zako binafsi.

Haki ya kupitia (kusoma) au kufuta taarifa zako
Ukikubali kushiriki katika utafiti huu una haki ya kuzipitia taarifa ulizotoa. Una haki pia ya kuzisahihisha endapo kuna makosa yoyote. Kama utaumua kujitoa kwenye utafiti unayo haki ya kuomba taarifa zako zifutwe kwenye kumbukumbu; isipokuwa kama taarifa hizo zitakuwa zimeshatumika au zimeshaingizwa katika makala/machapisho.

Taarifa kuhusu matokeo ya utafiti
Una haki ya kupewa taarifa kuhusu matokeo ya utafiti huu; tutahakikisha kuwa matokeo ay utafiti huu yanarejeshwa kwenye jamii yako kupitia uongozi wa jamii unayoishi. Kama utapenda kuuliza swali lolote kuhusu cho chote katika utafiti huu tafadhali wasiliana na mtafiti mkuu au muulize mtafiti aliyeko katika kituo chako.

Dkt. Andrea Solnes Miltenburg
Mtafiti Mkuu
Mawasiliano: +255 687 084 177)

Ridhaa ya kushiriki katika utafiti

Mimi nipo tayari kushiriki katika utafiti.

Jina:--Sahihi:-----------------------Elimu----------------Tarehe:--------------
(Saini na mshiriki wa mradi, tarehe)

Mshiriki amekubali uangalizi wakati wa huduma za kliniki? Ndiyo / Hapana

Mshiriki amekubali uangalizi wakati wa kujifungua? Ndiyo / Hapana

Mshiriki amekubali mahojiano? Ndiyo / Hapana

Mshiriki amekubali kwa ajili ya kufuatilia utafiti? Ndiyo / Hapana

Namba ya simu: 255 __ __ __ __ __ __ __ __ __ __
Kama hakuna namba ya simu, anwani: __ __ __ __ __ __ __ __ ____ __ __

Mimi nathibitisha kwamba ametoa taarifa kuhusu utafiti.

Jina:----------------------------Sahihi:---Tarehe:--------------------
(Imesainiwa, jukumu lako katika utafiti huo, tarehe)

Kitambulisho cha mshiriki wa mradi:

Request for participation in a research project

“ Improve Maternal and Perinatal Health Outcomes in Sub-Saharan Africa by focus on Quality of Care”

Background and purpose
This is a request for you to participate in a research study that intends to learn about the services provided at this facility. The results of this study will be used to help improve the healthcare services at this and other facilities. I would like to ask your permission to observe your work at the health facility today and during several other visit the coming months. If you agree we would like to contact you also for an interview.

What does the study entail?
The study is collecting information about the services being provided at this facility during pregnancy and childbirth. All information from your work today is confidential and will not be discussed or communicated to anyone outside of this project. Your participation is voluntary. You do not have to agree to let me observe your work. If you choose not to participate, this decision will not affect your work today or at any time in the future.

Potential advantages and disadvantages
There are no major risks or direct benefits to you from participating in this study. Observers will not test you or communicate your performance to your seniors or leadership.

What will happen with the information from you?
The data that is registered from you will only be used in accordance with the purpose of the study as described above. All the data will be processed without name or other directly recognisable type of information. A code number is given to your information. It will not be possible to identify you in the results of the study when these are published.

Voluntary participation
Participation in the study is voluntary. You can withdraw your consent to participate in the study at any time and without stating any particular reason. If you would like to participate, sign the declaration of consent on the final page. If you later on wish to withdraw your consent or have questions concerning the study, you may contact A. Solnes Miltenburg (tel: +255 687 084 177)

Further information on the study can be found on the next page.

The declaration of consent follows after this information.

Thank you for your participation.

Dr. Andrea Solnes Miltenburg
Main researcher
contact: +255 687 084 177)

Further elaboration of what the study entails

Study details
This study includes data collection through observations of clinic visits during pregnancy and childbirth. After some observations we would like to ask you for an interview about your experience of providing care to pregnant women. Women will also be interviewed about their experience of the visit within 1-2 weeks after the visit. Some women will be asked to join in a follow-up study where they will be contacted for interviews after each consecutive visit until after labour and delivery.

What can you expect as participant
The researchers will observe your work without intervening. They will only sit in the same room with you and the client and document what services are provided. When you agree to be contacted for an interview, the researchers will contact you by phone, if possible, or meet you at another location and ask you questions about your experiences with working in maternal health care.

Possible discomfort
During the work you might want the observer to help you. However, not all researchers are medically trained. Therefore the researchers will not be able to assist you. They will only be present in the room. If however, some time during the visit you wish the observer to leave, you can request this at any time.

Compensation
In the event that we ask you to travel somewhere for an interview we will compensate your travel expenses. In most cases however the research will come to visit you or call you by phone. No other payments will be made and your participation is voluntary.

Privacy
Information that is registered about you during observations is the care women have received during their visit and the services that you provide at the health facility and if applicable the outcome of their pregnancy. Documents will not include your name. Interviews will be regarding your experience of the services you have provided. We will not influence your work and we will respect your privacy. All information collected will be documented without your personal information.

Right to access and right to delete your data
If you agree to participate in the study, you are entitled to have access to what information is registered about you. You are further entitled to correct any mistakes in the information we have registered. If you withdraw from the study, you are entitled to demand that data are deleted, unless the data have already been incorporated in analyses or used in scientific publications.

Information about the outcome of the study
You are entitled to receive information about the outcome/result of the study and we will make sure the results are disseminated back to your community though the community leadership.

If you would like to ask anything about the study please contact the main researcher or ask the researcher present at your facility.

Dr. Andrea Solnes Miltenburg
Main researcher
Contact: +255 687 084 177)

Consent for participation in the study

I am willing to participate in the study.

(Signed by the project participant, date)

Participant agreed for observations of his/her work during ANC? Yes/No

Participant agreed for observations of his/her work during labour and delivery? Yes/No

Participant agreed for interview? Yes/No

Phone number: +255 __ __ __ __ __ __ __ __ __ __

I confirm that I have given information about the study.

(Signed, role in the study, date)

Participant project ID:

____

Ombi Kwa ajili ya ushiriki kwenye utafiti wa mradi.

Kuboresha afya ya wajawazito na matokeo ya afya kabla na baada ya kujifungua katika nchi za kusini mwa jangwa la Saharan na kujikita katika lengo la ubora wa huduma.

Historia Na Lengo
Hili ni ombi kwako kushiriki utafiti ambao unalenga kujifunza kuhusu huduma zinazotolewa katika kituo hiki. Matokeo ya utafiti huu yatatumika kuboresha huduma za afya katika kituo hiki na vituo vingine. Nigependa kuomba ruhusa ya kuangalia kazi yako leo na awamu nyingine nitakapotembelea kituo kwa miezi ijayo. Kama unakubali tungependa pia kuwasiliana na wewe kwa ajili ya mahojiano.

Je utafiti huu unahusu nini?
Utafiti huu unakusanya taarifa zinazohusu huduma zinazotolewa kwenye kituo hiki wakati wa ujauzito na wa kujifungua. Taarifa zote kuhusu kazi yako ya leo ni siri na hazitajadiliwa au kuwasilishwa kwa mtu yeyote nje ya mradi huu. Ushiriki wako ni wa hiari. Una hiari kunikubalia au kunikatalia kuangalia kazi yako. Na kama utakataa kushiriki, maamuzi hayataathiri kazi yako leo au kwa siku zijazo.

Faida na hasara
Hakuna hasara au faida za moja kwa moja kutokana na kushiriki kwako kwenye utafiti huu. Utafiti huu si wa kukupima wewe na waangalizi hawatazungumzia uwezo wako kwa wakubwa wako wa kazi.

Nini kitatokea kuhusu taarifa unazotoa?
Taarifa utakazotoa zitasajiliwa na kutumika tu kwa madhumuni ya utafiti huu kama ilivyoelezwa hapo juu. Taarifa zote zitatumika bila jina au vitambulishi vingine vya moja kwa moja. Namba ya siri itawekwa kwenye taarifa yako. Haitawezekana kukubaini wewe katika taarifa hii itakapo chapishwa kwenye jarida.

Ushiriki wa hiari
Ushiriki katika utafiti huu ni wa hiari. Unaweza kujitoa kushiriki katika utafiti huu wakati wowote na bila kutoa sababu yoyote. Kama utapenda kushiriki, tia saini kwenye tamko la ridhaa, ukurasa wa mwisho juu. Kama baadaye utataka kujitoa kwa ridhaa yako au kuuliza maswali yoyote kuhusu utafiti huu, unaweza kuwasiliana na A. Solnes Miltenburg (tel: 255 687 084 177).

Kwa taarifa zaidi kuhusu utafiti inaweza kuzipata kwenye ukurasa ufuatao.
Tamko la ridhaa linafuata baada ya taarifa hii.

Ahsante kwa ushiriki wako.

Dr. Andrea Solnes Miltenburg
Mkuu mtafiti
Mawasiliano: +255 687 084 177

Maelezo zaidi kuhusu utafiti huu

Maelezo ya utafiti
Utafiti huu unajumuisha ukusanyaji wa taarifa (data) kupitia uangalizi/ufuatiliaji wa mahudhurio ya kliniki wakati wa ujauzito na wakati wa kujifungua. Baada ya uangalizi tutapenda kuwa na mahojiano na wewe kuhusu uzoefu wako wa kuwahudumia wamama wajawazito. Wamama watahojiwa pia kuhusu uzoefu wao ndani ya wiki ya kwanza au ya pili baada ya kuhudhuria kliniki. Baadhi ya wamama wataombwa kushiriki katika mwendelezo wa utafiti huu ambapo watafanyiwa mahojiano kila wanapohuduria kliniki hadi siku ya kujifungua.

Je unaweza kutarajia nini kama mshiriki?
Watafiti watafuatilia kazi yako bila kuingilia. Watakuwemo chumbani pamoja nawe na mteja (mama mhudumiwa), watarekodi huduma unazotoa. Ukiridhia kushiriki katika mahojiano, watafiti watawasiliana na wewe kwa simu ikiwezekana, au watakutana na wewe katika ene tofauti na kukuuliza maswali kuhusu kazi yako.

Usumbufu unaoweza kujitokeza
Wakati unatoa huduma, unaweza kumuomba mtafiti/mwangalizi akusaidie. Hata hivyo, si watafiti wote wenye taaluma ya ukunga/uuguzi; kwa sababu hiyo hawataweza kukusaidia, kumbuka wao watakuwepo kama waangalizi tu. Ikitokea huhitaji au hujisikii watafiti/waangalizi waendelee kuwepo unaruhusiwa kuwataka waondoke/watoke nje.

Fidia
Ikitokea tukakuomba usafiri hadi sehemu fulani kwa ajili ya mahojiano, nauli/gharama ulizotumia utarejeshewa. Hata hivyo tunatarajia kuwa mtafiti atakufikia hapo ulipo au kukupigia simu. Hapatakuwa na malipo mengine yatakayotolewa kwani shiriki huu ni wa hiari.

Faragha/usiri
Taarifa zitakazochukuliwa na kuhifadhiwa ni zile zinazohusu namna ulivyotoa huduma ya kliniki kwenye kituo, na zile za matokeo ya ujauzito wa mama. Taarifa hizi hazitajumuisha jina lako. Mahojiano yatahusu tu uzoefu wako kuhusu huduma uliyotoa. Hatutaathiri huduma yako na tutaheshimu faragha yako (usiri wa mambo yako). Taarifa zote zitahifadhiwa bila taarifa zako binafsi.

Haki ya kupitia (kusoma) au kufuta taarifa zako
Ukikubali kushiriki katika utafiti huu una haki ya kuzipitia taarifa ulizotoa. Una haki pia ya kuzisahihisha endapo kuna makosa yoyote. Kama utaumua kujitoa kwenye utafiti unayo haki ya kuomba taarifa zako zifutwe kwenye kumbukumbu; isipokuwa kama taarifa hizo zitakuwa zimeshatumika au zimeshaingizwa katika makala/machapisho.

Taarifa kuhusu matokeo ya utafiti
Una haki ya kupewa taarifa kuhusu matokeo ya utafiti huu; tutahakikisha kuwa matokeo ay utafiti huu yanarejeshwa kwenye jamii yako kupitia uongozi wa jamii unayoishi. Kama utapenda kuuliza swali lolote kuhusu cho chote katika utafiti huu tafadhali wasiliana na mtafiti mkuu au muulize mtafiti aliyeko katika kituo chako.

Dkt. Andrea Solnes Miltenburg
Mtafiti Mkuu
Mawasiliano: +255 687 084 177)

Ridhaa ya kushiriki katika utafiti

Mimi nipo tayari kushiriki katika utafiti.

Jina:---------------------------------------Sahihi:----------------------Cheo---------------Tarehe:-------------
(Saini na mshiriki wa mradi, tarehe)

Mshiriki amekubali uangalizi wakati wa huduma za kliniki? Ndiyo / Hapana

Mshiriki amekubali uangalizi wakati wa kujifungua? Ndiyo / Hapana

Mshiriki amekubali mahojiano? Ndiyo / Hapana

Namba ya simu: 255 __ __ __ __ __ __ __ __ __ __
Kama hakuna namba ya simu, anwani: __ __ __ __ __ __ __ __ ____ __ __

Mimi nathibitisha kwamba ametoa taarifa kuhusu utafiti.

Jina:---------------------------Sahihi:--Tarehe:-------------------
(Imesainiwa, jukumu lako katika utafiti huo, tarehe)

Kitambulisho cha mshiriki wa mradi:

Appendix 8 Errata

Abbreviation type of changes made:

- Gr. Grammar
- Sp. Spelling
- Other

Page no	Original text	Type of edit	Edited text
IV, 1, 2, 12, 49	…sub-Sahara Africa..	Sp.	…sub-Saharan Africa..
9, 10, 18, 41, 45	…focussed	Sp.	…focused..
IV	… respect of women’s and..	Gr.	…respect for women’s and...
IV	… Magu. Mama Masele, Asante…	Sp.	…Magu. Mama Maselle, Asante…
V	…Jamal <Ally…	Sp.	…Jamal Ally…
3	…doing joint ward rounds..	Sp.	…doing joined ward rounds..
3	… complications unexpected situations…	Sp.	…complications and unexpected situations…
5	…the strategies were reflected…	Gr.	…the strategies reflected..
6	…reduce mortality raise substantial..	Gr.	…reduce mortality raised substantial…
7	…which lead to development…	Sp.	… which led to development…
27	The proportion of births delivered in health…	Gr.	The proportion of births in health…
29	Changed font size of table 4 to size 9.	Other	
32	District Health information System	Sp.	District Health Information System
32	…were visited on at least on a minimum of two different occasions to ensure observations…	Sp.	…were visited on at least two different occasions to ensure observations…
33	Our focused for…		Our focus for…
44	…timely initiate its…	Sp.	…timely initiate it…
45	… respectful birthing environment..	Gr.	…respectful birthing environments…
45	…(in a range of…	Gr.	…(within a range of…
49	…safety, quite dark…	Sp.	…safety, quiet, dark…

I

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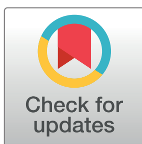

RESEARCH ARTICLE

Antenatal care and opportunities for quality improvement of service provision in resource limited settings: A mixed methods study

Andrea Solnes Miltenburg[1,2]*, Lisette van der Eem[2,3], Elias C. Nyanza[4], Sandra van Pelt[2], Pendo Ndaki[4], Namanya Basinda[4], Johanne Sundby[1]

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OPEN ACCESS

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Abstract

Antenatal care is essential to improve maternal and newborn health and wellbeing. The majority of pregnant women in Tanzania attend at least one visit. Since implementation of the focused antenatal care model, quality of care assessments have mostly focused on utilization and coverage of routine interventions for antenatal care. This study aims to assess the quality of antenatal care provision from a holistic perspective in a rural district in Tanzania. Structure, process and outcome components of quality are explored. This paper reports on data collected over several periods from 2012 to 2015 through facility audits of supplies and services, ANC observations and exit interviews with pregnant women. Additional qualitative methods were used such as interviews, focus group observations and participant observations. Findings indicate variable performance of routine ANC services, partly explained by insufficient resources. Poor performance was also observed for appropriate history taking, attention for client's wellbeing, basic physical examination and adequate counseling and education. Achieving quality improvement for ANC requires increased attention for the process of care provision beyond coverage, including attention for response-based services, which should be assessed based on locally determined criteria.

Introduction

Antenatal care (ANC) is an essential part of maternal healthcare services and includes history taking, screening for maternal illnesses such as hypertensive disorders and anemia, screening, prevention and management of infectious diseases, provision of prophylactic medication and essential health education [1–3]. Prior to the initiation of the Safe Motherhood Initiative, ANC was considered essential for identification and early management of high-risk pregnancies as a means to improve pregnancy outcomes [4], which later was argued to have little predictive value for reduction of mortality [5]. Global attention therefore shifted to emergency obstetric

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care and skilled care at birth as essential strategies to reduce maternal deaths [6,7]. Currently, however, it is globally accepted that while ANC alone is not *sufficient* to reduce morbidity and mortality, it remains an essential component in improving maternal and newborn health and wellbeing [8,9].

Considering the evidence of effectiveness of selected ANC services, a number of studies attempted to identify essential packages of interventions and required number of visits [5,10–12]. The aim to ensure access to goal oriented care for all women, and not only those at risk, resulted in the World Health Organization (WHO) recommendation of a minimum of four visits for low-risk pregnancies with targeted interventions in each visit [13], referred to as Focused ANC (FANC). FANC was meant to increase attention to the quality of ANC with emphasis on individual health education and counseling [3]. A reduction of the number of visits with targeted interventions in each visit proved to be equally effective as monthly ANC visits, although women were reported to be less satisfied with the new FANC model [5,14,15]. FANC was translated to settings in sub-Saharan Africa assuming equal benefits could be expected, despite the model not being tested in settings with low coverage of ANC visits and high mortality ratios [14]. Recently concerns have been raised that a reduced number of visits is associated with an increase in perinatal mortality, in particular in low-and middle-income settings [16]. Consequently the WHO updated their ANC guideline in 2016 aiming to provide women with a positive pregnancy experience and included a recommendation of a minimum of eight contacts [17].

In Tanzania, ANC coverage for the first visit has been above 90% since 1991, while coverage of four ANC visits has been stable around 60% over the past decades [18]. The Tanzanian Ministry of Health, Community Development, Gender, Elderly and Children (MoH) introduced FANC at the national level in 2002, changed policy guidelines for ANC, adapted documentation requirements such as administering new ANC cards and provided training to health care workers (HCW's) [19]. Initial indicators developed to assess ANC focused on timing and number of visits and more recent indicators have increasingly included assessment of the quality of the content of ANC [20]. Since introduction of FANC, several studies in Tanzania have assessed the quality of ANC and reported poor adherence to FANC guidelines and insufficient coverage of routine practices, in particular for health education and counseling [21–27].

Quality of care assessment is complex and requires attention to health system components such as available human resources, supplies and infrastructure (*structure*), the process of provision of routine health services and timely action in case of complications which is based on evidence-based practices (*process*), and coverage of key practices, health outcomes and satisfaction of both provider and client (*outcome*) [28–30]. Additional considerations for assessing quality include the extent to which care provision is people-centered with a focus on respect for patient dignity, while minimizing unnecessary interventions and harmful practices as well as efficiency in minimizing wastage and maximizing resource use [29,31].

The majority of previous research studies have focused their quality assessment of ANC primarily on coverage of a number of routine ANC practices [20,21,25–27,32,33] or the experience of care [34–37]. Determinants of poor quality of ANC are poorly understood and remain limited to lack of (human) resources and poor health worker knowledge [22,25–27,34,35,38]. Care provision, however, is more than deliverance of a number of health interventions and includes complex care process such as prioritization of services, interpretation of findings and clinical decision-making [28]. Additionally, quality is influenced by the complex context in which services are provided, in particular in low-resource setting. This study aims to assess the quality of antenatal care provision from a holistic perspective in a rural district in Tanzania. First we explore the organization and structure of the care setting. Second, the process of care provision is assessed related to evidence-based guidelines. Thirdly we examine the coverage of

essential practices and women´s experience of care. Finally, we reflect on areas of suboptimal care and discuss opportunities for quality improvement.

Materials and methods

Study setting

This study took place in Magu district, in the region of Mwanza, Tanzania, which borders Lake Victoria, as part of an exploratory and baseline study for the Woman Centered Care Project (WCCP), which is a project of the African Woman Foundation. For further information we refer to prior publications [39–41] and their website (www.africanwomanfoundation.com). Magu district has a population of 299,759, with 23% women of childbearing age [42]. It has 31 government health facilities that provide ANC services including a district hospital, four health centers and 26 dispensaries. The district hospital is approximately 65km from the city of Mwanza where there is a regional referral hospital and a consultant hospital. The ANC attendance rate for the first visit has been above 95% every year since 2011. The proportion of births delivered in health facilities was estimated to be 65% in 2013 [43].

Study design

This paper draws upon data collected over several periods from 2012 to 2015 making use of multiple data collection methods. Quantitative methods included: facility audits of supplies and services, ANC observations and exit interviews with pregnant women. Qualitative methods included participant observation, semi-structure interviews and focus group discussions.

Quantitative data collection. For the facility audits a survey tool was developed based on the Johns Hopkins Program for International Education in Gynaecology and Obstetrics (JHPIEGO) manual for monitoring birth preparedness and complication readiness to assess facility readiness to deliver maternal health services [44]. For the ANC observations a checklist was used based on Focused ANC guidelines by Kearns et all (2014), the Maternal and Newborn Quality of Care Survey ANC Observation Checklist developed by the Maternal and Child Health Integrated Program (MCHIP) and the currently used ANC card from MoH in Tanzania [45,46]. Tools were pre-tested in a health facility outside of the research area. Based on experience from 2014 minor improvements were made for assessment in 2015. Exit interviews included review of documentation of services on the ANC card, assessment of knowledge related to birth preparedness and complication readiness including danger signs and evaluation of satisfaction of care. Exit interviews were held at the health facility.

ASM and SP visited health facilities in April-May 2014 and 2015 for the facility audit together with representatives of the district medical officer to collect information on facility infrastructure, available services, equipment and supplies. In 2014 the audit was conducted while facilities were awaiting their new batch of quarterly supplies. In 2015 the audit was done two weeks after receiving new supplies. Facility statistics were collected using the Health Management Information System registries (HMIS) of the year 2013 and 2014. In August-September 2014 and 2015 Tanzanian medical students from the Catholic University of Health and Allied Sciences, School of Public Health (CUHAS-SPH) in Mwanza conducted ANC observations and exit interviews and were trained and supervised by EN, NB and ASM in 2014 and PN, SP and LE in 2015.

Purposive sampling was used to select health facilities and villages in 9 of 18 wards of the district, based on population size (three large populated, three middle populated and three small populated areas) and inclusion of different geographical locations in the district covering both areas close to the lake as well as more in-land and close to the main tarmac road. Health facilities included 13 dispensaries, one health centre and one district hospital. For ANC

observations a sample size was calculated to be 422 with OpenEpi, version 3, open source calculator with a confidence interval of 95% including an expected refusal rate of 10%. Health facilities were visited on a minimum of two different occasions until the sample size was reached to ensure observations at different clinic days during the week. All women visiting the health facilities for ANC during these days were eligible for inclusion. Due to logistical reasons the sample was not reached in 2014. In 2015 After the ANC observations all women were approached for exit interviews and 286 (69%) agreed to participate. Main reason for refusal was lack of time.

Qualitative data collection. ASM and LE (both medical doctors) and SP (nurse) performed regular participant observations in the selected health facilities during the entire study period and had numerous informal conversations with health workers, district leaders, pregnant women and their husbands. ASM and SP have lived in Tanzania for more than two years and had most conversations in Kiswahili. A translator assisted LE. Masters students from medicine and public health programs in the Netherlands (VU University Amsterdam and University of Utrecht) conducted interviews and focus group discussions supervised by ASM. Students had their own sub-topics of interest but together covered aspects related to availability, accessibility, acceptability and quality of maternity care, including care during pregnancy and birth.

Participants for interviews were selected through convenience sampling and included women of reproductive age, pregnant women and women who recently gave birth (N = 48), men including partners of pregnant women (N = 31) and health care workers (N = 26). On average 8 participants participated in each focus group and were held with women (N = 2), men (N = 1), mixed gender (N = 2) and with health care workers (N = 7). Participants were recruited with help of the village executive officers and health workers in the study area or during clinic hours at the ANC clinics. Interviews took place at the house of the participant and focus group discussions at a convenient location for all participants.

Data analysis

Quantitative data was entered using the Magpi mobile data collection platform [47], which uses mobile phones, allowing for digital data entry during data collection and reducing entry errors. Data from the Magpi data collection software were exported to Excel (version 14.5.7 and SPSS (version 22) for analysis. Overview of supplies and materials across facilities were made in Excel. For ANC observations and exit interviews descriptive analysis was performed using SPSS. Facility audit and ANC observations were performed both in 2014 and 2015. For this paper data of both years were analysed separately. We did not perform a comparative analysis, as this was not the objective of this paper.

Qualitative data included field notes and reflective journals as well as transcripts from interviews and FGDs. Interviews were mainly held with a translator and were transcribed in English. For some interviews also Kiswahili was transcribed and translated by research assistants to verify the quality of the translation. Data was initially analyzed using different frameworks depending on the main aim of the sub-studies. For the purpose of this paper qualitative findings was re-analyzed using a quality of care framework as adapted from the WHO vision of quality of care for pregnant woman and newborns (29). Qualitative data was used to provide context to the quantitative findings and assisted to increase understanding and interpretation of the complex care processes, in particular where findings deviated from evidence-based guidelines. Triangulation of data was done through a continuous back and forth interpretation of findings. When new information emerged along the way this resulted in adaptation of tools,

development of new hypotheses and alternative explanations, which were then, further assessed and analyzed.

Validation of data. In addition to the project team's extensive field engagement and triangulation of multiple sources of data, member checks and peer debriefing during the data collection period assisted in interpretation and validation of our findings. The Magu District Council and Ward District Councils received reports of the plans and outcomes of all research activities since 2012 through frequent feedback meetings. Some of these meetings included facility based and community based health workers. Feedback meetings were formalized in the form of quarterly meetings in 2014. Finally, the ANC observations were discussed during regular meetings with the authors and extra observations in some of the facilities for counter check of the data collected and to gain further understanding of the local setting. Preliminary results of the 2015 ANC observations were discussed and reflected upon with health care workers in all thirteen facilities to further understand findings.

Ethical considerations

Ethical approval for this study was obtained from the National Institute for Medical Research (MR/53/100/103) and the VU University Amsterdam in the Netherlands (2013/135). The Regional Committee for Medical and Health Research Ethics, Section A, South East Norway (2015/1827), and the Norwegian Social Science Data Service (44482/3/MHM) both reviewed the study. Research clearance was acquired from the Tanzania Commission For Science and Technology. Written informed consent was obtained from health workers and verbal informed consent was obtained from pregnant woman prior to ANC observations and exit-interviews. Participants of interviews and FGDs were asked for verbal consent. Health Care Workers and pregnant women were explained on the purpose of the study and that they were free to withdrawal their participation once enrolled without affecting their health care services at the specific health facility.

Results

Organization of care

ANC is provided daily at the district hospital and health centers. Most dispensaries have daily ANC clinics lasting officially from 8am to 2pm. Specific days are often allocated for women coming for their first visit. In the morning nurses provide group education, usually on a different topic every month including prevention of malaria, HIV/AIDS, birth preparedness and breastfeeding. This is followed by registration of each woman. In the larger facilities this is usually done in larger groups together with weight measurement in the waiting area of the clinic. At the district hospital women in need of investigations are sent to the different locations (for HIV testing or to the laboratory for other blood tests). HIV testing does not always seem optional as women are not always asked for consent and privacy is not guaranteed depending on the facility infrastructure and patient flow. Women who come without their husbands have to wait, couples have priority. Sometimes women are refused care for their first visit if they don't bring their husband [39]. For the physical check-up women are seen in private rooms. Depending on the type of visits and location, women can spend between 5 minutes up to an entire day at the facility. ANC observations done in 2015 revealed both first and return visits had a mean duration of 11 minutes. When women inform nurses they are 'sick', have symptoms or findings that deviate from "normal", they are sent to the clinical officer or clinical attendant if present at the facility. At health centers and dispensaries similar patterns of care provision are seen. Some however provide ANC for all women, one by one, where women are seen alone in private rooms for all services needed during that visit.

Documentation

The ANC card, which is provided by the government, is meant to assist health workers in the provision of FANC and is kept by women themselves. Health workers can refer to the MoH 'learners guide for ANC service providers' for guidance on ANC. Health workers have two additional government ANC registration books that remain at the health facility. Each book needs to be filled in after each visit including an attendance registry with socio-demographics and registry for documentation of services provided for each woman. There are additional separate books for HIV testing and treatment if women are HIV positive.

The ANC card has three parts allocated for documentation of services during pregnancy, birth and after birth. In practice the card is mostly used for ANC and documentation of the outcome of this pregnancy. Three categories of referral indication distinguish between risks needing referral for further assessment during pregnancy, referral for birth or immediate referral. The main part of the card, which is filled in during each visit, includes essential services that need to be provided based on the FANC guidelines. It is recommended women with uncomplicated pregnancies receive a minimum of four visits. Women with complications need appropriate referral or additional visits depending on individual conditions, it is however not specified which actions are expected for which conditions. At the same time there is no space on the ANC card for health workers to document findings other than what is offered on the card (for example, if women express any complaints or symptoms, if findings deviate from normal, second opinions by colleagues, documentation of decision making, treatment provided by the health worker or advice for referral for additional services). There is also no space to document admissions or additional services received during a pregnancy. If services are not being provided due to lack of supplies the MoH guideline advises that 'the provider should encourage the client to return when it is expected that the supplies will be available' [19]. In practice, however, health workers explained that the availability of such supplies is highly variable and therefore women are usually requested to come back the following month. If the ANC card is out of stock women report they are encouraged to buy their own notebooks that will then be used instead, often they remain with these notebooks until birth, despite availability of the ANC card during next visits.

Facility appearance and resources

Table 1 presents the results of the Facility Audit in 2014 and 2015. Conditions of the facilities varied. Some facilities were newly renovated, mostly located close to the main tarmac road; others were in state of collapse and unclean with molding walls, holes in the roofs and windows and bird nests inside the facility. Water source and electricity was not available in all facilities. Magu District has been dealing with major shortages of water, despite its location bordering Lake Victoria. Most facilities get water from the closest well or need to purchase it. In some cases women are told to bring water to the facility. The issues of cleanliness and availability of electricity and water as well as lack of toilets or health worker housing is a major concern for health workers, community members and community leaders and a frequent discussed topic during community group meetings.

The number of ANC visits varied between dispensaries ranging from 9–49 new first ANC visits per month. During the audits health workers explained that the two dispensaries with more than 30–50 new first ANC visits per month receive many women from outside of their catchment area, who come from neighboring districts and surrounding wards that have fewer health facilities. Their staffing levels, however did not differ from less populated facilities. Dispensaries had between 2–4 staff members, mostly consisting of one medical attendant, one nurse/midwife and a clinical officer. Some facilities have a number of nursing students present

Table 1. Facility audit outcomes and availability of supplies for antenatal care provision.

Audit elements		District Hospital 2014 (N = 1)	Health centre 2014 (N = 1)	Dispensaries 2014 (N = 13) N (%)	Dispensaries 2015 (N = 13) N (%)
ANC equipment	Stethoscope	Yes	Yes	10 (77)	9 (69)
	BP machine	Yes	Yes	8 (62)	9 (69)
	Fetoscope	Yes	Yes	13 (100)	13 (100)
	Thermometer	Yes	Yes	9 (69)	9 (69)
	Urine dipstick	Yes	None	1 (7.7)	1 (7.7)
	Tape measure	Yes	Yes	11 (85)	13 (100)
Medication ANC	Iron/Folate	Yes	None	12 (92)	12 (92)
	Anti-Malaria	Yes	None	4 (31)	7 (54)
	Tetanus Toxoid	Yes	None	11 (85)	12 (92)
	Paracetamol	Yes	None	5 (38)	12 (92)
	ARVs	Yes	None	8 962)	13 (100)
Blood tests	Hb	Yes	Yes	0 (0)	0 (0)
	Malaria	Yes	Yes	4 (31)	13 (100)
	HIV	Yes	Yes	2 (15)	13 (100)
	Syphilis	Yes	Yes	0 (0)	8 (62)
	Blood grouping	Yes	No	0 (0)	0 (0)

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who are performing much of the work. Three dispensaries actively work with local traditional birth attendants who both see women for ANC and assist births at the facilities.

None of the facilities had all equipment and medication needed for provision of ANC. In 2014 only one dispensary was able to both measure blood pressure and check for protein in the urine. However, during observations it appeared the staff did not use the urine dipsticks because they were unaware how to use them. None of the dispensaries in 2014 or 2015 were able to test hemoglobin level, blood grouping or test for syphilis and in 2014 few facilities had the ability to test for Malaria or HIV. While reviewing the facility statistics it appeared every year there were certain periods in the year where HIV tests were done frequently. During facility visits staff members commented that there is a frequent stock-out of HIV tests and stock is often only available for a few weeks per quarter.

ANC care provision

Results of the ANC observations are presented in Table 2. Of all ANC observations conducted, the majority of observed ANC consultations were with women present for their 2nd or 3rd visit. In 2014 and 2015 respectively 16% percent and 20% of the women were pregnant for the first time. In 2014 20% of the observations took place in the district hospital, whereas in 2015 this was 10%. In 2015 a skilled health provider provided the majority of ANC services. Medical attendants provided services during 29% of the observed visits, sometimes under supervision of a clinical officer.

History taking for first visits was assessed differently in both years after adapting our observation tool to be more specific. Where in 2014 the majority of health workers asked *some* medical and obstetric history, in 2015 it became clear that history taking rarely included risk identification based on possible problems during previous pregnancy (see Table 3). Additionally few women were asked if they had any current complaints or problems (20%), were asked about the presence of danger signs (6%) or asked about the presence of fetal movements (3%). Interviews with pregnant women revealed women rarely mention if they have problems

Table 2. Services provided during ANC consultations (Process).

Year		2014 (N = 250) N (%)	2015 (N = 414) N (%)
Visits	1st visit	97 (39)	115 (28)
	2nd - 3rd visit	125 (50)	243 (59)
	≥ 4 visits	28 (11)	56 (13)
History (1st visits)	Medical history	65 (67)	37 (32)
	Obstetric history (para ≥ 1)	57 (69)	83 (97)
Examination (all visits)	Weight	241 (96)	408 (99)
	Pallor	150 (60)	81 (20)
	Oedema	196 (83)	87 (21)
	Blood pressure	129 (52)	116 (28)
	Fetal presentation (visit ≥ 3)	68 (85)	122 (83)
	Fundal Height	231 (92)	394 (95)
	Fetal heart rate (visit ≥ 2)	138 (90)	287 (96)
Laboratory tests (1st visit)	Haemoglobin	13 (13)	2 (1.7)
	HIV	32 (33)	106 (92)
	Syphilis	1 (1)	0
	Urine test	0	1 (1)
	Grouping/Rhesus	0	0
Medication	Ferrous sulphate / folic acid (all visits)	215 (86)	307 (74)
	Mebendazol (1st visit)	-	36 (31)
	Sulphadoxine-pyrimethamine (2nd/3th visit)	35 (28)	220 (91)
	Tetanus toxoid (1st/2nd visit)	104 (61)	168 (63)
Education (all visits except where indicated)	Birth preparedness and complication readiness	198 (79)	282 (68)
	Danger signs in pregnancy	189 (76)	227 (55)
	Family planning (visit ≥ 3)	27 (34)	60 (41)
	Effect of STI/HIV/AIDS	122 (49)	155 (37)
	Diet and nutrition	144 (58)	60 (15)
	Use of drugs in pregnancy	116 (46)	71 (17)
	Process of pregnancy	199 (80)	38 (9)
	Personal hygiene (1st visit)	59 (61)	10 (9)
	Rest and exercise in pregnancy	150 (60)	10 (2)
	Symptoms/signs of labour (visit ≥ 3)	52 (65)	9 (6)
	Harmful habits (e.g. smoking, drug abuse)	54 (22)	1 (0)
	Return visit	208 (83)	60 (15)
High risk (all visits)	High risk pregnancy identified	-	77 (19)
	Referral	7 (3)	36 (9)

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without being asked for it and they assume that if health workers don't report problems, their pregnancy is progressing well. In 2015 28% of the women were informed about their expected date of birth, and 55% was informed about their gestational age, usually in months of pregnancy. The gestational age per visit is mostly based on the documented gestational age during the previous visit or based on and equal to centimeters of the fundal height. These estimations do not always match the last normal menstruation period or the expectations of the women causing confusion about the estimated date or month of birth.

Clinical examination varied between 2014 and 2015. In both years however during almost all visits women were checked for their weight, fundal height and fetal heart rate. In 2014 blood pressure was measured in 53,4% while in 2015 this was 28%. At the district hospital, blood pressure was measured in only in 2 out of 42 observations. Some facilities that had a

Table 3. Specific assessment of history taking in 2015.

History	Specific assessment	N (%)
Medical history (1st visit, N = 115)	HIV status	107 (93)
	History of TB/heart disease/diabetes	34 (30)
	Use of medication	21 (18)
Obstetric history (para ≥ 1, N = 86)	Gravidity/Parity/Living children	83 (97)
	Mode of previous birth	10 (12)
	Previous PPH	10 (12)
	Previous high BP in pregnancy	1 (1)
Current pregnancy (all visits, N = 414)	Asked about any complaints	83 (20)
	Asked about any danger sign	25 (6)
	Asked about fetal movements	13 (3)

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well-functioning blood pressure machine did not always use them during observations: to illustrate, in 2015, out of 313 observations done, the blood pressure machine was only used 37.1% of the time. This was largely attributed to the fact that not all medical attendants were aware how to use the machine; other health workers reported malfunctioning of the machines. Provision of medication and laboratory investigations corresponded with the availability or lack of supplies.

Few women were identified as high risk and referred for ANC at higher level. Women with high parity or age below 20 were mostly advised to give birth at the hospital or health workers documented this specifically on the ANC card. Abnormal findings, if any, were rarely a reason for referral and return date was usually standardly documented to be the next month, independent of number of visits, current gestational age, complaints or other factors. Also women, whose gestational age was estimated to be above 36 weeks, could be requested to come back the next month, sometimes with a return date *after* the estimated date of birth.

Experience of care

Exit-interviews were done with 286 (69%) women whose visits were observed. Knowledge of birth preparedness and complication readiness including danger signs is presented in Table 4 and was similar to those topics which were primarily discussed during the ANC visit. Thirty

Table 4. Birth preparedness and danger signs.

Topic	Items	ANC Observations 414 N (%)	Exit interviews with women 286 N (%)
Birth preparedness	Purchase relevant items	259 (63)	135 (47)
	Financial arrangements	227 (55)	67 (23)
	What to do for a complication	196 (47)	3 (1)
	Transportation	139 (34)	11 (4)
	Place of birth	43 (10)	25 (9)
	Skilled birth attendant	30 (7)	1 (0)
Danger signs	Vaginal bleeding	220 (53)	71 (25)
	Severe headache or blurred vision	202 (49)	35 (12)
	Swelling of fingers, face, legs	190 (46)	22 (8)
	Severe abdominal pain	183 (44)	32 (11)
	Fever or too weak to get out of bed	95 (23)	16 (6)
	Convulsions	37 (9)	9 (3)
	Fast and difficult breathing	14 (3)	5 (2)

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eight percent of women interviewed stated that they did not receive any explanation as to why certain examinations and procedures were performed, and 27% of women were never asked if they had any questions about their health status. Despite this, 96% of women interviewed said they were 'happy with the care received' and 97% would recommend this facility to family and friends. Furthermore, 92% of women interviewed planned to give birth at the facility where the consultation was observed by the project team. In contrast to these positive statements in the exit interviews, during community group meetings and focus group discussions, community members expressed frequent concerns regarding long waiting times, unavailability of staff, lack of essential medicines and equipment as well as poor health worker attitudes both towards women and their partners.

Discussion

This study aimed to assess the quality of antenatal care provision from a holistic perspective. Similar to studies in other regions of Tanzania, major resource problems regarding both the availability of sufficient qualified staff as well as materials needed for ANC provision mitigate poor delivery of adequate care [22,25,38]. Frequent occurrences of out-of-stock medication and materials even after receiving a new batch of quarterly supplies indicate serious supply chain problems, which are not easily solved at facility level. However, quality of care requires more than adequate resources and our findings indicate that it is unlikely that an increase in resources alone will improve the quality of ANC. Availability of supplies did not necessarily mean they would be used nor did the presence of a skilled health worker ensure the provision of essential ANC services. On the contrary, this study revealed that many routine ANC services were neglected while priorities for other services seemed to be more out of habit than instrumental for clinical reasoning and decision-making.

Similar to previous studies our findings indicate weaknesses in the provision of appropriate history taking, attention for danger signs and provision of essential health education as well insufficient screening for anemia, hypertension, malaria and syphilis [21,22,25,26,48]. Although the ANC card functions as a ´working guide´ [38] not all services indicated on the card are always provided and health workers seem to prioritize some services over others. Measurement of weight, fundal height and fetal heart rate are nearly always done while other services are frequently left out, partly dependent on availability of supplies. Over the years, the provision of ANC has turned into a complex 'mosaic' of services [6] with specific attention for integration of vertical interventions proven to be effective, such as provision of tetanus toxoid, iron and folic acid supplementation and voluntary counseling and testing for HIV [3, 49]. Struggling to implement the increasing number of interventions during busy ANC clinics and limited time available, health workers seem to cope by prioritizing services either because they are easily provided or for which they believe they will be held accountable [38,49]. Prioritization can also be influenced by client expectations, who may report high satisfaction, despite poor quality of services, as long as tangible services such as medication and vaccinations are provided [26,35]. Most of the clients in this setting have never experienced excellent care, so their expectations may not be what we should attempt to measure.

Provision of ANC requires many different actions and skills; next to routine services it requires provision of ´response based services´ including: responding to clients symptoms and concerns; clinical reasoning and skills; analytical assessment of findings; adequate decision-making; risk identification; proper client counseling [6,13]. This means services, which are tailored to the individual woman's needs, to ensure a positive pregnancy experience [17]. Coverage of routine services alone is insufficient if information is not used or acted upon. Some routine services such as weight and fundal height measurement have little meaning for progress of

pregnancy if they are not related to the gestational age and progress over time [50]. Similarly, it is questionable if the health worker is fully informed of maternal and fetal wellbeing if women were not asked about fetal movements, presence of danger signs or given opportunity to express complaints and ask questions. Response based service provision also means services need to be adapted to the local context. When no blood pressure machine or urine dipstick is available it is easy to assume that women presenting with risk of pre-eclampsia no longer can be identified [51]. However proper history taking, assessment of danger signs and targeted physical examination including assessment of oedema and fetal wellbeing are equally important, especially in low resource settings. In the absence of resources, performing such basic assessments and responding adequately, is the highest attainable standard that can be expected and therefore should be considered of 'good enough' quality.

Health policies and evidence-based guidelines shape service provision, and evaluations relate clearly to those. Current guidelines and quality indicators for ANC are limited to a number of routine services. Quality assessments based on these indicators however do not provide sufficient information whether women received the right services based on their individual needs. Assessments are insufficiently approached along the continuum from antenatal to delivery care, while early identification of danger signs during ANC has the potential to reduce the need to resort to costly and dangerous interventions during delivery [52]. Additionally, aiming for quality improvements without attention for the process and local dynamic circumstances in which they are delivered is likely to fail [49,51,53]. Output indicators should therefore not be limited to coverage of some routine services alone and include indicators regarding client wellbeing as well as responses to findings and basic assessments such as history taking and physical examination. Ultimately these indicators should also be linked to specified, well-known fetal and maternal outcomes. Training and tools available to health workers, such as the ANC card, may not be adequately adapted to the provision of quality ANC in their working environment [54–57]. Therefore, changing quality indicators requires extensive training and supportive supervisions to assist health workers how to cope within their dynamic local settings. This requires increased attention for basic midwifery skills including clinical competence and problem solving, rather than focus on the routine indicator-documentation alone. Broadening the quality indicators and adapting guidelines, reporting and supervision for quality improvements based on local realities allows for incremental improvement of quality [57]. The expansion of the new ANC model to include eight contacts will be a major future challenge for improved quality [17]. Local practice needs to be carefully adjusted to allow for a gradual change, and also cater for those women that still only go 1–4 times.

Limitations of this study prevent making generalized conclusions, but nevertheless the context in terms of what was observed in facilities is representative of the situation for semi-rural areas in Sub-Saharan Africa. Although the facility audit was done twice and always together with a government representative it is possible that availability of supplies was not adequately reported. The audit and observations were done in different periods in the year and several data checks aimed to increase validity of both the audit and ANC observations which helped to fine-tune irregularities. Differences between 2014 and 2015 observations can be explained by a difference in supply levels or changes in staffing. However, it is likely that inter-observer variability caused this difference. Based on the 2014 experience we specified the observation tool for 2015 to increase our understanding. Nevertheless, in particular for education and counseling, inter-observer differences can have occurred and illustrates the challenges with such quality assessments. There are no criteria available to determine when sufficient education is provided on a given topic for each individual woman. We relied solely on qualitative methods to gain an insight into the quality of response-based services. Direct ANC observations did not give us information whether women received the appropriate services as

observers could not check or see the outcomes of the findings nor how the health worker interpreted these. Further research is needed to understand these processes. Despite these limitations the combination of different research methods as well as the qualitative elements of the data collection process shows to be relevant, similar to other comparable studies in this field [34,38,56].

Conclusion

Inadequate resources contribute to poor quality of ANC and many routine ANC services seem to be neglected. Nevertheless, coverage of routine services alone is not sufficient for provision of quality ANC services and there should be increased attention for the importance of basic assessments and response based services. Current quality indicators and ANC guidelines do not provide sufficient guidance for achieving quality ANC adapted to the individual woman's needs. Flexible quality assessment criteria adapted to the local setting should be considered to strive for realistic quality improvement of ANC.

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Reproductive Health

RESEARCH Open Access

Quality of care during childbirth in Tanzania: identification of areas that need improvement

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Abstract

Background: Making use of good, evidence based routines, for management of normal childbirth is essential to ensure quality of care and prevent, identify and manage complications if they occur. Two essential routine care interventions as defined by the World Health Organization are the use of the Partograph and Active Management of the Third Stage of Labour. Both interventions have been evaluated for their ability to assist health providers to detect and deal with complications. There is however little research about the quality of such interventions for routine care. Qualitative studies can help to understand how such complex interventions are implemented. This paper reports on findings from an observation study on maternity wards in Tanzania.

Methods: The study took place in the Lake Zone in Tanzania. Between 2014 and 2016 the first author observed and participated in the care for women on maternity wards in four rural and semi-urban health facilities. The data is a result of approximately 1300 hours of observations, systematically recorded primarily in observation notes and notes of informal conversations with health providers, women and their families. Detailed description of care processes were analysed using an ethnographic analysis approach focused on the sequential relationship of the 'stages of labour'. Themes were identified through identification of recurrent patterns.

Results: Three themes were identified: 1) Women's movement between rooms during birth, 2) health providers' assumptions and hope for a 'normal' birth, 3) fear of poor outcomes that stimulates intervention during birth. Women move between different rooms during childbirth which influences the care they receive. Few women were monitored during their first stage of labour. Routine birth monitoring appeared absent due to health providers 'assumptions and hope for good outcomes. This was rooted in a general belief that most women eventually give birth without problems and the partograph did not correspond with health providers' experience of the birth process. Contextual circumstances also limited health worker ability to act in case of complications. At the same time, fear for being held personally responsible for outcomes triggered active intervention in second stage of labour, even if there was no indication to intervene.

Conclusions: Insufficient monitoring leads to poor preparedness of health providers both for normal birth and in case of complications. As a result both underuse and overuse of interventions contribute to poor quality of care. Risk and complication management have for many years been prioritized at the expense of routine care for all women. Complex evaluations are needed to understand the current implementation gaps and find ways for improving quality of care for all women.

Keywords: Maternal Health, Quality of Care, Participant Observation, Partograph, Active Management of Third Stage of Labour

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Plain English summary

Good routines for management of normal childbirth are essential to ensure quality of care and timely actions in case of complications. There is however little research about the quality of routine care. This paper reports on findings from the maternity ward, from an observation study in Tanzania. The study took place in the Lake Zone in Tanzania. Between 2014 and 2016 the first author observed and participated in the care for women on maternity wards in four rural and semi-urban health facilities. The data is a result of approximately 1300 hours of observations. Our findings show that facility infrastructure requires women to move between different rooms during active childbirth. This influences the care they receive. We observed few women were monitored during birth. This is partly because health workers have an assumptions and hope for good outcomes. At the same time health workers fear for being held personally responsible for outcomes. This triggers the use of interventions to speed up birth even if there was no indication to intervene. Insufficient monitoring leads to poor preparedness of health providers both for normal birth and in case of complications. Risk and complication management have for many years been prioritized at the expense of routine care for all women. To understand the current gaps between what care is desired and what happens in reality complex evaluations are needed to find ways for improving quality of care for all women.

Background

During the past two decades the global maternal mortality ratio (MMR) has nearly halved. Although this is reason for optimism, many countries in sub Sahara Africa did not achieve the Millennium Development Goal 5 target of 75% MMR reduction [1]. Nevertheless, in many of these countries there was substantial increase in coverage of facility births [2]. Persisting high mortality and morbidity figures despite increase in service utilization, is thought to be due to a gap in the quality of care [2, 3]. Quality of care is insufficient due to poor facility capacity to provide timely emergency obstetric care (EmOC) and limited health provider knowledge to prevent, identify and manage complications [4]. Additionally, the push for increased numbers of facility births in countries with weak health systems also threatens the quality of routine care for uncomplicated births.

High quality of childbirth care includes provision of both routine care and emergency care. The majority of women giving birth in the health facility only require routine care. One reason for coming to a facility is to be near interventions provided by competent personnel if a complication occurs. Lack of good quality routine care may lead to more complications or late detection of these. However limited systematic research is available on the quality of routine care in low-middle income countries [4]. Quality of care assessments for management of complications are guided by the EmOC signal functions but similar signal functions for routine care are not well defined [4–6]. The WHO quality standard for childbirth care [7] suggests a selected number of process measures for quality assessment of routine monitoring during childbirth covering two essential interventions: 1) initiation and use of the partograph for monitoring and management of first and second stage of labour and 2) active management of the third stage of labour (AMTSL). Both interventions are intended to allow for controlled monitoring of the natural processes of birth, early identification of complications and preparedness of potential interventions when things deviate [8].

Use of the partograph and AMTSL are complex interventions because they contain a variety of interacting components and rely on good clinical skills [9]. Both interventions have been evaluated for their ability to help health providers detect and deal with complications. Little attention however has been paid to such intervention as part of routine care [4] beyond assessment of coverage of selected elements (e.g administration of oxytocin). It is increasingly acknowledged that there is a gap between global strategies, coverage of services and what actually happens when women reach health facilities to give birth [10]. Measurement of coverage of services and outcomes of care, although relevant, do not inform us on how care is provided and under which circumstances. Nor does it inform us about the health workers evaluation of clinical findings and decision making process. Qualitative studies are therefore important to increase our understanding of how such care processes take place and what this tells us about the quality of interventions such as the partograph and AMTSL for routine care [11]. This paper reports on findings from an observation study in Tanzania. Through description and holistic analysis of partograph use and AMTSL we intend to provide an understanding of the quality of routine care for uncomplicated childbirth in an African setting.

Methods

Setting

The study took place in the Lake Zone in Tanzania. Although Tanzania has made significant progress between 1999 and 2015 in increasing facility births (from 47% to 63%) the maternal mortality ratio has remained the same (from 578 in 2000 with CI 466-690 to 556 in 2015 with CI 446-666) [12]. Other sources suggest there has been substantial progress (MMR of 398 in 2015, CI 281-570) [13] but current reduction rates and wide confidence intervals suggest it remains unlikely Tanzania will reach the 2030 target MMR of 140 maternal deaths

per 100.000 live births [14]. Maternity care in Tanzania is organized along a referral pyramid with dispensaries being the first formal health unit at primary level, followed by health centres and district hospitals [15]. All facility levels are expected to provide routine care for pregnant women and basic EmOC. District hospitals are expected to provide Comprehensive EmOC including availability of blood transfusion and caesarean sections [16].

Observer and Observations

Over the course of 25 months between 2014 and 2016 the first author [ASM], a medical doctor, observed and participated in the care for women on maternity wards in four health facilities. ASM speaks Kiswahili and lived in Tanzania for the past three years engaging with peoples lives in both urban and rural settings. For 6 months, ASM taught nursing and medical students on a weekly basis while volunteering alongside midwives and doctors on the maternity ward in one urban district hospital. This was followed by 8 months of volunteering full time as a medical doctor at a semi-urban faith-based health centre, before entering a systematic PhD program. As the research role evolved the final 11 months more focused observations were performed in a second rural district hospital and rural government health centre where the researcher had no clinical responsibilities. During these final months a research assistant (a nurse) also provided observations at the district hospital. As she was less able to intervene and participate this helped to increase understanding of routine care processes. For practical reasons observations only took place during the daytime and evenings. The research role of observing versus participating often fluctuated and shifted depending on the situation.

Being a medical doctor, ASM was naturally engaged in the defences of best practices in obstetric care from a technological point of view, following essential guidelines as promoted by the WHO. As a result of this, beyond participating in care provision, there were situations where ASM would intervene in normal care. For example if the situation was interpreted to potentially endanger the woman (either physically or psychologically) or cause unnecessary harm. Intervening in normal care included active discussion with providers about the course of action, give solicited or unsolicited advice or take action.

Taking action would always be in agreement with the women, the health providers or their seniors and only if the researcher felt capable to do so. For the final 11 month of observations the researcher had no authority to intervene independently. This was clear to the staff because observations were not on a daily basis and the researcher never established a formal role in these institutions. On some occasions the researcher faced difficult decision whether to intervene in the process of care or not. Situations occurred where women were prepared for a caesarean section without proper indication or where women received harmful treatment or practices, which went against most standards of care. When the researcher intervened this sometimes resulted in clashes or arguments with some of the staff. When the researcher did not intervene, and remained in the observer role, feelings of guilt for allowing things to evolve gave internal conflict. If the researcher intervened this was documented in the observation reports and taken into account for analysis.

Data collection

The data is a result of approximately 1300 hours of participant observation and consist of systematically recorded observation notes, notes of informal conversations with health providers, women and their families. In addition we reviewed clinical notes, handover books, staff schedules, reporting books and clinic cards while being present at the facilities. Observations mainly focused on the perspective of the health provider. During observations, activities and timing of care provision for individual women were documented using key words if the situation allowed for it. This usually started with description of the situation on the maternity wards after arrival. Researchers selected women that arrived at the nursing station or that were already admitted with what was expected to be an uncomplicated birth. Where possible individual women were followed until they had given birth. In additional other remarkable situations were noted, this could include situations where women developed complications. Although focus for our observations was uncomplicated births, it was important to document other happenings as they influenced and determined health worker's other activities. Full observation reports were written after each observation day. To the best of the researchers ability details of the day were documented. In addition personal reflections including feelings and interpretation of the activities were written down in the same reports.

Data analysis

Preliminary analysis of findings took place throughout the observation period. As a reference to standards of care we made use of a modification of the Maternal and Newborn Quality of Care Survey Labor and Delivery Observation Checklist developed by the Maternal and Child Health Integrated Program (MCHIP) [17]. The modified checklist is provided as Additional file 1. Detailed analysis was done after completion of the data collection using an ethnographic analysis approach comprising of four subsequent techniques: domain-, taxonomic-, componential- and theme analyses [18]. Domain analysis helped to meaningfully describe observations. For example one domain that

we identified was 'the admission process' and all activities that these include (e.g. review of antenatal record, history taking, physical examination). For this paper domain analysis focused on identifying the 'stages of labour'[1] (see Table 1). Our reference point and terms used included the three stages of labour, around which standards of care have been organized in both international and local protocols with focus on normal, uncomplicated, childbirth.

Taxonomy analysis resulted in identification of subdomains within the different stages of labour (e.g movements between stages, locations of service provision, actions performed, consequences of clinical findings etc). This helped to identify how procedures and actions were organized and understand behaviour of women and health providers in the different stages and how they related to each other. Subsequently compound analysis helped to identify contrasting dimensions and its attributes (e.g. characteristics of woman and health providers, expectations of services, actual observed practices for monitoring and actions taken in case of deviations across the stages of labour). Themes were identified through identification of recurrent patterns in the previous steps.

Results

During analysis the following themes were identified: 1) Women's movement between rooms during birth, 2) health providers' assumptions and hope for a 'normal' birth, 3) fear of poor outcomes that stimulates intervention during birth.

Moving between rooms

Women accessed at least two rooms during childbirth at the health facility: the waiting room and/or the birth room (see Table 2).

> *In the maternity ward, women who are in latent phase or early stages of childbirth are admitted to the waiting room or antenatal room. In practice, this includes all women who are in the first stage of labour. There are 8 beds in the waiting room and women often have to share a bed when it is crowded.*

Table 1 Stages of Labour [8]

Latent phase
Presence of contraction which can both be regular and irregular, cervical dilatation < 4 cm
Active phase
First stage: Presence of frequent and regular contractions, cervical dilatation > 4 cm
Second stage: Full cervical dilatation and urge to push, birth of the baby
Third stage: After birth of the baby, placental separation and expulsion

> *[...] When approaching the second stage of labour, women need to shift to the birth room. Women need to walk approximately 15-20 meters to get to this room, carrying their own belonging and supplies. On their way to this room women pass the nursing station, which is located adjacent to the birth room. The birth room has six delivery beds, three on each side, although one of the beds is mainly used for supplies and materials. Rarely all beds are occupied. (Observation note district hospital)*

The admission process at the nursing station was the start of the care process. Examination was part of this process and took place in the birth room. Most of the time, it included assessments of the fundal height, fetal heart rate and vaginal examination to determine the cervical dilatation. Women arriving before the second stage of labour were considered not to be 'in labour' and they were placed in the waiting area together with women who were not in active phase of labour (for stages of labour see Table 1). When the beds in the birth room were not occupied, nurses would say 'it is not busy' or 'we don't have anyone in labour' while several women could be in active stage of labour in the waiting room. Women were required to walk from the waiting area to the birth room for physical examinations, complete certain stadia of birth within an expected timeframe (e.g cervical dilatation of 1 cm per hour) and adhere to the rules of the health facility (e.g. ensure availability of necessary supplies, wear appropriate clothing) for each step in the process. Although most births fit well into this local flow of care provision, some women had a faster birth than expected. For example Mrs P (18 years, primigravida).

> *Mrs P came to the hospital at 10.40am. At 11 am the nurse examines her abdomen and checks how far her cervix has dilated. She then informs Mrs P that she has to try and walk around, drink tea and can come back later: 'After four hours we measure you again'. Mrs P goes to the waiting area and the nurse documents that she has a cervical dilatation of 7cm on the admission form and the partograph. An hour later, another nurse brings Mrs P back to the nursing station, saying: 'This mama was pushing above her basin'. The nurse informs Mrs P it is not yet time. She should drink her tea and come back when she feels strong pushing urge. Mrs P quietly walks back to the waiting area. After 5 minutes, another pregnant woman comes to inform the nurses someone is pushing in the waiting area. Not long after cries of a baby can be heard and Mrs P has given birth to her daughter in the waiting area, assisted by her own mother. (Observation notes District Hospital)*

Table 2 Matrix of stages of labour in waiting area and birth room

Stage	Latent	Early first	Late first	Early second		Late second	Third
Location	Waiting area			Birth room			
Birth expected	Birth not imminent			Birth imminent			NA
Labour	Not in labour	Beginning in labour		In labour			After birth
Cervix	Tip of finger, closed,<4 cm	3-7cm	7or 8cm	8or9cm	Fully dilated head high/far	Fully dilated head close	NA
Time allowed	Days	Up to 1 day	Up to 6 hours	Up to 4 hours	1-2 hours	1 hour	5-15min
Nursing proximity	Far			Hearing distance		Close by	
Monitoring frequency	None	4hourly, upon shift change, doctors round, upon request		Frequent		None	
Monitoring activity	None	Cervical dilatation, foetal heart rate		Cervical dilatation		None	
Care seeking	Woman needs to approach the nurse by walking to the nursing station			Nurse will approach the woman, woman can ask for help when nurses are in hearing distance or on the labour ward			
Visitors/birth companion	Allowed on set times inside but women are able to go outside as they please			Not Allowed, only when instructed by nursing staff to bring supplies and materials			
Mobility	Women are able to walk around freely, urinate at the toilet, can position herself in any way but has to lie flat on her back during examination			Women are confined to the labour bed, urinate in a basin next to the labour bed which is brought by the woman herself, has to position herself lying flat on her back for pushing or other nursing activities			
Food and drink	Is allowed to eat and drink as she pleases			Is only allowed tea when this is instructed by the staff			

'Whatever will be, will be'

After admission women's antenatal card and files including a partograph remained at the nursing station. The type of partograph used at the health facilities was the composite partograph and was integrated in the admission form used at the maternity ward. Partographs were often not filled in immediately after admission, even though women where in active phase of labour. There was usually no organized filing system and from the admission files it was not clear which women required monitoring or were expected to give birth the coming hours. Sometimes women were admitted for days without any notes of observations until they eventually presented themselves at the nursing station in second stage of labour. The following case of Mrs S (32 years, gravida 6, para 5) illustrates poor monitoring and insufficient use of the partograph:

> *At 11am, the nurse says they are having a prolonged labour case, which they are thinking of referring. When we go to review the case of Mrs S, it becomes clear no partograph was filled in so the nurse decides to fill in her findings of this morning. Mrs S, who has given birth 5 times before with only two living children, informs us she was checked twice, upon arrival at 10pm yesterday evening and early morning at 6am. Some scattered notes show us her cervix was 5 cm dilated on arrival. There is no documentation of the examination of 6am, but the nurse checked Mrs S at 9.30am after the ward rounds and found her cervix was 6 cm dilated. (Observation notes Health Centre)*

Routine 'checks' and monitoring of women in the active stage occurred primarily during nurses' shifts changes (around 7am, 1pm and 7pm) and if there was a doctors ward round (between 9 and 10am). Nurses would collect all admission papers and pass by the different rooms on the maternity wards. If vaginal examination was needed women were asked to come to the nursing station one by one after the ward round. The time intervals between such routines during daytime were relatively short which allowed for somewhat regular monitoring. However, during the evening and night shifts many women like Mrs S were often left unattended and unnoticed until morning hours. Sometimes women presented themselves at the nursing station requesting to be examined

If the partograph was used, nurses appeared to prioritize some parts of the partograph, while leaving out others. If examination took place for the purpose of monitoring, this primarily included routine assessment of cervical dilatation. Less invasive assessments such as blood pressure measurement, assessment of fetal heart rate, number of contractions per 10 minute, pulse rate or temperature were rarely measured nor discussed in relation to the birth progress or well-being of the mother. Blood pressures were sometimes documented based on the findings during the last clinic visit, because the blood pressure machine was not readily available and a temperature of 37.5 C was often written assuming the woman had no fever. Assessment findings were not always recorded on the partograph, but rather in separate notes. Some assessments were filled in through 'guessing' rather than actual measuring.

While assisting the nurse with documentation on the partograph, I asked her how much the fetal heart rate was. She listened for a few seconds with the fetoscope and said '136'. I wondered how she calculated this so quickly. [Observation notes district hospital]

Usually nurses expressed an expectation that, even though based on the partograph the firsts stage appeared to take too long, most women would eventually give birth without problems and with mostly positive outcomes. If women seemed to approach the action line on the partograph nurses would sometimes dismiss previous documented cervical dilatation or make changes to what was filled in on the partograph before and rather allow women more time to progress without intervention. Sometimes nurses preferred to avoid documentation on the partograph or did not actively monitor women unless women themselves called the nurses for assistance. This lack of monitoring could result in staff being unprepared for in-facility 'sudden events'. Women who had been admitted for days could appear with 'sudden' onset of complications, give birth 'suddenly' on their own in the waiting area or 'suddenly' appear in second stage at the birth room with staff being unprepared, for example Mrs D (19 years, primigravida).

After finishing at the ANC clinic, at 1pm, a nurse rushes to the birth room where she quickly puts on some gloves. A young girl, Mrs D, is lying on the bed in second stage of labour. The nurse says: 'This girl was admitted to the ward since yesterday, now suddenly she comes in second stage'.[…] Her file states that Mrs D was examined this morning and that her cervix was 2 cm dilated. […] Shortly after, she gives birth to a 3kg baby girl. (Observation notes Health Center)

Nurses were also hesitant to start the partograph at early first stage of labour, saying this would result in 'too many women reaching the action line'. The action line would indicate 'poor progress' requiring immediate action, which was not always easy to manage in their setting. The decision that birth was not progressing resulted in a range of consequences for both families and health providers in the example of Mrs. S:

When we examined Mrs. S at 11am she had mild contractions but a cervical dilatation of 8 cm with the head high and membranes intact. The fetal heart rate was fine. There was hesitation to rupture the membranes because of the long distance to the district hospital in case of problems after rupturing. […] The doctor- in charge, who was on his way to the hospital, instructed the nurse to rupture the membranes and to give Mrs. S 500ml IV fluids. […] There was slight meconium stained fluid but a good fetal heart rate of 140 beats per minute [bpm]. At 12.30 Mrs S was still 8 cm and not showing signs of progress and the nurse suggested to refer her for further management. But lack of available ambulance would require the family to make their own arrangements.[…] The doctor in-charge was still on his way and informed us he would come to perform a caesarean section. […] The family was instructed to buy a catheter and the nurse asked the laboratory technician to perform hemoglobin measurement. The doctor arrived at 2pm. Meanwhile the contractions of Mrs S had increased, although she had progressed, there were signs of obstruction. Family members were asked to bring supplies and water for cleaning the operating theatre at 3pm. Finally at 4pm Mrs S delivered a baby boy by caesarean section. (Observation notes Health Center)

In the example of Mrs S several delays occurred after poor progress was diagnosed. The nurses, and the researcher, experienced they had little influence on these delays. The researcher had suggested to drive Mrs S to the district hospital in her private car. Although both the nurses and Mrs S where happy with this option the medical doctor refused this saying he would arrive soon to assess the situation. When he finally arrived, family members where instructed to make necessary arrangements before the caesarean section was possible, resulting in more delay. Similar delays were also observed at the district hospital. One afternoon nurses adequately and timely called for supervision for a case of obstructed labour. It took an entire night before the woman was taken to the operating theatre the next morning.

Active management out of fear of poor outcomes

After women arrived in the birth room we observed nurses appeared to have a sense of urgency to intervene and make sure women gave birth as quickly as possible. Failure to complete a stadium, for example poor descend of the head within the expected time, or failure according to expected social norms, such as screaming out of pain and being perceived demanding, was considered a deviation of 'normal' and required intervention and active management. If women did not give birth soon enough after arriving to the birth room nurses would fear poor progress would lead to poor fetal outcome and therefore required active management. For example Mrs A (21 years, gravida 3, para 0), who was lying in the birth room with what was perceived to be poor progress because she had been in the birth room since early morning. The following events occurred:

10.25: Nurse gives 500ml IV fluids and a urine catheter. She struggles with the catheter and it seems painful for Mrs A.

10.36: Doctor comes in and asks what size the catheter is and leaves right after.

10.39: Nurse looks at the partograph and discusses this with the doctor who agrees to give her some more time.

11.50: Gives second bag of IV fluids. There is still no urine in the urine bag. Doctor also comes and looks at her but does nothing.

12.10: Mrs A says she feels to push. The nurse comes and talks to her.

12.30: Doctor orders to prepare for a caesarean section and orders to check the Hb.

13.10: Researcher intervenes: it is documented her membranes are still intact; the nurse decides to check this and does a vaginal examination of Mrs A. She finds Mrs A has intact membranes and only 4cm cervical dilatation. She discusses with colleagues to find out who documented she had 6cm several hours ago.

13.20: Discussions with the doctor who also performs a vaginal examination. He instructs removal of the catheter and IV line and tells Mrs A to go to the waiting area and come back for another check after 4 hours. 'She is not in labour' he says.

13.30: The nurse checks the FHR and Mrs A collects her things to go to the waiting area.

(Observation notes District Hospital)

Nurses would quickly provide women with IV fluids, even though women were able to drink, have catheters inserted, while women were able to urinate spontaneously, give oxytocin, while contractions were sufficient or give episiotomies or fundus expression while there was no information regarding the fetal condition due to lack of assessment of the fetal heart rate.

The following case of Mrs D describes active management of the third stage of labour:

She [the nurse] felt the top of the uterus and then started pulling the cord, the cord and placenta followed smoothly without problems. She dropped the placenta into the bunch of 'kitenge [local fabric]' lying on the bed without looking at it. She looked at the perineum, while spreading the labia with one finger. 'No tear,' she said. Then she started pushing heavily on the fundus of the uterus to push blood clots out of the vagina: pushing deep and massaging. Meanwhile some blood was leaking on the floor, so she told Mrs D to hold the plastic sheet up to avoid it from dripping down. The nurse looked for some fabric to clean the blood away and took the basin towards her with her foot. Then she took of one glove on her right hand as she was wearing another one underneath. She then went inside the vagina with the same hand to take out some more remaining clots. She did this several times while at the same time pushing on the stomach with her left hand for about 5 minutes long while Mrs D was moaning of pain. The nurse said: 'Look how much blood, so much blood'. (Observation notes Health Center)

The example above was hardly an isolated event and was observed both at health center level and at the district hospitals. Provision of oxytocin and controlled cord traction were usually provided for all women. Although posters of recent training on prevention of post-partum hemorrhage were hanging on the walls of the wards, it was not accepted that expulsion of the placenta could take up to 30 min after birth, the placenta was rarely checked for completeness and uterine tone was assumed not to be sufficient, even if the uterus was well contracted. Instead, uterine massage and manual expression to empty the uterus for blood clots was done on many occasions.

Despite frequent absence of monitoring and unclear indications for interventions, outcomes of births were mostly good. Maternal death remained a rare event, and it seemed generally acknowledged to be a result of multifactorial causes. Nevertheless, in particular neonatal deaths and stillbirths occurred relatively frequently. Renewed focus on these deaths, both by the ministry and media[2] increased health providers' fear to be personally held accountable for such outcomes. These fears became mostly visible in decisions made around documentation to avoid potential blame.

'Don't teach the students that [to fill in the partograph]. This will be used in court. If the baby dies you will not be blamed but I don't want to loose my job. I can loose my job for someone else's mistake' (Reflection notes after teaching students on the maternity ward)

We observed partographs were often completed after birth, visualizing regular monitoring of fetal heart rate every 30 minutes and linear increase of severity of contractions combined with linear increase of cervical dilatation, even if this was not the case. For example, after poor progress was diagnosed for Mrs S, the nurse

retrospectively filled in all FHR measurements on the partograph of the night before:

> [Researcher]: 'Why are you filling this in now?'
>
> [Nurse] : 'It needs to be completed'.
>
> [Researcher]: 'But you did not check this right?'
>
> [Nurse]: 'No, but the nurse of the night was there'
>
> [Reseacher]: 'Yes but did he actually check it [the FHR]?'
>
> [Nurse]: 'No, probably not'.
>
> (Conversation extracted from observation notes Health Centre)

Review of reporting books showed Apgar scores where nearly always reported to be 9 after 1 minute and 10 after 5 minutes. We also observed documentation of more positive Apgar scores than what the score would be in reality. On one occasion we reviewed the case of a neonatal death at a health center, which had occurred during the night shift. The Apgar score had been documented to be 10 after 5 minutes. The nurse on duty decided to change this to 6 after 5 minutes because a score of 10 had seemed unlikely because the baby had passed away. The majority of cases that may have been a neonatal death were recorded as fresh stillbirths. Stillbirth cases where a fetal heart rate had been documented on admission were sometimes revised to indicate death had likely occurred before arrival at the facility.

Discussion

In this study we present a range of examples of what can be considered suboptimal maternal health care. Interventions and activities that are intended to support health providers to monitor the natural processes of birth are not used accordingly. For example the partograph seems to be used more as a documentation tool than a decision-making tool. Often this is the result of a non-conducive environment, which hinder their effective use. In addition a culture of 'blame and shame' creates unfavourable working conditions where individuals perceive to be held accountable for system failures. Our findings demonstrate how this negatively influences care provision. It must be recognized that these observations, findings and shortcomings are not intended to point fingers at the individual providers or facility managers. Facility or care providers names or titles are not included in the paper and most of them work as good as possible in the setting in which they are operating. It is however a reality that much of the routine care provided is sub-optimal and is also taught in sub optimal institutions. Rather than viewing this as individual mistakes, it needs to be acknowledged that the underlying reasons for sub optimal care provision are much more complex, and have roots in poor economic conditions, work organization shortcomings, lack of supervision and poor priority setting at the political level.

The observations are limited to few health facilities in the Lake Zone region, but the setting here is not fundamentally different from any other setting in SSA.[3] The underlying issues with regards to health system challenges, poor availability of resources and increasing pressure to improve maternal and neonatal outcomes are similar to other low-resource settings. We believe our findings are relevant beyond our setting in Tanzania, illustrating the importance of qualitative methods to understand complex care processes. Being a doctor and an observer at the same time has both benefits and drawbacks. As a doctor, the internalized idea about standards of care gave an urge to intervene and this perspective also influenced the data collected and how it was analysed. It also limited the ability to meticulously document complete care processes for individual women. Nevertheless joining local health staff proved a unique opportunity for detailed informed observations of provision of care.

Through our analysis we identified health providers are confronted with contrasting drives for care provision during the birthing process. In circumstances such as in these Tanzanian health facilities, health providers appear to balance the perception of not being able to influence the process of care with the fear that they will be held responsible for the outcome. On the one hand care provision during the first stage of labour can appear meaningless resulting in inaction. On the other hand, during second and third stage of labour actions determine outcomes, stimulating the use of interventions. In the following section we will argue that the tandem of underuse and overuse of care during childbirth occurs due to a failing technocratic model of care and decades long prioritization of risk and complication management at the expense of routine care for all women.

Failure of the technocratic model in unpredictable settings

Dividing the birth process in stages and monitoring of individual women with the partograph is part of the development of the technocratic model of childbirth [1]. Applying this model, with increased use of technology, routines and protocols for monitoring and management of childbirth has improved outcomes but is also criticized for viewing birth as a mechanical process [19]. The partograph, developed based on the Friedman curve, is based on the expectation that birth occurs in a certain

time frame [20, 21]. Approaching birth as a linear process can result in an "assembly line" of care provision, not paying attention to individual variations in the birth process [22], as was observed in this study. Although the partograph is thought to be too stringent [22, 23] and evidence of positive impact on outcomes remains limited [24] its use is still advocated in settings with high maternal mortality and morbidity [7]. The partograph functions as an 'early warning system' [21, 25], and intends to assist clinical management of childbirth and timely identify poor progress [26]. Nevertheless despite its widespread promotion for the past decades many studies have shown partographs are not implemented well: they are often not used at all, filled in after birth, or filled in incomplete [27–32].

We found that the hesitancy of health providers to initiate the partograph lies on the one hand in the assumption that most women will have an uncomplicated birth despite crossing the action line on the partograph and on the other hand that care processes are perceived to be out of their control. The partograph implicitly stimulates the 'hunt for abnormality' and generates an individual responsibility of childbirth management where health providers can be held accountable for the outcome [33]. However, when birth is in transition to deviate from what is accepted as the norm, care provision can become highly unpredictable as a result of ineffective referral systems, unavailable supervision staff and lack of timely available necessary supplies and materials [4, 30, 34, 35]. Use of the partograph is unlikely to improve outcomes in an ineffective maternity care system which still causes outcomes of childbirth to be a 'product of chance' [25, 33, 36]. Health providers seem to 'buy time' for both women and themselves, to allow birth to progress without interventions [37]. It is not simply insufficient use of the partograph, which results in poor monitoring. Monitoring is poor because nurses perceive they lack the ability to provide meaningful care to women in the first stage of labour. For this reason implementation of the use of the partograph in such settings seems largely unsuccessful.

Treatment in the absence of risk

In the absence of monitoring, which extends into the final stages of labour, active management takes over out of fear for individual consequences in the case of poor outcomes [38]. Low resource settings are usually associated with insufficient availability of interventions, nevertheless, both over medicalization and overuse of interventions form an increasing threat to quality of care, also in Tanzania [39–41]. Some authors report on a high incidence of unnecessary caesarean sections in some Tanzanian health facilities [42–44], partly explained by poor implementation of guidelines [42] and increasingly defensive clinical decision-making [38]. For health workers working in settings of uncertainty, providing as much intervention as possible can give a sense of control, hoping to prevent the worst-case scenario, even if there is no appropriate indication [45]. Additionally, women, families and health providers might perceive more intervention and more technology to be the best possible care. As a result the 'measure of caring is by doing something active, rather than by being present' [46].

In this study we observed that some interventions, such as IV infusion, catheterization or episiotomies, were provided without proper assessments of clinical signs and symptoms to justify their action. Selective implementation of guidelines and assuming a 'worst-case' scenario was also observed for the third stage of labour [7]. Similar to other studies we observed that assessment of completeness of the placenta and regular monitoring the tonus of the uterus was often neglected [28, 47–49]. Instead actions were taken which would normally only be indicated in case of hemorrhage. The apparent routine use of uterine massage and manual expression to empty the uterus for blood clots not only causes unnecessary discomfort for women but it can also lead to iatrogenic occurrence of post-partum hemorrhage and infection [28]. When AMTSL is primarily implemented as a method to prevent post-partum hemorrhage, activities that function to control the natural processes through quality routine assessment and monitoring might seem less important.

Moving beyond saving lives

Our findings can be seen as examples of a how a global technocratic approach to maternity care, with implementation of policies, systems and interventions focused on prevention and treatment of complications, has disproportionally influenced local practice. As a result there is a large implementation gap for routine management of childbirth [49]. Both the partograph and AMTSL have been implemented primarily with the aim to identify and detect pathology (e.g prolonged labour and post partum haemorrhage) and have also been evaluated as such [21, 50]. This selective focus on some components of interventions indirectly influences care provision as health providers prioritize those same few activities, they feel they will be held accountable for [46]. Global maternal health actors have paid much less attention to their function for controlling the physiology of the birthing process [4, 51]. Guidelines and indicators are focused on those care activities, for which there is sufficient evidence it improves outcomes, not if they improve the process and quality of care. For example, the WHO recommendation for PPH presents that the most important AMTSL component is the administration of a uterotonic [50]. While this is arguably true for the outcome of hemorrhage, our examples show that leaving

out some other essential components of AMTSL can have negative consequences.

When global clinical management tools such as the partograph are implemented without locally adapted guidance on how to use such tools within the given context, health providers might resort to alternative interventions or avoid their use all together. In order to motivate health providers for routine birth monitoring, guidelines should be developed which take into account the contextual challenges, within a range of what can be considered acceptable care rather than based on an unrealistic ideal situation. Development of locally achievable guidelines for partograph use have been demonstrated successfully in a recent study in Zanzibar [52, 53]. Continuous advocacy for availability of EmOC remains important, however strict implementation of EmOC does not encompass the physiological and mental processes that are essential to ensure quality care for all women [54, 55]. Efforts to improve intrapartum care need to ensure care is provided respectful to the birthing woman and her newborn [3]. It is increasingly acknowledged that conditions which underlie sub-optimal quality of care enforce the occurrence of abuse and disrespect in childbirth [56]. Women's denial of quality childbirth care which at the same time increases their vulnerability to abuse are violations of women's basic human rights [57, 58]. Increasing quality of routine care should start with enabling health providers to return to the basics of what is required to care for women during childbirth within their local context. We cannot expect health providers to timely identify and tackle complications if they are unable to recognize what constitutes a normal birthing process. Nor if their working conditions, including lack of resources limit their possibilities for providing quality care even further.

Maternity care in low-resource settings needs to be 're-humanized' ensuring the dignity and the worthiness of the birthing woman and her family are placed at the centre [59]. This requires attention beyond our currently prioritized indicators, where maternity care is restructured and reorganized not based on an industrial model, but on a more humanistic model, making use of the rich evidence-base from midwifery science [19, 45, 55]. There are numerous interventions that have shown to be effective both to improve quality and outcomes of care. Continuous and caring support during birth, the presence of a birth companion, encouraging free movement, and having the birth position of choice [60, 61] are examples of low-cost evidence based interventions that have long been recommended [26] but are neglected. It can be expected that such interventions increase timely access to services, reduce the number of unnecessary interventions and increases satisfaction of care. Ultimately such improvement in the quality of routine care will likely lead to a reduction of unnecessary maternal and perinatal morbidity and mortality.

Conclusion

In settings with persisting high maternal and perinatal mortality and morbidity, interventions to tackle complications and emergencies seem to have priority over routine care provision. However, the majority of women will likely give birth without the need for interventions. The absence of quality routine care puts many women unnecessarily at risk. Health providers are experiencing pressure of responsibility for outcomes of care processes they perceive to be are out of their control. As a result both underuse and overuse of interventions result in poor quality of routine care for women having uncomplicated births. Insufficient monitoring leads to poor preparedness of health providers both for uncomplicated births and in case complications arise. If we truly want to improve the quality of care for all women attention needs to be paid to the implementation gaps that exist. Complex evaluations that embrace the intricacies of maternity care in low resource settings are needed to identify and understand these gaps. Interventions we know work, can only be effective if they are implemented within a health system that is responsive, encourages contextual adaptation and takes care of placing women's dignity at its centre.

Endnotes

[1]We refer to childbirth as 'labour' only in reference to stages of labour as this is the common way to describe the stages. In all other cases we speak of 'birthing' or the 'birth process'.

[2]During the study period there were several news items describing how health workers were fired after families had demanded someone to be held accountable for the death of their newborns, health workers would share such stories and were afraid to document their names in patient files out of fear that it could be used in court.

[3]The co-authors have observed around 50-60 maternities all over SSA over a long time period.

Additional files

Additional file 1: Checklist L&D observation tool. (DOCX 42 kb)
Additional file 2: Example analysis process. (XLSX 1574 kb)

Abbreviations

AMTSL: Active Management of Third Stage of Labour; Bpm: Beats per minutes; EmOC: Emergency obstetric care; MMR: Maternal mortality ratio; PPH: Post partum hemorrhage; WHO: World health organization

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Availability of data and materials
An example overview of the four steps of the analysis process is provided in the supplementary material. (See Additional file 2)

Authors' contributions
ASM performed the observations. RFK provided local expert advice and feedback on observations. JS spent a few days in the field, and JS and TK provided supervision and helped ASM to reflect on findings. All authors analysed and interpreted the data. ASM drafted the manuscript. All authors read and approved the final manuscript.

Ethics approval and consent to participate
Ethical approval was granted by the National Institute of Medical Research in Tanzania (MR/53/100/103-349-399) and a research permit was granted by the Tanzanian Commission for Science and Technology (No.2015-255-ER-2013-32). The Regional Committee for Medical and Health Research Ethics, Section A, South East Norway (2015/1827), and the Norwegian Social Science Data Service (44482/3/MHM) both reviewed the study and found the study in accordance with the Norwegian Personal Data Act. The first author was also registered at the Medical Council of Tanganyika as a medical practitioner (Reg.no 5533) during the time of the research. As soon as the research role became more explicit in 2015 we requested permission from relevant local health authorities for the research. Health workers were informed of the study and were asked for written informed consent. Women were asked for verbal consent where possible. Because of the sensitivity of the subject we ensured anonymity in note taking and for this reason hospital and clinic names are also not included in this paper.

Consent for publication
Not applicable

Competing interests
The authors declare that they have no competing interests.

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RESEARCH ARTICLE

Disrespect and abuse in maternity care: individual consequences of structural violence

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Abstract: *Disrespect and abuse of patients, especially birthing women, does occur in the health sector. This is a violation of women's fundamental human rights and can be viewed as a consequence of women's lives not being valued by larger social, economic and political structures. Here we demonstrate how such disrespect and abuse is enacted at an interpersonal level across the continuum of care in Tanzania. We describe how and why women's exposure to disrespect and abuse should be seen as a symptom of structural violence. Detailed narratives were developed based on interviews and observations of 14 rural women's interactions with health providers from their first antenatal visit until after birth. Narratives were based on observation of 25 antenatal visits, 3 births and 92 in-depth interviews with the same women. All women were exposed to non-supportive care during pregnancy and birth including psychological abuse, physical abuse, abandonment and privacy violations. Systemic gender inequality renders women excessively vulnerable to abuse, expressed as a normalisation of abuse in society. Health institutions reflect and reinforce dominant social processes and normalisation of non-supportive care is symptomatic of an institutional culture of care that has become dehumanised. Health providers may act disrespectfully because they are placed in a powerful position, holding authority over their patients. However, they are themselves also victims of continuous health system challenges and poor working conditions. Preventing disrespect and abuse during antenatal care and childbirth requires attention for structural inequalities that foster conditions that make mistreatment of vulnerable women possible.* DOI: 10.1080/09688080.2018.1502023

Keywords: Disrespect and abuse, maternity care, quality of care, structural violence

Introduction

Tanzania has made slow progress in reducing maternal mortality, failing to achieve Millennium Development Goal 5.[1] Significant progress between 1999 and 2015, however, was achieved in increasing facility births (from 47% to 63%).[2] While this is a reason for optimism, over recent years several studies have reported evidence that raises concerns about the poor quality of care women receive in some of these Tanzanian institutions, including frequent experiences of disrespectful and abusive treatment by health providers during childbirth.[3–5]

Disrespectful and abusive treatment during childbirth is a violation of women's fundamental human rights, can negatively influence birth outcomes and discourages women from seeking future care.[6] Numerous individual practices and behaviours of health care providers can be considered as disrespectful and abusive, depending on the definitions that are used. Examples range from behaviour being non-supportive (such as not providing information) to physically harmful practices (such as slapping or beating).[7]

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Mistreatment of women in health facilities is rooted in pervasive gender inequalities and power imbalance between health providers and women.[8] Therefore, disrespect and abuse can be viewed as a consequence of structural violence.[9] Structural violence refers to social forces that create and maintain inequalities within and between social groups, which make way for conditions where interpersonal maltreatment and violence may be enacted.[11,12] Although the term "violence" speaks to the physical nature of disrespect and abuse in childbirth, the essence of structural violence lies in the indirect, systematic and often invisible infliction of harm on individuals by social forces that disable individuals from having their basic needs met.[11] We may be tempted to analyse this phenomenon in a narrower framework, such as seeing women as "victims" and health workers as "perpetrators" of abuse.[13] However, the mistreatment of women in health facilities is systemic and requires a more structural analysis to look at the issue as a consequence of women's lives not being valued by larger social, economic and political structures.[14,15]

Despite 30 years of action at the global level to improve care for women during pregnancy and birth, many countries, including Tanzania, have never been able to make the financial investments required.[14] Instead, expenditures for maternal health over the past decades have increasingly relied on household contributions.[1] In response to structural adjustment policies, the Tanzanian government introduced cost-sharing and decentralisation and reduced the already limited number of health workers and their salaries. Up until today, the human resource scarcity remains a major bottleneck.[16] At the same time, the population has doubled, increasing the burden on a fragile health system. HIV/AIDS and more recently non-communicable diseases have contributed to this fragility.[17] It is not surprising that increasing resource challenges and overload of health facilities have resulted in decreased health worker morale, lack of compassion, fatigue, and sometimes burnout, which are often reported to be underlying reasons for mistreatment of women.[18,19]

Over a decade ago it was suggested that ensuring respectful, high-quality care for all women was a matter of political will to value the lives of women and newborns.[20] Nevertheless, the Safe Motherhood policy discourse remained focused on technical solutions and scaling up simple disease-specific interventions, particularly a focus on skilled birth attendance and access to emergency obstetric care.[21–23] Simultaneously, health system challenges, including limited resources, insufficient training and poor working conditions of health providers, continued and/or deteriorated even further. Disrespect and abuse during childbirth occurs in an impoverished social and political context, in which women's broader needs during pregnancy and birth have been systematically ignored or devalued. In this paper, we describe how and why women's exposure to disrespect and abuse in health facilities should be seen as symptomatic of structural violence.

Methods

Study setting

The study took place from September 2015 to February 2017 at two health centres and one district hospital in the Lake Zone in Tanzania. Facilities were selected based on our previous involvement in the district, ensuring familiarity with the leadership and health professionals. All three facilities were assessed in terms of basic infrastructure, staffing, resources and quality of service provision as part of a district-wide emergency obstetric care assessment. None of the facilities in the district performed in accordance with international guidelines, primarily influenced by lack of available resources and an insufficiently functioning health care system.[24] Some basic characteristics of the three health facilities are provided in Table 1.

Researchers positioning

ASM (a medical doctor) and SP (a nurse) both speak Kiswahili and spent several years in the study area. Both authors were involved in setting up and managing a community-based project and volunteering at different health facilities in the study area. During the data collection period, both spent a total of 52 days at the antenatal care (ANC) clinics or maternity wards of these facilities, observing and participating in care provision. For ASM, this sometimes meant active participation in the form of providing ANC and assisting births. SP remained as an observer but also assisted with minor tasks. JS and TM supervised the study and both have extensive experience working in similar settings in sub-Saharan Africa. All authors were trained in a high-income setting and approached this study from a biomedical perspective. This study was performed with attention to

Table 1. Basic characteristics of health facilities

	Health center 1	Health center 2	District hospital
Location	30 km from district town center, access via tarmac road, centrally located	30 km from district town center, rural location, rough road	In the district town center
Staffing	1 assistant medical officer, 4 clinical officers/assistants, 14 nurses and 4 medical attendants (total staff)	2 clinical officers, 6 nurses and 2 medical attendants (total staff)	ANC clinic: 2 enrolled/registered nurses and 2 medical attendants. Maternity ward: 3 nurses and 2 medical attendants (daily presence, morning shift)
Basic facility statistics 2015/ 2016 (monthly average)	153 ANC visits, 58 births	149 ANC visits, 75 births	550 ANC visits, 262 births

respectful maternity care as defined by the World Health Organisation.

At many of the health facilities visited, the authors observed a lack of respectful maternity care. ASM and SP's long-term involvement in the study area revealed the challenging working conditions of health providers that compromised their ability to provide quality care. Many of the health facilities were in a state of collapse and the basic infrastructure allowed for little room to ensure patient privacy. Health providers frequently shared their struggles in terms of their working environment, underpayment and long working hours. With few exceptions, ASM and SP experienced that all health providers intended to provide good care, aiming for good outcomes and thus this paper, does not indicate health provider perspectives or intentionality of their behaviour.

Study population

Fourteen women were purposively selected with different obstetric backgrounds, age groups and poverty levels. All women had a vaginal birth and half of the women gave birth at home. They were followed up throughout their pregnancy, birth and post-partum period. Recruitment was done in a staggered way to ensure researchers did not follow more than four women at the same time. Women's characteristics are presented in Table 2. Socio-economic status was categorised based on a number of indicators including possession of assets (mobile phone, livestock, furniture) and living conditions (e.g. housing structure, electricity, type of water source). Additional details can be found in Supplementary File 1.

Data collection process

Following selection of women during observations at the ANC clinics, ASM and SP scheduled subsequent observations at the clinics for the expected days of women's return visit. In total, 25 antenatal visits of these women were observed. On some occasions, visits were not observed because women did not show up, did not receive services, or were attended to while the authors were unable to be present. Additionally, observation days were scheduled at the maternity wards for women's expected dates of delivery. Aspects of the birth process were observed for three of the seven women that gave birth in the health facility. In total, 92 in-depth interviews were held with all women, scheduled 1–2 weeks after each of their clinic visits and after birth. Additional interviews were held if further clarification was needed. Interviews were conducted in Kiswahili, lasted 1–3 hours and took place at the women's home, or a location of their choosing. As a starting point, the focus of the interview was on women's perceptions and experiences related to their previous visits at the health facility, discussing both clinical and interpersonal aspects of care provision. Probing questions were asked based on the women's antenatal cards and on the observations. The way women define and explain events is influenced by their background and previous experiences,[25] therefore interviews included questions

Table 2. Overview of individual characteristics, health care seeking behaviour and outcome

Name[a]	Age	No of observations	No of interviews	Years in school	Work	Marital status	SES[b]	Age first birth	Previous birth location	Facility distance	ANC visits	Birth location	Newborn Outcome
Rory	22 years	2 ANC visits Birth partial	6	11	Yes	Married	3	18	1F 0H	1–5 km	4	District hospital	Alive
Diana	30 years	3 ANC visits	8	7	Yes	Married	4	22	2F 0H	<1 km	5	District hospital	Alive
Jessica	25 years	3 ANC visits	8	6	No	Married	2	18	1F 3H	5–10 km	5	District hospital	Alive
Angel	22 years	1 ANC visit	5	7	No	Married	3	17	1F 0H	1–5 km	3	Health centre	Stillbirth
Flora	21 years	2 ANC visits	7	7	No	Married	1	19	0F 1H	5–10 km	4	Health centre	Infant died at 3 months
Jane	18 years	0 ANC visit Birth	5	9	No	Relationship	3	-	- -	1–5 km	3	District hospital[c]	Infant died at 6 months
Tara	37 years	0 ANC visit Birth assisted by researcher	6	5	No	Relationship	2	16	5F 1H	<1 km	2	Health centre	Alive
Maria	22 years	2 ANC visits	7	7	Yes	Relationship	3	14	0F 1H	<1 km	2	Home	Alive

(*Continued*)

Table 2. Continued

Bea	29 years	2 ANC visit	5	11	Yes	Married	4	24	2F 0H	1–5 km	3	Home	Alive
Pili	19 years	4 ANC visits	8	7	No	Married	3	17	1F 0H	>10 km	4	Home	Alive
Naima	19 years	1 ANC visit	7	7	No	Married	1	16	1F 0H	>10 km	3	TBA home	Alive
Mariam	32 years	1 ANC visit	6	7	No	Married	2	22	3F 2H	1–5 km	4	Home	Alive
Paulina	37 years	2 ANC visits	8	5	No	Married	1	16	3F 4H	>10 km	5	Home	Alive
Helena	31 years	2 ANC visits	6	4	No	Married	3	17	2F 4H	1–5 km	3	Home	Alive

Note: ANC: antenatal care; No: number; SES: socio-economic status; F: Facility; H: Home.
[a]Names are pseudonyms.
[b]All women are poor, but category for socio-economic status is determined based on a number of indicators including possession of assets, living conditions and personal background. Category levels range from very poor category 1 to more well off category 4.
[c]She was transferred from the health centre to the district hospital with the ambulance.

about women's childhood, their first pregnancy, marriage and subsequent pregnancy experiences, if any. Previous and current choices the women made in relation to care seeking or with regard to other major life events were discussed, providing information about women's perceptions of their self-efficacy, their social identity and the influence of their social networks.

Data collection tools

Observation of behaviour is highly subjective and challenging, particularly if conducted in a cultural setting different from the observers, since behaviour can be enacted differently across cultures.[26] However, health providers in Tanzania are expected to perform according to standards of professional conduct.[27] These standards include guiding principles that must be followed when caring for patients, such as ensuring to obtain patient consent before providing care and protecting confidential information. To reduce the influence of the author's personal judgment, observation guidelines were developed in line with these standards to provide some level of standardisation to the interpretation of what was observed. Few instruments exist for observation of interactions and behaviour of health providers in maternity care in low-income settings.[28] Considerably more work has been done in high-income countries, often limited to intrapartum care, or with reference to nursing care in non-maternity settings.[29] Based on existing literature reviews,[7,28,30–32] categories and sub-dimensions for both supportive (Table 3) and non-supportive behaviour (Table 4) were developed. The categories of disrespect and abuse as defined in previous studies have a tendency to be either too narrow,[31] or too comprehensive[7] for practical use. For these categories, complex concepts were avoided (e.g. non-dignified care), potential overlap between categories was reduced (e.g. physical abuse, sexual abuse) and the total number of categories was limited.

Analysis

Analysis of observations and interviews occurred continuously throughout the data collection period. Detailed reports were written after each observation day. All interviews were recorded and transcribed in Kiswahili and translated into English by a research assistant. Transcripts and observation reports were synthesised and, in dialogue with the women, were placed in chronological order based on the timeline of women's lives.

Through this, we developed detailed narratives of women's reproductive lives and interactions with the health facility during their current pregnancy. Narratives can be a tool to unravel the unconscious structures, conventions and norms through which people make sense of and cope with their lives.[33] For the purposes of this paper, we analysed the narratives in two phases. First, we performed a deductive thematic analysis of narratives, whereby we coded situations exemplifying supportive care and non-supportive care. Second, we looked at women's daily experiences through the lens of structural violence. We analysed women's exposure to non-supportive care in relation to the social context, deconstructing the categories of care and their meanings, forming overarching themes.

Validity

We took several measures to ensure the validity of the development and interpretation of the narrative text. First, the increased familiarity between the researchers and the women resulted in increased confidence and trust in the researchers. Women shared personal details they had left out initially and offered less socially desirable answers. Second, conducting several interviews allowed us to revisit previously discussed issues, gain clarification and further explore questions that arose during the writing of the narrative. The intervals between the interviews also allowed both the researchers and the women time for reflection. Third, the authors encouraged women to think

Table 3. Categories and sub-dimensions of supportive behaviour

Category	Sub-dimension
Emotional support	Observes, identifies and responds to signs of emotion, stress, fatigue, pain. Makes statements to reassure and encourage woman. Is friendly, open and gentle. Introduces self, smiles, has a pleasant facial expression. Positive laughter, joking, social chitchat, humour. Uses words, phrases and non-verbal expressions to express concern and empathy. Relaxed calm demeanour, soft calm voice. Keeps company with no tasks being performed, showing undivided attention (eye contact, woman-direct gaze, leaning forward). *Birth specific:* Active engagement and encouragement during contractions, verbal- and non-verbal, expressions affirming woman's ability, praise.
Physical support	Assists patient gently and in a culturally sensitive way during examinations. *Birth specific:* Offers, checks, encourages and assists woman to take fluids/food, go to toilet regularly, changes clothing and linen, showers or bathes. Provides pain medications, encourages relaxation or other ways of support (counter pressure, assists in walking, assuming different positions). Coaches through labour such as with breathing and relaxation or touch (holding hand, massage).
Effective communication	**Gives explanations**: Explains to woman when to contact the midwife, explains what needs to be done in case a complication occurs. Explains procedures or treatment, what is done and why and informs of findings. **Gives information**: Provides update on progress of pregnancy and birth. **Gives instructions**: Instructs woman what to do during pregnancy including how to cope with normal pregnancy symptoms. Informs woman where to go if supplies are not available. *Birth specific:* instructs patient during and after birth how to participate to improve outcome, information on how to cope with pain, coaching during pushing. Advises patient to change position, walk around, breath in and out for comfort. **Involves**: Provides woman with options and involves in decision-making. Asks woman if she has questions and encourages her to ask questions.
Nursing proximity	Is accessible, comes quickly when woman or family member calls, expresses accessibility verbally, encourages woman to request assistance and express needs, faces the woman and position at the same level.
Privacy respected	Ensures privacy and confidentiality: uses curtains, sheets, and positions to avoid exposure, discusses privately with client or with colleagues or with family, minimises interruptions.
Consent	Asks for permission before performing examination or medical procedures.

Table 4. Categories and sub-dimensions of non-supportive behaviour

Category	Sub-dimension
Psychological abuse	Verbal aggression such as shouting/scolding, threats, insulting, laughter (negative belittling humour or sarcasm), name-calling. Dominant behaviour such as preventing woman from doing certain things she wants or forcing certain actions. Demanding woman to clean after delivery. Discriminatory behaviour such as not providing care for reasons related to race, gender, age, HIV status, marital status.
Physical abuse	Pinching, slapping, pushing, beating, poking, sexual harassment or rape. Forced (unnecessary) examinations, excessive and inappropriate medical interventions, episiotomy and stitching without anaesthesia.
Non-support	Includes behaviour which is not necessary harmful [in contrast to with physical or psychological abuse] but is also not supportive: ignoring of cues, ignoring contractions (talks, discusses, performs actions during contractions), loud/harsh/cold tone, undermining efforts, nervous restless demeanour, cold or angry facial expression, criticism of woman's behaviour, doubts expressed about woman's ability. Absent behaviour such as no introduction, no discussion of wishes of woman, no explanations or information given, no encouragement, no expression of empathy.
Abandonment	Woman is ignored when seeks or asks for care, neglected when asks for help, left unattended, gives birth alone. Delay in receiving intervention when needed, failure to provide supplies even if supplies are available, failure to offer services when staff are adequate and on duty.
Privacy violation	Medical information shared with other patients or family members (such as HIV status shown to others, discuss issues with other clients present). Being unnecessarily uncovered during clinical examination or labour, no use of available screens or lack of attempt to provide privacy. Sharing of beds with other patients. Frequent interruptions and attendance of different staff members.
Non-consented care	No permission obtained before examination for medical procedures.

more critically about the interpersonal behaviour of health providers in relation to norms and values of social interactions in daily life. We explored local perspectives on the interpretation of behaviour through discussion of the narratives with a small group of local health professionals including a male Tanzanian gynaecologist/obstetrician and a female midwife. The group also included a young mother (ICT specialist) with both positive and negative birth experiences. The group was consulted in relation to the observation guidelines mentioned above. As women were included gradually and data collection and analysis occurred simultaneously, discussions with the group guided our focus with women who were subsequently included.

Ethics

Ethical approval was granted by the National Institute of Medical Research in Tanzania (MR/53/100/103-349-399) and a research permit was granted by the Tanzanian Commission for Science and Technology (No. 2015-255-ER-2013-32). The Regional Committee for Medical and Health Research Ethics, Section A, South East Norway (2015/1827), and the Norwegian Social Science Data Service (44482/3/MHM) both reviewed the study and agreed that it was in accordance with the Norwegian Personal Data Act. Health workers and participating women gave written informed consent. We ensured anonymity in note taking and pseudonyms are used for participant names.

Findings

All women were exposed to both supportive and non-supportive care, including instances of disrespect and abuse, throughout their pregnancy and birth. Half of the women described similar experiences during previous pregnancies and births. Tables 5 and 6 give an overview of both supportive

Table 5: Examples of exposure to supportive care in the current pregnancy

Name	Type of supportive care	Examples
Rory	*ANC:* Effective communication	Received quick services during her second ANC visit and was asked if she has any problems.
	Birth: Physical support	During admission for birth one nurse escorted her to the waiting area and helped her find a bed.
Diana	*Birth:* Emotional support, nursing proximity, effective communication	During birth she was attended gently and in a friendly way. Nurse came when she asked her to and she experienced the nurse to be with her at all times during the birth. Was given instructions on how to push.
Jessica	*ANC:* Emotional support	She was given priority when she came with her husband during her first ANC visit. She liked that she was allowed to sit on the front bench and was given services quickly. She was approached in a friendly way.
	Birth: Emotional support, physical support, effective communication	During birth she felt she got very good service. The nurses were gentle and friendly to her. She was explained what was causing her to delay giving birth and nurses directed her what to do after they ruptured the membranes. They helped her to carry her things, cleaned her and carried her baby.
Angel	*ANC:* Effective communication	During one ANC visit a nurse was providing health education about HIV prevention and testing, was giving explanations and involving women.
Flora	*ANC:* Emotional support, effective communication	During her second visit, she was given good services. It was discovered she was HIV positive. Nurses ensured they were sitting in a private place. The nurse used humour, a soft tone of voice and had regular eye contact. She was given explanations and instruction about her condition and the medication.
Jane	*ANC:* Emotional support, effective communication	She was happy with the services during the first ANC visit, nurses were swift in providing care and helped each other when it was busy so that she did not have to wait long. During her third visit, she was told the baby was doing fine.
	Birth: Physical support, emotional support	Upon arrival at district hospital for birth, the nurse assisted her to get on the bed and instructed her how to lie. When the nurse noticed the examination was painful, she tried to comfort Jane, told her in a soft tone of voice to try to relax and keep her bottom down on the bed.
Tara	*ANC:* Emotional support	The ANC clinic was closed one day when she went for a check-up outside of her scheduled visits because she was feeling sick. She was instead directed to be seen by the doctor.
	Birth: Emotional support	During birth the nurse was considerate for her HIV status and made sure the person accompanying her did not find out. Was given good services after birth. Was told to lie down to rest for a while after birth and not get up immediately. (Note: The researcher assisted this birth.)
Maria	*ANC:* Effective communication	During her second ANC visit, nursing students asked her for consent before performing physical examination. They were polite and friendly to her.

(*Continued*)

Table 5: Continued

Bea	*ANC*: Effective communication, nursing proximity, emotional support	During her first ANC visit, a nurse was providing health education about HIV prevention and testing, was giving explanations and involving women. She was seen immediately by a doctor who asked her name and spoke about her problem. He looked at her while asking and expressed a friendly attitude; he was gentle and listened to her.
Pili	*ANC*: Emotional support	During second and third ANC visit she had positive social talk with the nurses.
Naima	*ANC*: Effective communication	During her second ANC visit she was told the baby was fine and that he was playing inside. Was instructed to go and see the doctor if she was having pains or other complaints.
Mariam	*ANC*: Effective communication	Was told everything was fine during all her ANC visits.
Paulina	*ANC*: Emotional support	During her third ANC visit, she was listened to with regard to her symptoms and allowed to change her HIV medication.
Helena	*ANC*: Emotional support, effective communication	During her first ANC visit, she was informed about the condition of the baby and given an explanation together with her husband on what to bring during birth. The nurse ensured privacy during HIV testing, closed the door and asked for consent and explained the procedure.

and non-supportive care that women were exposed to during their recent pregnancy and birth.

Normalisation of absence of care

Women and health providers often interacted in complete silence and care provision was frequently devoid of any form of verbal communication. Women were rarely greeted or welcomed and were not addressed beyond simple instructions such as "*simama hapa*" (stand here), "*panda*" (climb) or "*kaa*" (sit). This is a cultural deviation, as greetings are very important in all social interactions in Tanzania. Women were not always informed about the findings of examinations or results of laboratory tests and they rarely received information about the system of care provision. Additionally, women's concerns, opinions and knowledge were frequently ignored.

"They check and see what they see, they don't tell us whether it is positioned well or not, they don't say, they just measure." (Paulina, interviews)

"I don't like it […], but that's how it is. Does she [nurse] listen [to us]? […] She asks, we listen, it's just normal." (Helena, interviews)

"Those nurses, even if you tell them, they don't care […] because when you tell them they don't really concentrate on what you are telling them, they are just doing their business and just looking at you as if you are nothing and then continue with their business, with other work." (Pili, interviews)

Some of the women were not believed when they informed the nurses about their last normal menstrual period, resulting in conflicting opinions on the gestational age. Even if they disagreed, most of the time women did not argue with health providers. They did not want to risk being scolded or blamed for "thinking they know it all", putting them at risk of not receiving care. If women were feeling sick their symptoms were sometimes dismissed as being irrelevant. Most of the time, however, women would not inform nurses if they were having problems, partly because they did not expect much from them:

"Even when you tell them, with what will she help you, even when you talk it will stop you from telling them […] even if you tell them they don't have medicine, […] these nurses … it is just a waste of time […] I don't think they will advise me." (Pili, interviews)

Table 6: Examples of exposure to non-supportive care in the current pregnancy

Name	Type of non-supportive care	Examples
Rory	*ANC:* Psychological abuse, non-supportive care	During her first ANC visit she decided to keep quiet when she heard nurses speak harshly towards other women. She was placed at the end of the waiting line because she did not come with her husband. She was unnecessarily sent back and forth between different rooms without receiving services. She was not welcomed, lack of communication including no information provision about the wellbeing of her baby or herself. No consent or information provision during HIV testing. Was given a return date on a national holiday.
	Birth: Physical abuse, non-supportive care, abandonment	Forced vaginal examination during birth despite protest and expressing physically and verbally that it was painful. Not welcomed upon arrival at the facility. Her card was taken from her without any communication. No information provision after examination other than “later”, meaning she needed to go to the waiting area because birth was not imminent. Nevertheless, she gave birth 30 min later. Despite calling repeatedly for the nurse to help her, the nurse remained at a distance only to come closer when the head was crowning.
Diana	*ANC:* Non-supportive care	During her first ANC visit she had to wait unnecessarily long, was sent back and forth and left to wait uninformed until she was told to come back tomorrow without explanation why and for what. General lack of communication during other clinic visits without information on the wellbeing of her baby and herself.
	Birth: Non-supportive care	Other than being told birth was not until “later” she remained both at the waiting area and labour ward for a long time (total 24 h) without information about the progress of labour or condition of the baby or herself despite her own expressed worries about the amount of blood she had lost.
Jessica	*ANC:* Non-supportive care, privacy violation, non-consented care, psychological abuse	During her first ANC visit she was not given explanation of the findings of laboratory investigation. Was ignored when she informed the nurse about her complaints (stomach ache). She was given a return date on a Sunday. During physical examination at her first visit, there were many interruptions by students coming in and out. Was reprimanded for coming too late to her second clinic visit and threatened she would not receive services. HIV test was performed without counselling or asking for consent.
Angel	*ANC:* Non-supportive care	During her first ANC visit she was not provided with the ANC card and therefore had to buy and bring a notebook. She had been seen for ANC the morning of the day that she delivered a stillbirth. During this visit her stomach ache was dismissed as being part of normal pregnancy symptoms, she was not informed about her condition or that of the baby.
Flora	*ANC:* Abandonment, non – supportive care	For her first attempt to visit the ANC clinic she was refused services because she did not come with her husband During her actual first visit she was not welcomed, no explanations were given about the service received, no safe space to express her symptoms of pain and cough.

(Continued)

Table 6: Continued

	Birth: Psychological abuse, abandonment, non-supportive care	Upon arrival at the facility for birth, the nurse responded annoyed and aggressive upon arrival at the facility, wanted to send her to another hospital for unclear reason. The nurse was angry at her for having squatted above the basin and said that she would have lost her job if the baby had been born in the basin. She was told to clean up after birth and was threatened not to get back ANC card or would not be allowed to go home if her sheets were not washed. Was not taken seriously when she told the nurse she felt to push. Was left alone for 4 hours without any check-up. Eventually, the head was born without nurse present.
Jane	*ANC:* Non supportive care, abandonment.	During her first ANC visit she was not believed when she told the nurse her last normal menstrual period. Her information was dismissed and the nurse gave her an estimated date of birth two months beyond what Jane believed to be true. No education or information provision on measurements or what to expect during pregnancy and birth despite it being her first pregnancy. Was refused services at her second clinic visit because this day was not for her village.
	Birth: Psychological abuse, physical abuse, non-supportive care, abandonment, non-consented care	Upon arrival for birth she was not welcomed at the health centre, instead she was ridiculed by the nurse because she was not adequately responding to the nurse's comments. The nurse had told her firmly not to drop her clothes on the floor. Was told her son almost died because she was not pushing well. Was told firmly to stop crying without attention for the reason why she was crying. Vaginal examination and interventions were done without consent and forced while restraining her if she resisted. She was told she was not relaxing, she was not doing what she was supposed to do. Received directions on what to do in a firm way "keep arm straight", "don't move", but no explanation on what was going on, why she received interventions and no consideration for her pains or her fear. Was refused to drink water as this was thought to reduce contractions. Was ignored when she arrived at the health centre until her family member provided the necessary gloves to the nurse. Vaginal examination and interventions including fundal expression and episiotomy without consent.
Tara	*ANC:* Non supportive care	During her second ANC visit, the nurse was ranting about her working conditions while performing services and scolded another woman because she said she could not hear her well.
Maria	*ANC:* Psychological abuse, non supportive care, privacy violation	During her first ANC visit she received belittling comments when she was unable to answer all the questions related to danger signs. During her second visit, other women who came with their husbands were prioritised and she was told to go back in line. Nurses laughed at women complaining about long waiting time. Asked the researchers to change her return date on her ANC card after she had not shown up, she feared she would be scolded if she would go next time. No explanation given on findings, no follow-up provided despite being diagnosed with low haemoglobin level. Interruptions when other students walked in and out during physical examination.

(*Continued*)

Table 6: Continued

Bea	*ANC:* Non-supportive care, abandonment	Nurses refused to give her an estimated date of delivery because she could not remember her last menstrual period; however, this was complicated because of her use of contraceptive method. Was refused care during her expected fourth visit because the nurses expected to receive training.
Pili	*ANC:* Psychological abuse, abandonment, privacy violation, non-supportive care	Threatening language during health education. The nurse was informing people what to bring for birth, explaining that women will get HIV if they don't bring their own sheet and that they will be refused if they don't bring everything. Pili felt this was normal and good health education because some women don't know how to behave. No explanation about medication which was given or tests which were performed. Refusal of service for her first visit because they only see women for their first visit on Mondays. Also refused services during her fourth visit because the nurse who was doing the clinic had to escort a woman in labour to the district hospital. Frequent interruptions during the clinic visit.
Naima	*ANC:* Psychological abuse, non-supportive care, privacy violation	Naima felt she was not allowed to be seen during her second ANC visit. Nurse told all waiting women that "if you do not have a husband with you, there is no checking at the clinic". During the visit her cues of being sick were ignored, not asked about. For her third ANC visit, other women were prioritised which caused her to wait for a long time, she was not feeling well and had a crying toddler with her, she could not cope and left without being attended. Interruptions by other health provider during physical examination looking for supplies.
Mariam	*ANC:* Non supportive care	She said the nurse was harsh during the first ANC visit, performing her work angrily. Was not taken seriously in relation to her own expectation of when she thought she would give birth.
Paulina	*ANC:* Non supportive care:	Had to go to another clinic several times to collect her HIV card number. Was getting severe side effects of her new HIV medication but was not taken seriously at the ANC clinic which resulted in her stopping taking her ARVs, despite going back to the ANC clinic outside of her scheduled visits. She explained the nurse did not inform her about the condition of the baby or herself.
Helena	*ANC:* Non-supportive care, abandonment	Was refused services during her first visit because she had not brought her husband with her. During ANC she was told she was wrong about the length of her pregnancy. Received a return date on a national holiday. Received another vaccination for tetanus even though she had finished it, was not believed and given the injection anyway. Nurse was annoyed she came late for her third ANC visit, was reprimanded and threatened not to receive services. Was refused services during her 1st visit because she had not brought her husband with her.

Despite women expressing disapproval about how they were treated at facilities, women frequently referred to services being "*kawaida tu*" (only normal), "*nzuri tu*" (only good), because it is how it always is. Women routinely attended their scheduled visits at the clinic. They expressed that this was their responsibility and a necessity to know if everything was normal. Even though some women had performed a pregnancy test, it was not until a nurse at the clinic confirmed this that they embraced the full truth of being pregnant.

"It is important to go there; […] it is my task to go there. […] There is gain for the pregnant woman herself and the child […]. It is necessary for advice as well, advice on how to care for your child. […] The nurses they know, when my pressure goes up or goes down, how will I know how it is? No that is why the one who knows more is the nurse […] the one who measures is the one who knows." (Maria, interviews)

Justification of punishment and rewards

Younger, less experienced women were more likely to experience disrespect and abuse, mostly because they did not behave as they were expected to, for example, if they did not bring the necessary "*vifaa*" (supplies or materials) for birth, if they did not dress properly or if they did not follow the system of care provision. Sometimes women were reprimanded or scolded if they did not do as they were told. When Flora was admitted to the labour room, the nurse repeatedly told her to lie on her side and instructed her not to push, even though Flora felt it was already time.

"When she [the nurse] left the room, I asked my relative to hand me the basin, so that I could pee. I squatted down and the bottle broke [membranes ruptured] and the door [of the labour room] was opened and then one of the women came to help me on the bed. […] So when she [her relative] saw the head started to come she ran away to call the nurse. […] When the nurse came she saw the water in the basin and shouted: 'Do you want me to be fired?' [Flora imitating the angry voice.] I told her: 'You say the contractions are not yet ready so that's why I came down'. The nurse said: 'It is better you pee on the bed because if you pee here I'll be fired and also the other nurses they will be kind of surprised, why do you allow her to walk, why did she deliver in the basin. So it's better to pee in the bed, […] now just be strong and start pushing because the head is out". […] Then I pushed like three times and the baby came out." (Flora, interviews)

After birth Flora cleaned the bed and was instructed to clean her sheets, otherwise she would not get her ANC card back. Some women deliberately took precautions to avoid being confronted with disrespectful behaviour. Women said they would "keep quiet", refrain from asking any questions and make sure not to attract any unwanted attention. Particularly for younger women, acting as more confident and experienced could result in better treatment. For example, when Pili entered the ANC room, the nurses did not greet her but instead directly asked her for the name of her village. Pili responded swiftly and confidently while asking the nurse: "Did you forget?" During the interview, when asked how she presented herself in the clinic, she said:

"I am entering there [at the facility] very confident, like a true woman […]. I am doing that because if you are scared you will feel they are bad but if you go in a charming way you are just like them. You see them they are good." (Pili, interviews)

During health education sessions, stories about what happened to women if they did not behave well often resulted in laughter from both the nurses and the women. Not only was such behaviour by nurses considered "normal", it was a necessity because "some women don't know how to behave". Some women justified health providers' strict language, threatening behaviour and verbal or physical acts for disciplining, for example:

"Then I felt like the baby is coming out, and then she tells me 'keep pushing'. She was [standing] far […]. Then I felt like I want to go to the toilet. I was calling her, 'nurse come', and then she told me 'aah just keep pushing'. […] Then she came a bit [closer]. They don't care, some of them they think you are just scared, [that you are] not yet having [pushing] contraction. So when she starts to see the head of the baby then she is starting to help you. […] When you are screaming, maybe they can start to kick you, to slap your face [Rory started to laugh]. Because the noise it does not help you. She slaps you to stop. It is okay to slap them because some of them are really making noise. But me I don't scream." (Rory, interviews)

Whose effort counts?

At times, several women were unable to receive services while attempting to attend the ANC clinic.

On some occasions women were refused services because they were too late, did not come with their husband or because their type of service was not available on that particular day. Sometimes clinics were closed unexpectedly due to lack of available staff, during national holidays or when health workers were receiving supervision or training. Often these closures seemed arbitrary, as we observed that attending to the pregnant women would have been possible. For example, when Bea was unable to attend her fourth visit, the following was observed:

> At 8 a.m. there were three women at the entrance of the ANC clinic, including Bea. At the reception two nurses were sitting and resting their head in their hand, another nurse was lying down with her head on the table. One of the nurses approached the women and said there would be no service today because they were expecting to receive special education. Women were instructed to come back after the weekend. […] When walking back to the bus stand Bea said this was a bad situation and that she wasn't happy. She came with the 'daladala' [taxi bus] but now she needs to come back next week. […] The following hour and a half, while the nurses were waiting for the training to start, one more woman was told there was no clinic today, another woman was helped with measuring the weight of her baby and a pregnant woman was assisted to collect antiretroviral tablets. (Bea, observation notes)

Bea was already far into her pregnancy and never managed to attend to a fourth visit because she gave birth at home the following day. When women were unable to receive services, there was rarely an empathic reaction or apology for the inconvenience. Women's efforts using their time and personal resources to come to the facility in vain seemed not to be valued. In contrast, the women nearly always appreciated nurses' efforts, even if this meant women needed to tolerate physical and verbal abuse. For example, the following events were observed during Jane's birth:

> Two nurses [medical attendants], walked towards Jane deciding to help her. Nurse Esther stood at the right side and Nurse Dynes stood at the left side of Jane. Dynes supported Jane's head while Esther actively spread Jane's legs and told her to push. 'We are using traditional methods now' she said. Esther and Dynes folded a 'kanga' [a local fabric] on the stomach of Jane like a belt and when Jane had a contraction they pushed the kanga down and screamed 'push!!' The head of the baby slowly became visible. Esther put her fingers in the vagina and said to the doctor who was present: 'Look, look there is space, mama is not pushing! There is a lot of space.' She moved her fingers around in Jane's vagina with force, around the head of the baby and repeated this several times. No one spoke with Jane, she gasped heavily, was sweating and looked tired but the nurses did not pay attention to her. Another contraction came and Jane pushed while Esther hung with her full body weight on Jane's abdomen to push the baby down. Esther screamed 'you are not pushing, mama push, you let us do all the work!' Dynes asked for a scissor, placed it at the perineum and made the cut. Jane was not informed and let out a piercing scream. Both Esther and Dynes took a part of the kanga at one side of Jane and, created a rhythm with their voices. 'Push, push, push, push, push' while pushing the kanga down. Jane looked exhausted. She was gasping for air with her eyes wide open. Every time she wanted to take a breath someone told her to push. 'You don't speak! PUSH', they said. […]. (Jane, observation notes)

Jane explained later she was afraid her baby would die, she had been in pain, but was mostly worried about her child. She thanked God he survived.

"She [the nurse] was just giving me normal service, that is good service […] because the nurses worked at it, they attended me." (Jane, interviews)

Discussion

Women's narratives revealed how they were repeatedly exposed to disrespect and abuse in their interactions with health providers, during ANC, during childbirth, and from one pregnancy to the next. All women, regardless of their age or socio-economic status, experienced both non-supportive and supportive care (see Table 5), sometimes by the same nurse within the same setting. Women's experience of such conflicting treatment is further complicated by the manifestation of non-supportive care. Our findings reveal how normalised and legitimised non-supportive care has

become over time, with women lacking power or opportunities to confront this experience.

The majority of women in our study grew up in poverty and were still living with grave economic insecurities. Many of them were pushed into early marriage due to teenage pregnancy and were unable to continue their education. Few women had an independent income. The majority of women therefore relied on their husbands to provide for the necessary expenses to access care. In Tanzania, many young girls and women experience abuse in school (Tanzania allows corporal punishment)[34] or are exposed to intimate partner violence.[35] Health care institutions reflect and reinforce dominant social processes in their society.[36] The way women are treated in health care settings correlates with their position in society and vice versa. It should not be a surprise that such frequent and normalised abuse in everyday life leads to equal normalisation of similar poor treatment in health care institutions.[37]

For many women, their first experience of disrespect in a health facility is the absence of greeting by health providers and of a welcoming reception. This might seem of little relevance in the greater debate on abuse and disrespect during childbirth. However, the absence of greeting is a rejection of social rules that health providers outside the health institution abide by. In health institutions, women appear to lose their social identity, and "lose their right to be respected".[38] Women frequently expressed disapproval of such interpersonal behaviour but at the same time felt disempowered to change this. Normalisation of non-supportive behaviour is symptomatic of an institutional culture of dehumanised care. In such a context, women have to accept a deplorable physical environment, inadequate (human) resources, and to endure disrespectful and abusive treatment.[39] Repeated exposure to such non-supportive care ultimately weakens women's agency, including their self-esteem and sense of safety.[40]

Regardless of low levels of education or socioeconomic status, women are aware that they deserve better, and do not simply submit themselves to poor treatment.[41] They were consistent in attending ANC, even if they were frequently disappointed or if their knowledge or opinion was dismissed. Women frequently expressed that they trusted nurses to know what was best for them. The active suppression of women's knowledge and women's firm belief in what nurses represent is referred to by Jordan as "authoritative knowledge".[42] Health providers may act in disrespectful or abusive ways, in part because they are in a powerful position and represent a powerful system.[32] Their level of education and technical biomedical knowledge confer superior social status[38] in relation to their female patients[43] and this power imbalance influences how they behave towards women. Women are expected to adopt behaviour imposed by the nurses and to abide by these rules when they come to the facility for services or to give birth. Consequently, if women don't comply, or are unaware, they are perceived to be disobedient, and are themselves held responsible for poor outcomes. To regain control, health providers can turn to abusive measures to force compliance.[43] Women justify this behaviour even though they fear exposure to it.[10] Our findings illustrate how women use tactics to avoid mistreatment and are proud if they are able to do so. Such submissive behaviour symbolises how women through their oppression have internalised the prescribed behaviour.[44]

Addressing the mistreatment of women in health facilities is finally gaining momentum in the global field of maternal health, leading to the integration of respectful maternity care in critical guidelines.[45] But within the current global health culture of relying on metrics,[46] such guidelines risk oversimplifying individual women's needs. The search for universal definitions of disrespect and abuse in child birth, as well as clear typologies of what this includes, can result in misleading or narrow dichotomies which devalue the routine and often subtle nature of women's suffering and the complexity of what drives it.[10]

Nurses are themselves confronted with hierarchical power structures within their work. Medical doctors or others in leadership positions can undermine nurses' authority and decision-making ability.[47] Predominantly female health providers have gone through the same abusive educational system and their ability to provide quality care is seriously compromised by a lack of resources and support, and the perceived threat of losing their jobs in case of poor outcomes. Similarly to the women they provide care to, they are unable to change their situation due to their perceived lack of voice, both within the nursing education system and within the health system as a whole.[47] Nurses may act as oppressors, while also being oppressed by the same social forces that maintain structural violence.

The global maternal health community needs to be more self-critical and reflect on how global health interventions may contribute to women's mistreatment. Examples include women being refused services if they come without their husband, or finding the clinic closed due to supervision visits or skills training. The lack of recognition of women's efforts to get to the health facility, often in vain, contributes to the complexity of this situation. Global statistics on antenatal coverage are a representation of services that are provided but do not reflect the true picture of women's care seeking. Women seek services, but do not always receive good quality care, nor are they always treated with respect.[39] Acknowledging disrespect and abuse of women in health facilities as a consequence of structural violence requires us to move beyond viewing disrespect and abuse as a primary problem during childbirth. Mistreatment of women should be holistically tackled across the continuum of care, through structural interventions. Preventing disrespect and abuse at its core requires an approach beyond improving health workers' skillsets and achieving organisational changes at institutions level. Societal conditions that keep women's status inferior must be addressed,[32] policy and funding priorities must be discussed,[21] and collective efforts are needed to establish accountability mechanisms whereby the appropriate authorities are held responsible for women's lack of access to respectful care.[14,48]

Limitations

Although we attempted to keep much of the original wording of participants, the narratives are a product of our subjective interpretation of the situations and thus particular and incomplete. The knowledge generated can therefore not be generalised.[49] However, following Fathalla's story "Why did Mrs X die?" presented during the launch of the Safe Motherhood movement in 1987,[15] there are lessons which can be garnered from individual stories. Some authors argue that to determine if certain behaviour is "abuse", it needs to be subject to variation based on culture, context and personal expectation or experience.[5,21] Freedman et al[21] proposed that local consensus as to what constitutes disrespect and abuse helps to determine behaviour within local norms.[21] For this reason, we consulted with a local group of health professionals for the analysis. However, reflecting on behaviour based on local consensus risks ignoring that disrespectful acts can be invisible manifestations of inequality engrained in the fabric of society.[12] It is therefore possible that we interpreted situations as disrespectful or abusive, while these were not experienced as such, not intended as such and not considered as such by local standards.

Conclusion

In this study, all women experienced disrespect and abuse starting from their first obligatory and expected visit to the health facility for ANC and during birth. From the perspective of structural violence, non-supportive care is symptomatic of systemic gender inequality in society, which is manifested in health providers' interactions with women. Disrespect and abuse in health facilities has been normalised and legitimised as a consequence of women's lives not being valued. Health providers, however, are also victims of structural violence, even though at the same time they can be perpetrators of abuse. To achieve respectful maternity care for all, interventions to prevent disrespect and abuse cannot be implemented without recognition of structural inequalities that foster the conditions that make mistreatment of women possible.

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Conflict of interest

The authors declare that they have no conflict of interest.

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Résumé

Les patients, en particulier les femmes en couches, souffrent effectivement d'un manque de respect et de maltraitance dans le secteur de la santé. C'est une violation des droits fondamentaux des femmes et peut être considéré comme une conséquence du peu de cas que font les structures sociales, économiques et politiques plus larges de la vie des femmes. Nous démontrons ici de quelle manière cet irrespect et cette maltraitance sont pratiqués à un niveau interpersonnel dans l'ensemble des soins en République-Unie de Tanzanie. Nous décrivons comment et pourquoi l'exposition des femmes au manque de respect et à la maltraitance devrait être vue comme le symptôme de la violence structurelle. Des récits détaillés ont été préparés sur la base d'entretiens et d'observations des interactions de 14 femmes rurales avec des prestataires de santé depuis leur première visite

Resumen

En el sector salud ocurren falta de respeto y maltrato de las pacientes, especialmente de las mujeres en proceso de parto. Esto es una violación de los derechos humanos fundamentales de las mujeres, que puede ser considerada como consecuencia del hecho de que la vida de las mujeres no sea valorada por mayores estructuras sociales, económicas y políticas. Aquí demostramos cómo la falta de respeto y el maltrato son aplicados a nivel interpersonal a lo largo del continuum de atención en Tanzania. Describimos cómo y por qué la exposición de las mujeres a la falta de respeto y al maltrato debe ser considerada como síntoma de violencia estructural. Se elaboraron narrativas detalladas basadas en entrevistas y observaciones de las interacciones de 14 mujeres rurales con prestadores de servicios de salud, desde su primera consulta prenatal hasta después

prénatale jusqu'à après la naissance. Les récits étaient fondés sur l'observation de 25 visites prénatales et 92 entretiens approfondis avec les mêmes femmes. Toutes les femmes ont été exposées à des soins non positifs pendant la grossesse et l'accouchement, y compris des violences psychologiques, des mauvais traitements physiques, un manque de soins et des violations de leur intimité. Les inégalités sexospécifiques systémiques rendent les femmes excessivement vulnérables aux abus, exprimés comme une normalisation de la maltraitance dans la société. Les institutions de santé reflètent et renforcent les processus sociaux dominants et une normalisation de soins non bienveillants est symptomatique d'une culture institutionnelle des soins qui est devenue déshumanisée. Les prestataires de santé peuvent agir de manière irrespectueuse parce qu'ils sont placés dans une position de pouvoir, exerçant une autorité sur leurs patients. Néanmoins, ils sont eux-mêmes aussi les victimes des défis continuels du système de santé et des mauvaises conditions de travail. Il est impossible de prévenir l'irrespect et la maltraitance pendant les soins prénatals et l'accouchement sans porter attention aux inégalités structurelles qui favorisent les conditions permettant la maltraitance des femmes vulnérables.

del parto. Las narrativas se basaron en la observación de 25 consultas prenatales y 92 entrevistas a profundidad con las mismas mujeres. Todas las mujeres fueron expuestas a atención sin apoyo durante el embarazo y el parto, tales como maltrato psicológico, maltrato físico, abandono y violaciones de privacidad. Debido a la desigualdad de género sistémica, las mujeres son excesivamente vulnerables a sufrir maltrato, expresado como normalización del maltrato en la sociedad. Las instituciones de salud reflejan y reafirman los procesos sociales dominantes, y la normalización de atención sin apoyo es sintomática de una cultura institucional de servicios de salud que se han dehumanizado. Los prestadores de servicios de salud pueden actuar de manera irrespetuosa porque son colocados en una posición poderosa, con autoridad sobre sus pacientes; sin embargo, también son víctimas de retos continuos y malas condiciones laborales del sistema de salud. No se puede prevenir la falta de respeto y el maltrato durante la atención prenatal sin prestar atención a las desigualdades estructurales que fomentan las condiciones que permiten el maltrato de mujeres vulnerables.