“THERE ARE NOT ENOUGH”

The Banning of Traditional Birth Attendants in Zambia

By
Tyler Christopher Fox

Senior Honors Thesis
Department of Anthropology
University of North Carolina at Chapel Hill
April 1st, 2019

Approved:

_____

Dr. Robert Daniels, Thesis Advisor

Dr. Lydia Boyd, Reader

Dr. Emily Burrill, Reader

Acknowledgements **4**

Glossary **7**

INTRODUCTION 8
The Politics of Reproduction: 11
The Technocratic Model 17

Research Questions **19**

Methods **21**

Overview of Chapters **23**

CHAPTER 1: A BRIEF HISTORY OF ZAMBIA POST-INDEPENDENCE 24

Independence **25**

The Introduction of Structural Adjustment Programs **27**

The Effects of Structural Adjustment Programs on the Health Sector **28**

The Use of Traditional Birth Attendants Pre-2010 Policy Passage **30**

CHAPTER 2: THE PERSPECTIVES OF MIDWIVES AND TRADITIONAL BIRTH ATTENDANTS ON THE HEALTH POLICY 34

Interest **35**

Arrival **36**

Midwives **38**

Interviews: Midwives **41**
Midwife: Thandi 41
Midwife: Jika 42
Midwife: Trina 44
Midwife: Angela 45
Rural Midwife: Thandiwe 47
Health Official: Kasunga 49
Analysis: Midwives 52

Traditional Birth Attendants **55**

Interviews: Traditional Birth Attendants **57**
Traditional Birth Attendant: Hellen 57
Traditional Birth Attendant: Lushomo 58
Traditional Birth Attendant: Megai 59
Traditional Birth Attendant: Suria 61
Traditional Birth Attendant: Malindi 62
Analysis: Traditional Birth Attendants 63

CHAPTER 3: POLICY RAMIFICATIONS 66

Ramifications **67**

CONCLUSION 71

Works Cited **76**

Acknowledgements

Getting this project off of the ground was not a simple task. It was something that required an enormous amount of help from a sizeable number of people. Therefore, it is crucial for me to acknowledge the wonderful people who have made my thesis possible.

I was sitting in my room the night that I got a text message from Dr. Andrea Arrington asking if I wanted to go to Zambia. I had already been thinking about writing a thesis for some time – on the topic of midwives in North Carolina. However, this was an opportunity I could not pass up. Andrea helped me from start to finish, from being a sounding board on which to bounce ideas off to making my project happen logistically. I am forever grateful for her assistance with my thesis, as well as for her friendship since my senior year at NCSSM. I should also note her daughter Charlotte was an absolute angel during the entire trip to Zambia and brightened my day during more than a few minor crises that naturally arise during an international research project.

Dr. Michele Rivkin-Fish, my first thesis advisor, has been critical to my research. Not only is she a wonderful educator (I have taken two of her classes), but she is also someone who would listen to my ideas, talk me through rough spots, and keep me on task. I specifically remember one summer afternoon when I was working on a particularly challenging task. I sent her a draft and she responded with all sorts of suggestions while on her holiday to make sure I got all of my information in on time. Most importantly, though, she has always treated my project like it was important to her – even when she was slammed with work. She was and continues to be a terrific mentor and I am grateful for her help.

Dr. Lydia Boyd has been instrumental as well. I have talked to her about issues with my thesis over the course of the year through email and office hours. Dr. Boyd continually checked in on my progress while I was in her class fall semester and she has always made herself

available when I need advice. She has talked me down from a fair share of cliffs throughout the process.

Dr. Emily Burrill has also been with my thesis since the beginning. I found her office hours and went to talk to her about my project when it was still in infancy. She helped me over the summer with different problems I was running into, she continued to be a sounding board throughout the year and has also taken the time to help me with the writing process. There was also one instance over the summer where everything seemed to be falling apart. I was walking home from work and Dr. Burrill called me to quell my anxiety, while also reassuring me that everything would work out. It did.

Dr. Robert Daniels took over for Dr. Rivkin-Fish when she left for her sabbatical to Jerusalem. I was extremely lucky that Dr. Daniels agreed to come out of retirement and help me with my writing. We met every Wednesday for lunch at Linda's and while his main "job" was to edit my writing, we would end up sitting for much longer talking about his experiences in Kenya, as well as anything anthropological. I have learned more from Bob in a few weeks than I have learned in some classes I have taken. I am extremely grateful to him and now consider him to be a friend.

Everything that these professors have done to help get my work off of the ground can never truly be repaid and I thank them for all of their hard work. I also need to take a moment to thank my family, especially my parents. They have listened to me ramble for hours on my project and essentially funded my entire trip to Zambia. They continue to support me in every way, shape, and form. I am incredibly lucky to have such a wonderful mom and dad behind me in everything I set out to do. Thank you, Aunt Carrie, for introducing me to Africa during our trip to Kenya and Tanzania. You are one of my greatest academic supporters. I would also like to

thank Mimi, my grandmother, who read over my thesis numerous times to find all of the grammatical errors I missed.

Finally, I'd like to thank my partner, Madelyn. She has been listening to my aspirations for my thesis since the very beginning. She was there when Andrea texted me and encouraged me to go to Zambia. She has talked me through countless problems I have encountered along the way and has done so without complaining a single time. For the five years that I have known her, she has made each and every day brighter. I am forever grateful for her love and support.

Glossary

Traditional Birth Attendant (TBA): A traditional birth attendant is a person who assists the mother during childbirth and initially acquires her skills by delivering babies herself or through apprenticeship to other traditional birth attendants (WHO 1992:4).

Safe Motherhood Action Group Worker (SMAG): Safe Motherhood Action Group Workers are community volunteers trained on messages and practices that lead to safer pregnancies for the women in their village (Crass 2019).

Skilled Birth Attendant (SBA): A skilled birth attendant is an accredited health professional - such as a midwife, doctor or nurse - who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns (WHO 2004:1).

Midwife: Midwifery encompasses care of women during pregnancy, labour, and the postpartum period, as well as care of the newborn. It includes measures aimed at preventing health problems in pregnancy, the detection of abnormal conditions, the procurement of medical assistance when necessary, and the execution of emergency measures in the absence of medical help (WHO 2019).

Doula: a trained professional who provides continuous physical, emotional and informational support to a mother before, during and shortly after childbirth to help her achieve the healthiest, most satisfying experience possible (DONA International 2019).

INTRODUCTION

"The respect that we were given was more because we were able to conduct the delivery in the community. Now because of the change from the TBA to SMAGs, where the government [requires] the community to refer [women], now people sometimes they disregard us."

– Suria (Traditional Birth Attendant Turned SMAG)

"I am sure we are held to a higher significance [in society]. Those who haven't come across the midwife, they might hold the TBA as higher of the two."

– Jika (Midwife)

"[The policy] was good in the sense that midwives managed the complications. The TBAs, they didn't understand the delivery process, the birth process, and they were unable to anticipate complications."

– Angela (Midwife)

Medical studies have found that traditional birth attendants (TBAs) and midwives have played important roles in the overall global declines in maternal mortality, as the global maternal mortality ratio has fallen 44% since 1990 (United Nations Children's Fund 2018). According to the World Health Organization (WHO), TBAs are "persons who assist the mother during childbirth and learns her skills through apprenticeship that involves both observation and imitation, and is often highly regarded by the community that chooses her to assist women in childbirth" (Sialubanje 2015). Traditional birth attendants were included in the initial response to combat high global maternal mortality ratios, especially in the 1970s and 1980s, but are beginning to be sidelined (Kruske and Barclay 2004:306; World Health Organization 1992).

There are currently health policies being passed in countries around the world aiming to ban traditional birth attendants from delivering. The World Health Organization associated TBAs with increasing global maternal mortality ratios – specifically in the global south – due to their lack of knowledge and education surrounding birth complications (Kruske and Barclay 2004:307). For example, in Mexico, "traditional midwives are required to direct all births to

hospitals - and they are threatened with murder charges should a woman or baby die in their care" (Vega 2018). While this seems to be an especially extreme case, this is one example of many displaying that traditional birth attendants are beginning to be phased out in favor of skilled birth attendants (SBAs), like midwives, who are given a formal education.

One country which banned traditional birth attendants as a response to high maternal mortality ratios was Zambia. According to the World Health Organization, the current maternal mortality ratio (MMR) in Zambia is 224 deaths per 100,000 live births (World Health Organization 2015). The ratio has declined significantly since 1990, where the MMR was 577 deaths per 100,000 live births (World Health Organization 2011). These reductions can be contributed, at least in part, to the use of midwives and traditional birth attendants. However, the Zambian Ministry of Health decided to cut all funding for traditional birth attendant training programs and bar the maternal health attendants from delivering mothers at home in 2010. I am interested to see the role TBAs and midwives have played in combatting the maternal mortality ratio in Zambia and how this role has changed since the health policy passed in 2010. I am specifically interested in understanding the traditional birth attendants and midwives' perspective on their changing roles in society as a result of a reproductive policy change in the country.

I found – through the use of five ethnographic interviews from midwives, five from traditional birth attendants, and one from a health official – that the passage of the policy was a contentious issue in Zambia. The midwives believed, overall, that the traditional birth attendants did not have the medical knowledge necessary to safely conduct deliveries. The danger of birth complications outweighed the cultural importance of the TBAs in rural areas and women should primarily deliver in health care centers, in their opinion. The traditional birth attendants, on the other hand, felt as if they no longer had the same connection to their community – they had been

circumvented by mothers who now travel kilometers to the nearest health center. Interestingly enough, however, the traditional birth attendants recognized the importance of limiting the complications that did arise with pregnancy – and the need of clinics to assume the role of caring for women who experienced complications. While the TBAs recognized this need, there was some confusion over the passage of the health policy as well, because the clinics needed to manage complications were not close to their villages and they viewed their work as relatively harmless.

I seek to understand these interviews through the lenses of previous anthropological research surrounding reproduction and health metrics. Two broad anthropological theories emerged during my research: (1) the politics of reproduction and (2) the technocratic birth model. These theories have been explained through, and applied to, the research of Cosminsky, Ginsburg, Rapp, Davis-Floyd, Wendland, Thomas, and Chapman – just to name a few. I will draw on the work of these anthropologists to place my project within the context of previous research, while also explaining how my work can further enhance the understanding of medicalization and the technocratic birth model.

The Politics of Reproduction:

Faye Ginsburg and Rayna Rapp have been foundational to the understanding of the politics of reproduction. Essentially, the politics of reproduction are the ways in which distant powers regulate local reproductive experiences (Ginsburg and Rapp 1991:313). The authors further described this as "the intersecting interests of states and other powerful institutions such as multinational and national corporations, international development agencies, Western medicine, and religious groups [that] construct the contexts in which local reproductive relations are played out" (Ginsburg and Rapp 1991:312). I am interested in the ways in which the

Zambian government, and more distally the World Health Organization, have exercised considerable political power over local reproductive traditions in rural Zambia. This political power manifests itself through the health policy, which innately places biomedicine and medicalization over more traditional forms of delivery.

The notion of reproduction becoming intertwined with state interests came up in Cosminsky's *Midwives and Mothers: The Medicalization of Childbirth on a Guatemalan Plantation*. Cosminsky began following her research participants, Doña Maria and Doña Siriaca, in 1974 and continued to work with the lay midwives for decades to follow (Cosminsky 2016:12). The situation concerning traditional birth attendants in Guatemala ultimately played out differently than in Zambia. Prior to the WHO suggesting the use of skilled birth attendants over TBAs, the Guatemalan government provided numerous training sessions for the care providers on topics ranging from sanitation to medical practices (Cosminsky 2016:208). However, later versions of these training sessions placed the biomedical professionals on a stage – placing them above the TBAs in a symbolically superior position (Cosminsky 2016:208). This is just one piece of evidence among many that Cosminsky provides concerning ideas of medicalization and biomedical superiority. Despite the WHO's decree, in 2008, the Guatemalan government decided to continue the training programs to educate the lay midwives in biomedical topics (Cosminsky 2016:220). (This is clearly different than the response the Zambian government had.) The Guatemalan government "recognized their importance and the necessity of continuing to train them" (Cosminsky 2016:220). Due to a political decision, the lay midwives in Guatemala interacted with the biomedical system more frequently. This training process has detrimental effects on the culture of traditional birth attendants, as biomedicine comes to be imposed as the authoritative and correct knowledge (Cosminsky 2016:8).

Despite the overall policy differences between Guatemala and Zambia, I believe that there are similarities between the two contexts. The Zambian government adopted a health policy barring traditional birth attendants in favor of a biomedical model, one where birth complications need to be managed by skilled birth attendants. However, the TBAs in Zambia are still interacting with the biomedical model – just in different ways than in Guatemala. They continue to experience the cultural clashes that occur between biomedicine and tradition through their new role as Safe Motherhood Action Group workers. These "doula like[1]" roles were created to have TBAs remain involved in their communities, avoiding deliveries, but providing biomedical based patient education on pre- and post-partum health. The barring of TBAs in Zambia was the result of fear of birth complications arising and mothers dying – as well as the government following the global redirection of barring the birth attendants (Cheelo 2016:2).

Claire Wendland, a medical anthropologist working in Malawi, writes about the political process of relocating the place of birth as a result of health metrics. In Wendland's paper, "Who Counts? What Counts? Place and the Limits of Perinatal Mortality Measures," she describes how the usage of health metrics can cloud the decisions made by policymakers and governmental health officials (Wendland 2018:278). Specifically, "In both nations [Malawi and the United States], statistics can push policymakers and clinicians to focus narrowly on place of birth – specifically whether birth happens inside or outside of a clinical facility – and in doing so to neglect other factors vital to the well-being of mothers and their newborns" (Wendland 2018:278). The use of statistical data, taken as fact, can misplace blame for poor maternal health outcomes (on traditional birth attendants, for instance), while protecting institutions (like

[1] The role of the doula, in the American sense, "lies between natural care and professional care" where they serve as a "human life line to help the woman play her part in the birth" (Lundgren 2010:173). Doulas in the US do not deliver but provide continuing support and education to women.

governmental health infrastructure) from increased scrutiny. Data can also be, and has been, used to bring women into the confines of an institutionalized health system – taking women away from traditional support mechanisms and throwing them into a healthcare complex that has the potential to negatively impact their health – all in the name of improving a metric that may be false to begin with.

The statistic that Wendland is referring to is the maternal mortality ratio, which describes the number of maternal deaths that occur per 100,000 live births (Wendland 2018:279). The use of these statistics to make policy decisions is problematic, especially in developing countries, because of the lack of counting infrastructure (Wendland 2018:280). Wendland stated that, "Infrastructure problems mean that neither paper death certificates nor computerized records are gathered reliably into a central vital registration system," implying that the maternal mortality ratio is much more of an estimate than hard data (Wendland 2018:280). These estimates are used to politicize the issue of maternal mortality, as governments feel pressure to comply with health goals put out by the World Health Organization. Wendland describes this in another work, where while doing research in a hospital in Malawi and viewing a mourning down a ward corridor, her colleague stated that:

> "They are saying we will meet the Millennium Development Goal. But I can't believe it. If it's [the MMR] that low, why are we still seeing this kind of thing every day?" The sad procession had passed now, and my colleague continued. "I think it has to be at least in the five hundred or six hundred range still. You know, there's a lot of pressure on this goal. A lot. The President has really staked her legitimacy on improving maternal mortality" (Wendland 2016:59).

It is clear to see through Wendland's work that statistics, even ones that are estimations at best, drastically frame health policies when they become politicized and can have overall negative impacts on maternal health.

These political decisions have directly impacted the ways that midwives and traditional birth attendants are utilized in Zambia. In the "Politics of Reproduction," the authors describe medicalization as a "double-edged sword" (Ginsburg and Rapp 1991:318).While both Ginsburg and Rapp understand that there are many benefits of biomedicine, including the saving of mother's lives when complications do arise, the authors also stated that, "the introduction of hospital-based birth technologies, for instance, often displaces or competes with indigenous practices and may disorganize or extinguish local forms of knowledge" (Ginsburg and Rapp 1991:318). Midwives, who are considerably younger than their traditional birth attendant counterparts, are now deemed "worthy" of delivering – as they are backed by the government. The traditional birth attendants, despite being utilized for generations, are now completely discounted in Zambia – they no longer hold weight in maternal health care, especially in the eyes of the government. This is despite the fact that the TBAs are considerably older and should, in theory, be more respected in their communities due to their age. The policy changed who had authority over birth.

The issue of generational authority over childbirth was written about in Lynn Thomas's work, *Politics of the Womb: Women, Reproduction, and the State in Kenya*. While the book focuses intensely on female initiation, childbirth is inherently a part of women growing from adolescence to adulthood. According to Thomas, "Whereas initiation grounded a girl-turned-woman within the female hierarchies of her natal home, childbirth, especially with a woman's mother-in-law serving as midwife, located women in the female hierarchies of their marital home" (Thomas 2003:17). The British colonial government in Kenya began to step into this realm, as they were trying to increase the number of women delivering in clinics across the country (Thomas 2003:55). Thomas stated that:

> "Few Britons could have imagined a better vindication of imperial rule than that of replacing the 'old women' with dirty clothes and hands who performed excisions with hospital-trained African midwives, described by one official as 'bright, intelligent young creatures, with excellent manners … dressed in their white gowns and white caps'" (Thomas 2003:56).

This colonial desire was challenged by Kenyans because birth was a ritual process and was an affair almost entirely shut off from outsiders (Thomas 2003:63). There were strict generational guidelines to selecting a birth attendant, where age and hierarchy were of the upmost importance. Midwifery for the old women was not simply about providing comfort to the mother but also about protecting their communities from dangerous births (Thomas 2003:73). The young midwives were inherently dangerous to communities due to their age and generational status (as potentially uncircumcised women) (Thomas 2003:73).

Just as the British were challenging generational authority over birth during colonial rule in Kenya, generational authority also appears to be challenged by the health policy passed in Zambia. The Zambian midwives receive their authority from the government and are closely tied to their biomedical culture. The TBAs, on the other hand, are deeply entrenched in their communities and seek to protect mothers that they have interacted with since childhood. The ability in which I am capable of speaking on this topic, however, is limited, as this arose during my interviews and my time on the ground was short.

The politics of reproduction, essentially the understanding that powerful, distal political institutions directly impact local reproductive practices, occurred in Zambia though the passage of the health policy. The Zambian government decided that because all births have the potential for complications, all deliveries should take place in a medical center. This decision was made as a result of the high maternal mortality ratio of the country – and the blame was placed upon the traditional birth attendants for supposedly contributing to these high metrics. The traditional birth

attendants were, and continue to be, removed from their medical roles – and thus their cultural and generational ones – in society by not being allowed to deliver. This policy decision is closely tied with medicalization and the trust instilled in biomedicine (midwives) to handle birth complications that – according to the Zambian government – will inevitably arise.

The Technocratic Model

In order to fully understand the technocratic body, one needs to understand the body-as-a-machine enlightenment philosophy. The "body-as-a-machine" idea depends on cartesian dualism, where the body and the mind are separate entities (Davis-Floyd 1994:49). According to Davis-Floyd, "This idea meant that the superior cultural essence of man – his mind – could remain unaffected while the body, as a mere part of mechanical nature, could be taken apart, studied, and repaired" (Davis-Floyd 1994:49). If the body is a machine, the physician is a repairman, fixing and replacing parts as they fail. This metaphor also placed the ideal machine as the male body, implying that females were inherently defective when compared to their male counterparts (Davis-Floyd 1994:51). This concept of women being defective carried over into language surrounding the birthing process. "Despite the acceptance of birth as mechanical like all other bodily processes, it was still viewed as inherently imperfect and untrustworthy" (Davis-Floyd 1994:51). By giving control of birth over to men, through obstetrics, this further engrained the idea of the body-as-a-machine and the inherent imperfection of the female machine to handle birth processes.

According to Peter C. Reynolds, "technocracy [denotes] the ideology of modern industrial society, in which social policy and political debate presume scientific models of nature and society, and knowledge itself is reduced to scientific research and description" (quoted in Davis-Floyd 1994:1126). I will argue that as a result of the World Health Organization suggesting that skilled birth attendants be used over traditional birth attendants, the WHO put

forth a recommendation for the Technocratic Model of Birth with the implicit understanding that linear, biomedical intervention is always necessary because it is safer than the natural, inherently female, alternative. The use of skilled birth attendance inherently encompasses the use of biomedicine, at least in the Zambian context.

Davis-Floyd stated that "As a number of physicians and social scientists have pointed out, our medical system has done a thorough job of convincing women of the defectiveness and dangers inherent in their specifically female functions" (Davis-Floyd 1994:1127). As stated previously, all of the interviews I conducted cited the "risks" associated with pregnancy through complications. The fear of complications, and the supposed inability for traditional birth attendants to identify these complications, led to the government's encouragement of hospital-based delivery. The technocratic model views the female body as abnormal, especially during the pregnancy and delivery process (Davis-Floyd 1994:1127). During delivery, the "unusual demands placed on the female body-machine render it constantly at risk of serious malfunction or total breakdown" (Davis-Floyd 1994:1127). In other words, the technocratic model believes that women are at constant risk of suffering from complications during delivery and thus require biomedical intervention to manage the female body's abnormalities as they arise. This is exactly the goal of the Zambian policy passed in 2010.

Rachel Chapman, a medical anthropologist from the University of Washington, focuses on risk associated with pregnancy in the context of Mozambique. The country joined the World Health Organization's *Safe Motherhood Initiative* (SMI) to address the large maternal mortality problem within the country (Chapman 2006:492). The core of SMI, according to Chapman, is the "risk approach," which "identifies women at high risk for pregnancy or obstetric complications for referral to the appropriate level of care for treatment" (Chapman 2006:492).

While this sounds like a positive aspect of the program – identifying women who may be at risk for pregnancy complications – it has been identified as a poor predictor for identifying at-risk women and it is now widely agreed that birth complications cannot be accurately identified (Chapman 2006:492). The idea that risk is the best predictor for maternal health outcomes is clearly problematic, as it places unnecessary focus on the individual rather than the underlying structures that may lead to complications in the first place (Chapman 2006:493). This further supports the concept that biomedicine thinks of women in terms of the technocratic birth model – as individuals existing outside of a social context who need fixing from biomedical institutions. The women are further alienated by a health structure that views female procreation as secondary and unnatural.

The concept of risk removes agency from a woman's choice in health care providers, especially in the Zambian context where TBAs have been removed from the acceptable list of healthcare workers. Traditional birth attendants are designated by the community, with mothers and their families choosing to rely on the health care workers for various health needs throughout their pregnancies. Midwives, which are roles created for and supported by the government, are assigned to women by circumstance and could be unknown to the mother at the time of initial contact – possibly the delivery itself. The shift towards the medicalization of birth by promoting institutional delivery using midwives, due to health metrics that connotate risk, is the core of the health policy passed in 2010.

Research Questions

My research aims to answer three questions: (1) How do midwives and traditional birth attendants understand their changing role in maternal health care after the passing of a 2010 health policy barring TBAs from delivering?; (2) Do midwives believe that the passage of the

health policy will reduce maternal mortality?; and (3) How has the cultural significance of midwives and traditional birth attendants changed since the passage of the health policy?

The World Health Organization believed that efforts should be placed behind skilled, biomedically trained birth attendants, such as midwives, to combat high maternal mortality ratios globally. However, it has been argued by Kruske and Barclay that the WHO missed the holistic care that TBAs can provide by focusing solely on metrics. The measurement of the maternal mortality ratio was and continues to be fraught with underreporting and misclassification, making a true statistic nearly impossible to measure (Kruske and Barclay 2004:308). It is also important to note that by focusing solely on the maternal mortality ratio, policy makers "ignored the other skills and expertise of the TBA" (Kruske and Barclay 2004:308). I undertook this research in Zambia to examine the debate first hand. I believe that it is important to see how midwives and traditional birth attendants understand their changing role in health care – especially when this role is being dictated at the policy level.

Stemming from the first question, I am also intrigued to see whether midwives believe that the policy will truly reduce maternal mortality in Zambia. This question is closely tied with health infrastructure in the country. According to a report titled *WHO Country Cooperation Strategy 2017-2021: Zambia* from the WHO, "The main challenges include: unmet family planning needs, inequalities in the coverage of maternal health services, shortages and inequitable distribution of healthcare workers - particularly midwives, and inequities in distribution of deliveries by skilled health workers" (WHO 2017:10). Along with the weakening of the overall health system, individual health facilities are lacking in human and material resources, which makes providing quality care that much more difficult (WHO 2017:14). It is

made clear through this World Health Organization report that health infrastructure in the country is lacking (I posit due to the effects of structural adjustment programs).

The Zambian government ignored glaring structural issues when passing the health policy barring traditional birth attendants. A recent study showed how many women lived closer to their traditional birth attendant than a clinic. According to a study conducted by Gill et al. in Zambia, "On average, mothers lived closer to their birth attendants than to the nearest health facility: only 32% of mothers lived within an hour's walk of the nearest health centre, whereas 85% of mothers lived within an hour's walk of their birth attendant" (Gill et al. 2011). By removing traditional birth attendants and lacking the health infrastructure necessary to follow through with the policy changes, women are left without any attendants at all.

My third question examines whether the cultural significance of traditional birth attendants and midwives has changed since the passage of the health policy. According to Cheelo, a negative aspect associated with the health policy is that traditional birth attendants feel as if they have lost recognition and respect from their communities (Cheelo et al. 2016). Filby also cited similar findings with midwives. As the number of patients being seen by midwives has increased since the passage of the health policy, midwives have been cited feeling "undervalued in their economic and professional contribution to society, had low or absent wages, experienced gender inequality in the workplace, and felt stretched too thin" (Filby et al. 2016). The third goal allows me to further examine the cultural ramifications felt by midwives and traditional birth attendants after the passage of the policy in 2010.

Methods

For this research, I conducted semi-structured interviews with midwives, a government official, and traditional birth attendants. The interviews were designed to gain insight into the

educational background of the participants, information on the health policy (especially the individuals' understanding of it), and cultural conceptions of birth in Zambia. Each interview took between thirty minutes to one hour to complete, was recorded, and all participants provided written consent to participate in the project. All participants of this study were Zambian. A majority of the midwives interviewed were from Lusaka, the capital city of Zambia. The health official and the traditional birth attendants were located north of Lusaka, as TBAs tend to exist and practice in more rural areas in the country. These health workers were identified and contacted through an in-country liaison – also a midwife and someone very familiar with the healthcare landscape.

A primary concern of mine was and continues to be ensuring that information provided by the midwives, traditional birth attendants, and the health official will not negatively impact their careers or their cultural standing within their community. As these health care workers are commenting on a national health policy barring traditional birth attendants, I found it necessary to anonymize names and locations of respondents. Each name and location have been assigned a pseudonym as a result. My analysis of these interviews, including coding, was done by hand. I believed that this method was more fitting for my project, as I had a limited number of interviews examining a small number of variables. Several studies on midwives and traditional birth attendants have been conducted using qualitative analysis (Gill et al. 2011, Sialubanje et al. 2015, and Cheelo 2016). By referencing past studies conducted in Zambia, I was able to further examine questions surrounding the impact of the health policy barring traditional birth attendants.

Overview of Chapters

Chapter One focuses on the history of Zambia since independence from Britain. In this chapter, I will explore the impact of post-colonial development, the development of democracy, structural adjustment programs and economic policies imposed by the World Bank. I posit that these economic policies that were imposed by the World Bank and the International Monetary Fund had significant impact of the development of health infrastructure in the country. The lack of infrastructure has had lasting negative effects for the population in Zambia, as the country does not have nearly enough midwives to support the populations maternal health needs.

Chapter Two examines the effects of the health policy after its passage in 2010. This is where a majority of my ethnographic data will come into play. I am interested in the effects the health policy has had on the cultural standing of traditional birth attendants and how they understand the policy. I am also interested in how the policy affects the workload of midwives and whether they believe the health policy will achieve the goal of reducing maternal mortality. Finally, in Chapter Three, I will talk about the ramifications of the health policy – both the good and the bad.

Chapter 1: A Brief History of Zambia Post-Independence

The economic history of Zambia is crucial to truly understanding the health policy that was passed in 2010. This chapter focuses primarily on the negative impacts structural adjustment programs and other economic policies had, and continue to have, on the health infrastructure of Zambia – especially concerning the number of clinics in rural areas and the number of midwives available to staff those clinics. According to Thomson et al., "structural adjustment is hypothesized to affect government health expenditure, which in turn alters the quality and quantity of services provided to children and mothers" (Thomson et al. 2017:9). In order for governments to meet certain stipulations associated with their loans, many times they were pressured into "reducing the fiscal space in which healthcare systems can operate," meaning that health benefits to mothers are greatly reduced (Thomson et al. 2017:9). There is evidence that the Zambian government had to cut healthcare expenditure as one stipulation, as the country has suffered significant shortfalls in healthcare infrastructure since the acquirement of structural adjustment loans. This ultimately limited the availability of midwives and clinics for rural women today.

Independence

In 1964, the Republic of Zambia gained independence from the British and shifted into a multi-party democracy led by the United National Independence Party (UNIP) (Barton 2016:1). At the time of independence, Zambia was rich in natural resources, such as copper and cobalt – meaning that the government should have had a strong economic foundation for future development. According to Zambian historian Beatwell Chisala, "the British Government left the United National Independence Party in a very strong financial position, handing over enormous foreign reserves and ensuring control over much of the region's mineral rights" (Barton

2016:20). Despite the strong economic footing that the Republic of Zambia was founded on, the government has had slow economic growth compared to other resource rich countries.

Part of the reason for this slow economic growth was the country's dependency on copper sales. Copper accounted for "47 percent of its Gross Domestic Product and 92 percent of its export earnings" at the time of independence (Barton 2016:20). This meant that for every 10 percent drop in copper sales, the Zambian GDP would drop by around five percent (Barton 2016:20). The government was urged to diversify the economy and the Seers report of 1964 provided suggestions of how to do so. These suggestions turned into the First National Development Plan for 1965-1970 containing eight objectives:

> "diversify the national economy away from the copper industry, increase employment by at least 100,000 during the course of the plan, improve the level of output per person from GBP 61 to about GBP 100, maintain price stability, balance the economy between rural and urban, rapidly raise the general level of education, provide better living accommodations, and develop new sources of energy and transport for a 'new economic order'" (Barton 2016, 16).

The government followed a semi-liberal economic policy, trying to stimulate growth by providing incentives for foreign private investment into Zambia (Mwanawina 1993:69). However, the Republic of Zambia ultimately failed to attract the necessary foreign investment, while also lacking Zambian entrepreneurs, which meant that the government had to invest in industrial projects in the hope that the private sector would eventually take them over (Mwanawina 1993:69). The gross domestic product in the country began to stagnate in 1970 and shortly after is when the integration of Structural Adjustment Programs from the International Monetary Fund appeared in Zambia (Mwanawina 1993:71).

The Introduction of Structural Adjustment Programs

Structural adjustment programs are the International Monetary Fund's and World Bank's solution for countries that are facing dire economic situations – they are the lenders of last resort (Thomson et al. 2017:2). Many times, these loans are tied with economic policies that follow a neoliberal agenda and along those lines, many governments were required to privatize public industries and cut public spending (Thomson et al. 2017:2).

Zambia drew money from the International Monetary Fund's compensatory financing facility in 1971 and drew financing again in 1972 through the gold tranch (Mwanawina 1993:71). According to Mwanawina, "the country did not need assistance from the IMF, as it had enough reserves. The IMF requested and encouraged the use of its resources" (Mwanawina 1993:72). There was a mismanagement of the funds provided to the Republic of Zambia and an approach was agreed upon where the government would stabilize its economy through currency devaluation in 1976 (Mwanawina 1993:72). Further economic policies were put in place in Zambia, such as: the liberalization of the economy in 1978, additional efforts for liberalization in 1981, and the IMF advised the government to float their currency through an auction to "streamline the allocation of foreign exchange" and reduce civil service employment in 1984 (Mwanawina 1993:72; Simutanyi 1996:826). By 1987, "the fund declared Zambia ineligible to use its financial resources because the country had failed to pay its obligations to the Fund, which stood at about 900 million USD" (Mwanawina 1993:72). The government continued working with the World Bank and the International Monetary Fund until 1991, when the World Bank suspended the disbursement of funds due to back pay and the government retaliated by cutting off all further projects (Mwanawina 1993:73).

The Effects of Structural Adjustment Programs on the Health Sector

By 1991, the economic standing of Zambia wreaked havoc on the country's health infrastructure. The delivery of medical services essentially stopped due to the shortage of equipment and drugs, as well as a lack of qualified medical professionals (Mwanawina 1993:75). The reason that hospitals were still able to partially run was due to "domestic and foreign donations" (Mwanawina 1993:75). The Ministry of Health stated that "its fleet of vehicles had been reduced to less than half due to the unavailability of spare parts and poor maintenance," and even if the vehicles had been functioning well, the poor quality of roads were already taking their toll on the health sector (Mwanawina 1993:75). All of this can be attributed, at least in part, to the cuts in health sector funding, which declined by 55% in 1990 (Mwanawina 1993:75).

With the election of a new government in 1991, the Multiparty Demography System, there was a new development towards public sector reforms. These reforms included the structuring of ministries, the development of personal systems, and the decentralization of government (Ndonyo 2005:2). The aim of this health reform was to "improve equity, access, cost-effectiveness, and service quality" while also assigning new roles to the government, communities, and the individual in terms of health care delivery systems (Ndonyo 2005:7). There were quick improvements seen after these changes were made. The decentralization of health care delivery led to improved resource use, an increased availability of drugs in health facilities, and an increase in the morale of health care workers (Ndonyo 2005:7). This can be attributed to the introduction of user fees increasing health care revenues. However, these changes were short lived. There was a decline in the availability of crucial drugs as well as inadequate infectious disease surveillance just a few years after the health care reforms were put into place (Ndonyo 2005:7).

As of 1995, there were 544 people per hospital bed in Zambia (Ndonyo 2005:10). This was about on par with other international health care systems at the time. However, the conditions of the beds and infrastructure during this time period is called into question. Mwanawina reported that in University Teaching Hospital (the flagship hospital for Zambia), patients were sleeping on the floor and those who had beds typically had no bedding (Mwanawina 1993:75). There was also a lack of running water and sterilization equipment (Mwanawina 1993:75). While the health care infrastructure may have been "sufficient," according to Ndonya, "there is only one doctor per approximately 14,000 population" (Ndonya 2005:10). She went on to state that between 1977 and 1995, the national density of physicians in Zambia decreased by 50% while the number of hospital beds remained unchanged (Ndonya 2005:10). This suggested that the number of health professionals were far too few in order to properly service the country's health needs.

According to data from 2005, the shortage of healthcare workers seemed to remain an issue for Zambia. A study from the World Health Organization stated that there were 14 physicians per 100,000 population and 201 nurses and midwives per 100,000 population (Kinfu et al. 2009:226-7). This study also found that Zambia was not training enough health care workers to service its growing population (Kinfu et al. 2009:228). [Zambia's population is growing at an estimate rate of 2.91% in 2018 (CIA 2019).] Similar findings were also found in research conducted by the Zambian Ministry of Health in 2009. The National Health Strategy Plan opened its chapter on Health Workforce stating that "Zambia is facing a serious Human Resources for Health (HRH) Crisis, both in numbers and in skills mix" (ZMOH 2011:22). From 2005 to 2009, there was an increase of only 101 midwives, from 2,273 to 2,374 (ZMOH 2011:22). This accounted for only 58% of the suggested number of midwives to properly serve

the population (ZMOG 2011:22). The urban areas also have a disproportionately large number of healthcare workers compared to rural areas. According to the Ministry of Health, "Rural areas have 70 clinical health care workers per 100,000 relative to 159 per 100,000 in urban areas" (ZMOH 2011:23). This data suggested that in 2009, there were not enough midwives to properly serve the population, and those that were working were primarily located in urban rather than rural areas.

The Use of Traditional Birth Attendants Pre-2010 Policy Passage

The first attempts to provide some modern medical training to traditional birth attendants began as early as the 1920s, when colonial powers and missionaries sought to improve health care and education (Kruske and Barclay 2004:306). However, it was not until the 1970s that policy makers identified the potential that TBAs had to lower health indicators like maternal and infant mortality (Kruske and Barclay 2004:306). According to Kruske and Barclay, "an international conference on primary health care held in Alma Ata released a declaration calling for urgent and effective action to develop and implement primary care throughout the world and particularly in developing countries" (Kruske and Barclay 2004:307). This document included the use of TBAs as they were heavily involved in the community and could possibly be included in primary health care work if trained effectively (Kruske and Barclay 2004:307). As a result, the conference "advocated for the collaboration between trained health workers (biomedicine) and traditional medicine in order to provide 'health for all'" (Cheelo 2015:3). Therefore, the World Health Organization promoted training TBAs during the 1970s and the 1980s.

These sponsored programs from the World Health Organization included training on "antenatal, intrapartum, and postpartum skills to detect early complications, ensure timely referrals, and reduce infection and postpartum haemorrhage" (Lane and Garrod 2016:3). (All of

these training programs were taught through a biomedical lens.) In 1987, the Safe Motherhood Interagency Group (IAG) and the Safe Motherhood Initiative launched with the goal of reducing maternal mortality by 50% by 2000 (Kruske and Barclay 2004:307). The IAG was "strengthened" when the International Confederation of Midwives and the International Federation of Gynecology and Obstetrics joined the IAG in 1999 (Kruske and Barclay 2004:307). It was expected that the biomedical training of traditional birth attendants would aid in the reduction of maternal mortality.

However, the World Health Organization rescinded its support of traditional birth attendants just a few years later when the rate of maternal mortality did not decrease. In fact, there was an increase of global maternal deaths in 1990 by around 80,000 (Kruske and Barclay 2004:307). This increase was contributed to the lack of scientific training and literacy that prevented the traditional birth attendants from being trained effectively (Kruske and Barclay 2004:307). In 1992, the World Health Organization reduced its support of TBAs but still considered them to be an interim measure until more skilled birth attendants could be implemented (Kruske and Barclay 2004:307). The requirements to become a skilled birth attendant included education through an accredited program, in-service training, and strict regulations (World Health Organization et al. 2018). Later, in 1996, the World Health Organization changed language in policies addressing safe motherhood from "trained attendant" to "skilled attendant" citing that "someone who has received training is not necessarily skilled" (Kruske and Barclay 2004:307). The World Health Organization effectively ended all support of policies training traditional birth attendants to aid in the delivery of women.

The problem with removing all support of traditional birth attendant training programs due to maternal mortality was that the WHO "failed to establish a baseline measurement in the

1970s" (Lane and Garrod 2016:3). This implies that the World Health Organization lacked a method of comparison when measuring the performance of the traditional birth attendant training programs. Kruske and Barclay also cited this fallacy in their research, stating that "using mortality rates as the most important and sole indicator of successful TBA training is highly problematic due to the absence of a reliable mechanism to measure maternal mortality" (Kruske and Barclay 2004:308). The measurement of the maternal mortality ratio was and continues to be fraught with underreporting and misclassification, making a true statistic nearly impossible to measure. It is also important to note that by focusing solely on the maternal mortality ratio, policy makers "ignored the other skills and expertise of the TBA" (Kruske and Barclay 2004:308).

This chapter demonstrates the extensive negative impacts that structural adjustment loans had on the health infrastructure of Zambia, and subsequently the health of mothers. Throughout the interviews conducted with midwives and traditional birth attendants alike, a commonality was describing the failing health infrastructure in the country. Both health care workers described the shortage of midwives, which is not surprising considering that the number of midwives in Zambia between 2005 and 2009 only increased by 101 (ZMOH 2011:22). The traditional birth attendants focused on the shortage of clinics in rural areas, as some mothers had to walk or pay for a ride while in labor. These clinics could be twelve kilometers away, or even further in some instances. The lack of clinics, and subsequently the small number of midwives available in Zambia, directly impact the effectiveness of the health policy passed in 2010 – as women are expected to travel to the nearest clinic to deliver. My findings, which are further outlined in the next chapter, support Thomson's findings that structural adjustment programs were detrimental for maternal and child health outcomes (Thomson et al. 2017:9).

Chapter 2: The Perspectives of Midwives and Traditional Birth Attendants on the Health Policy

Interest

My interest in this topic is a fair question and one that I have gotten fairly frequently. While my academic background remains in anthropology, I have been interning for a global health institute since the summer after my senior year in high school. The interconnectedness that exists between anthropology and the world of global public health cannot be overstated. Many times, as anthropologists know, the biomedical world will go into a country and attempt to fix one thing that is considered wrong or backwards. Many times, this is done without considering the underlying factors that play into a health concern. These vertical interventions often fail because the cultural institutions of a country or of a people are not considered.

The connection between anthropology and global public health really began to heighten my interest in maternal and child health. At work, I was exposed to a variety of health concerns surrounding reproduction and abortion. Reports would cross my desk concerning the maternal mortality ratios globally and the responsibilities countries had to mitigate the dangers surrounding reproductive health. However, I would also see instances of countries failing in their responsibility. The United States is a prime example of this, with the maternal mortality ratio for non-Hispanic black women being three times higher than that of white women.

Maternal mortality is a serious concern, one that I believe does not garner enough global attention. I wrote this thesis because I strongly believe in the capability of traditional birth attendants to help solve this problem. I believe that the ability of TBAs was discounted by the WHO when they barred the attendants based on estimated statistics. I believe the organization did not take into consideration the cultural security the TBAs provided women. I look forward to continuing my work in anthropology and global health for years to come, exploring issues in maternal health care.

Arrival

I arrived in Zambia in the mid-afternoon, climbing down the steps onto the tarmac after 24 hours of travel. After flying from Boston to JFK to Dubai and finally to Lusaka, the cool breeze of the Zambian air was welcoming. The air was much colder than I expected, reminding me that I was indeed in the Southern hemisphere. I slowly made my way towards the long immigration lines, followed by Andrea Arrington and her daughter, Charlotte. Everyone from the flight was antsy to get through immigration and gather their things – clearly exhausted from their long travels. A quick stamp of passports and a few moments to identify our group's pile of luggage and we were heading towards the exit to look for our welcoming committee.

Dr. Andrea Arrington is the professor I accompanied on the trip, an African historian and an expert on Zambian history. Andrea went to Zambia to begin investigating her next project, exploring what happens to premature infants after they are born into Zambian infrastructure. Her daughter, Charlotte (a preemie herself, now age eight) was also on the trip with us. Andrea supported the development of my project and opened numerous doors to allow me to conduct my research. One of those doors led to Charles, a trained midwife, and someone deeply ingrained in the workings of midwifery in Zambia. Charles was able to set up meetings with midwives and traditional birth attendants for my project. The other door led to Amadi, our trip coordinator and logistics specialist. Amadi could find out any information and get us essentially anywhere in the country – and he was also meeting us at the airport.

Amadi greeted Andrea with a hug and me with a handshake. With our bags in tow, we made our way to our group's vehicle and set off for the hotel. The airport was a good ways from the guest house we were staying in, but I didn't mind. I was sitting in the front seat with the windows rolled down, taking in every bit of Lusaka. The city was much different than I originally imagined. As we made our way into downtown, it began to bustle with life. The streets

were packed with cars, everything from Mercedes and Land Rovers to the Toyota Hilux. Buildings and parks lined the streets, topped off with a shopping mall around every corner. I loved everything about it – the sights, the smells, and especially the cool weather.

Amadi dropped us off at the guest house and left for the evening. We had a busy few days ahead of us. Charles would be coming in from the north in the morning and our group was scheduled to meet with high ranking Ministry of Health officials. We were also due to tour University Teaching Hospital, the flagship hospital of Zambia. Our group unpacked, showered, and met within the hour to walk around the neighborhood and find some dinner. Everything was finally coming together.

Midwives

A few days had passed by the time I was ready to interview midwives. The first days of the trip blurred by. Charles met the group at the guest house the morning after our arrival. He would be staying with us for the remainder of the trip – meaning that I had someone to bounce ideas off of as my interviews were taking shape. He was in charge of setting up meetings for our group, ranging from meeting with Ministry of Health officials to meetings with neonatal intensive care unit (NICU) staff and nurses.

The meetings took place over the course of three days and each one served a very specific purpose – access. The purpose of the Ministry of Health meeting was to obtain a letter granting us access to various hospitals and clinics throughout the country. We would have been unable to perform our research otherwise. We waited at the Ministry for around an hour, which began to test Charlotte's patience but was pretty interesting for me. The front desk had stacks of public health decrees and other information on infectious and chronic diseases, allowing me to view a few of the public health priorities for Zambia. We were ushered into an office and spoke with a high ranking official about our purpose in the country. Charles was extremely formal with the official, calling him "Doc" at the end of nearly every sentence. He later explained that it was customary to refer to those ranking above you in the medical hierarchy by their title. It was a show of respect. While tidbits of information surrounding hierarchy and respect may seem trivial, they are crucial when working within another cultural context.

After obtaining the letter, Amadi drove the group to University Teaching Hospital (UTH) for our next set of meetings. UTH, as the hospital is commonly referred to, is an immense complex of buildings and offices spanning what seems to be at least a few square miles. The hospital was crowded and bustling with activity when we arrived. People were walking between

the masses of buildings and doctors, nurses, and other health care professionals were hurrying about to their posts. Our group made its way into the main building on the campus, navigating the various corridors to find our meeting location. The wards were connected via outdoor walkways, sometimes uncovered, and were typically surrounded by parking or patches of grass.

Charles was taking Andrea to her first scheduled meeting with a NICU nurse to begin her background research for her book. I followed along, accompanying her only briefly, before Charles was going to take me to my first meeting with a group of midwives. The interior of the NICU building smelled strongly of bleach and sweat. The ward was warm, and the incubators were running full blast to aid in the premature babies' survival. I wanted to follow Andrea in, but the nurse would not allow Charlotte to enter the area. I offered to keep an eye on her while Andrea took a tour.

I was then taken to a separate ward in the hospital by Charles, after Andrea had completed her tour and went with Amadi to take Charlotte back to the guest house. Charles led me to an upstairs lounge where four nurse-midwives were waiting for us. The midwives ranged in age from 30-50 and were all extremely busy women. I was, and continue to be, extremely grateful for the information the group of women shared with me. The health care workers sat on a couch nearby, talking amongst themselves while I interviewed each individual at a desk. The others were in close proximity, but the desk was far enough away where I was confident that the midwives could not hear what the interviewees were saying. The midwives spoke of their personal experiences delivering babies and working within the Zambian healthcare infrastructure. They spoke of their frustrations with the system, the health policy passed in 2010 barring traditional birth attendants from delivering, as well as the joys associated with their profession. I also interviewed a midwife and a health official at the same location where I

interviewed the traditional birth attendants. I will provide individual background information for these interviews, as well. I found their perspectives to be extremely important and I think you will as well. Thandi, Jika, Trina, Angela, Thandiwe and Kasunga each had unique stories and I am pleased to share them with you.

Interviews: Midwives

Midwife: Thandi

Thandi was the youngest of the midwives I interviewed, at around 30 years old. She was petite, dressed in black scrubs with bright shoes, and was incredibly intelligent (she spoke six languages). Thandi was trained as a nurse-midwife, meaning that she had two years of nursing training and one year of midwifery courses. Thandi said that she was "trained on how to handle the mothers, the antenatal mothers, [but] not only the antenatal mothers. I'd say women in their reproductive age and our care goes up to six months post-delivery, then for the babies is up to five years." Her training included practical and theory work, with an emphasis on practical because "if you are not practicing, you can't be good." Thandi emphasized the need to be skilled and experienced in attending to the mothers and the babies. While she had only been out of school for a few years, Thandi said that she enjoyed being a midwife because "I am contributing to the Millennium Development Goals – for Zambia to make that, for the nation to make that, for the world to make the goals, I am part of the team." I remember Thandi saying these words to me during our interview clearly, and the pride that seeped into her voice as she described her job.

Thandi described nearly every aspect of her job to me, and as she was a biomedically trained nurse-midwife, she spoke about complications, lab tests, psychology, danger signs associated with postnatal mothers, and the importance of breastfeeding. Two quotes concerning health education and danger signs stuck out to me:

> "On health, let's say education is one of them because they'll go in the community and we need them to take care of themselves so that when we discharge them, they don't come back with complications and before discharge they have to go home very stable."

> "I need to give them [the mothers] the danger signs as they go home. If they notice any danger signs, they have to come back. So I'll talk about bleeding, the abnormals of bleeding. I'll tell them about that."

It is clear to me that Thandi focuses on very serious complications associated with maternal mortality, such as post-partum hemorrhage and the dangers associated with infection. Nearly the entire portion of the interview that focused on health education for mothers surrounded the reduction of risks and the importance of teaching mothers to identify these risks. This is closely tied with her comment about Zambia meeting the Millennium Development Goals.

I found these quotes to be important because of what Thandi mentions later in the interview concerning the health policy. I asked Thandi whether she believed the health policy would reduce the high maternal mortality ratio present in Zambia. She stated that:

> "One day we'll achieve it. What do I say? So, the traditional birth attendants, the way it used to be, not all of them were trained, especially in typical areas like the hard to reach areas you'd find that there will be traditional birth attendants there, but how are they recognized as traditional birth attendants? It's just by the community. This woman has got some knowledge, maybe they observe somebody doing this and this, but they don't have the knowledge about how to manage complications. That is what used to be the problem."

Her primary concern with the TBAs is that they are untrained and unable to manage complications associated with birth. She believes the biomedical model to be much more efficient in handling these complications. This was further highlighted when I asked who had a higher cultural significance, midwives or traditional birth attendants? Thandi responded, "I do because of the training. It's important. I am recognized by the government."

Midwife: Jika

Jika was one of the more experienced midwives that I interviewed, though she was no longer a midwife. She was a charge nurse, in charge of a "mix of medical and surgical patients." I asked her why she made this change and she said that being a charge nurse was a little less busy than being a midwife – even though she is both seeing patients and in charge of a ward. Jika was quiet, speaking to me almost in a whisper during her interview. She was also exceptionally bright

and spoke numerous languages, much like Thandi, but she had a very different view on the health policy.

Jika did believe that women should come to hospitals and clinics, stating that "Yeah, we prefer them to come to a hospital because of so many complications." However, she was concerned with the viability of the health policy. Jika spoke of infrastructure issues that she believed greatly hindered the effectiveness of the health policy:

> Tyler: "When the policy was passed, did you think it was a good policy?
>
> Jika: "Those is rural areas, where there are no health facilities, people are far from the health facility. So, they really depended on those TBAs."
>
> Tyler: "So they depended on the TBAs?"
>
> Jika: "Yes."
>
> Tyler: "What are some other barriers that exist?"
>
> Jika: "If the health facility is far, they will not have money for transportation to those facilities."
>
> Tyler: "So the policy was passed essentially trying to limit maternal mortality. Do you think that [the health policy] will accomplish that goal?"
>
> Jika: "The minister says they will accomplish because they want to build health facilities."
>
> Tyler: "But they haven't done that yet?"
>
> Jika: "No they are in the process of trying to build the health facilities by 2030."

I found this section of the interview to be extremely enlightening in terms of infrastructure issues in Zambia. Jika believed that mothers were best off coming to the hospital to deliver but recognized that Zambia did not have the clinics and staff necessary to support the policy. I found it interesting that Zambia passed the health policy before the construction of clinics was

complete and I find it hard to believe that the government was unaware of the structural issues affecting rural areas.

I asked Jika if she believed traditional birth attendants were abiding by the policy, given that there were not enough clinics and transportation to a health center was expensive for mothers. She stated that:

> "It is better they continue [to deliver] until the health facilities are built. It is better to have someone than no one for sure."

Midwife: Trina

Trina was also experienced in the field of midwifery and was one of the older midwives that I interviewed, at around 43. Like the other midwives, Trina went through the three-year nurse-midwifery program and now sees around 60 patients per day at UTH. Trina's interview contained many pieces of information, but two were particularly striking: her enthusiastic support of the health policy and her concern over the number of midwives in Zambia.

Trina, like Thandi, saw the health policy as a positive thing, stating that "the general reaction to the policy is it was a very welcome practice." She spoke about how "the policy made women come and deliver from the hospital instead of being assisted at home." Which, for the purpose of reducing maternal mortality, was a good thing in her eyes. However, Trina then began to list the barriers to accessing the central hospital in Lusaka. She stated that:

> "the barriers are distance to the hospital, lack of funds to reach the hospital because [women] need to book a vehicle in order to come."
>
> "And the other barrier is language. Some mothers, they avoid coming to the hospital because they think that most of the nurses will just communicate to them in English."

I found these statements to be contradictory to each other, especially considering her support for the health policy (which removes access of birth attendants to women) and then going on to talk about the issues concerning access for women in Lusaka.

Talking about other structural issues in Zambia, Trina mentioned the lack of midwives to be a very big problem. Her education was self-sponsored, meaning that the government did not supply any aid for her training. When I asked her about the cost, she stated that:

> "Especially now, starting in 2016, health education has become very expensive and it keeps increasing. Now it's been made worse because the [educational] model has changed from just writing two courses [to] now writing six courses."

Her concern with the price of education is linked with the low numbers of midwives present in Zambia. Trina stated that:

> "There are not enough midwives at all. There is need for more. There is very important need for more midwives. Because the ones that are working are overwhelmed. They are being overworked. So, there is need for more midwives."

The need for more midwives and feeling overstretched was a commonality seen in nearly every interview I conducted with the midwives. Despite feeling too overwhelmed, Trina still supported the health policy and even stated that TBAs should not have a place in the current health system. Her reasoning behind barring TBAs was similar to the opinion of Thandi – reducing complications:

> "The reason why [mothers] go to the health center and not to the TBA is because they want a safe delivery. If there are complications with a delivery with the TBA, they may not be able to manage the complications."

Midwife: Angela

I had a very short interview with Angela, as the time escaped me during my other interviews with the midwives at UTH. Because Angela had to get back to work, I cut straight to the point and asked her about the health policy and infrastructural issues present in Zambia. Angela, talking about the health policy, stated that:

> "I can say it was good and also bad. It was good in the sense that midwives managed the complications. The TBAs, they didn't

> understand the delivery process, the birth process, and they were unable to anticipate complications."

I found this quote to be particularly striking in that it exemplifies the importance of the technocratic birth model to midwives in Zambia. Angela stated that traditional birth attendants did not understand the birth process – which I found particularly interesting as TBAs had been conducting rural births for generations. Angela went on to tell a story about a previous experience with a TBA:

> "I've had situations where there is a hand prolapse. The baby is coming with the hand and the TBA thinks she will deliver. But it is impossible to deliver. With the traditional aspects, they'll believe that if the baby is coming out with the hand, its begging for something. So, you need to give it something and then they go in. By the time the woman delivers, it's too late. By the time they are transferring the patient to the nearest clinic, the baby's already dead and the mother is in bad condition."

This story, again, highlights the dichotomy between biomedicine and tradition. Angela finds the TBAs to be dangerous to the mother and midwives to be the biomedical saviors. While she mostly condemned the actions of the TBAs and supported the policy, Angela did believe that the SMAGs could be useful to the biomedical system, stating that "when the SMAGs are properly trained, they can identify the danger signs." She seemed okay with allowing them into the biomedical system, as long as they were properly trained and did not conduct deliveries.

Angela then focused heavily on the lack of midwives in Zambia. Below, I demonstrate her frustration with an excerpt for her interview:

> Tyler: "Do you believe there are enough health workers?"
>
> Angela: "There are not enough! We are more than 30,000 short of health workers in the country."
>
> Tyler: "Do you think that's because Zambia isn't training enough or people are not staying after they are trained? What is the reason?"

> Angela: "I think it's about funding. They don't employ people who have graduated, but of course they have tried their best. But yeah, I think with our resources, we cannot, we can only employ maybe to a certain number."
>
> Tyler: "Do you think the health infrastructure is adequate?"
>
> Angela: "Not adequate because the objective of the government is every, uh, 12 km, there should be a center. But it is not like that. There are 40 km, 50 km, no clinic."

Again, another midwife has condemned the actions of TBAs prior to the policy passage but then talks about the lack of workers and infrastructure in Zambia. I find this pattern to be interesting and almost ironic.

Rural Midwife: Thandiwe

Thandiwe is particularly interesting to me because she is a nurse-midwife located within the clinic that works with traditional birth attendants – giving her a close look at the effects of the health policy. Thandiwe told me quite a bit about her clinic. For example, the clinic conducts roughly 50 to 55 deliveries per month, as it services a large number of surrounding villages. The clinic also provides numerous types of family planning methods, such as "condoms, pills, and injectables". According to Thandiwe:

> "Most of [the women] prefer the injectables because they last long. The pills are cumbersome because you have to take them on a daily basis. We also offer implants, as the women prefer options that last a long time."

Thandiwe also works with the traditional birth attendants, now called SMAGs since the implementation of the health policy. The SMAGs go out into the communities for outreach and the dates are scheduled nearly a year in advance. The SMAGs provide health education on topics concerning children and family planning.

I began to redirect the topic of the interview towards the health policy and infrastructure concerns. I began by asking Thandiwe whether she thought there were enough midwives in Zambia. She stated that:

> "No. We don't have enough midwives, there is a very big shortage… We are still struggling to make sure that we have more institutions and more trained staff."

Thandiwe was generally concerned for the number of midwives and health care professionals in Zambia, especially because her clinic only had one midwife and one nurse to service the entire area. I then asked for her opinion on the health policy passed, considering the staff shortages in Zambia. Below is an excerpt from the interview:

> Tyler: "Were you happy about the policy? Did you think it was a good idea?"
>
> Thandiwe: "I can say yes or no."
>
> Thandiwe: "No, because the government first [stated that] we're supposed to scale up the number of trained midwives, and the institution should be closer to people as possible. The other way is that they are supposed to identify those who are of minimum education and train them more skills as TBAs. You see?"
>
> Thandiwe: "So, I can say yes or no."
>
> Tyler: "Hmm"
>
> Thandiwe: "But for the SMAG, it is also helping because they are able to indentify the danger signs of that pregnant mother, and they can come here and tell us, can even go back where [the women] stay and identify that program or arrange transport to go to hospital. It's a long process."
>
> Tyler: "So they're the eyes and ears of the hospital basically? They help refer?"
>
> Thandiwe: "Yes."

Thandiwe's opinion and observations concerning the health policy are particularly valuable, as she has seen the positive and negative effects first hand. The SMAGs have been of use to the

clinic, as they can help identify postpartum complications in the field or escort a woman to deliver. However, the SMAGs are not paid by the government to do this job and Thandiwe believes that this is a problem that needs addressing.

While she has identified issues with the health policy, Thandiwe does believe that the clinic is better equipped to handle the deliveries. She stated that:

> "Before we had the SMAGs, very few [women] used to come to the Center to deliver. Now, the SMAGs are scattered and after them, the importance of having a skilled provider to conduct the delivery, and at the same time it is risky being at home, because there are no other things that can help the woman when she is in a problem."

> "I can say it's better they come here where all the necessary equipment is than at home. You see? Because here you can monitor the mother. And if there's something that we can do, then we can raise up the – the ambulance can come and pick that one to go to the intensive care hospital."

Thandiwe does prefer the biomedical model, where birth is viewed as dangerous and risky. She much prefers that the women deliver under the care of a trained nurse-midwife.

Health Official: Kasunga

I questioned whether to add Kasunga's interview – as he was neither a practicing midwife nor a TBA. However, as a rural health official who worked directly with the government and the clinic containing TBAs/SMAGs, I believe his insights are useful. Kasunga was the first stop on our way to the clinic where the TBAs were waiting. In order to interview the TBAs, it was required that a health official accompany our group. Kasunga was a man of medium build wearing a suit when our group picked him up from his office. He was not very talkative during my interviews with the TBAs, but Andrea suggested I interview him on our way back from the clinic into town.

Kasunga was trained as a nurse-midwife. However, he was very well educated in other aspects of health care having been trained in wellness, registered nursing, then midwifery, and finally a training in obstetric care. He stated that he "had a passion for midwifery." This became even more apparent as he continued to talk about his training. Kasunga "was also sent to Nigeria for midwifery again, which he did to get more insight in terms of the care that we need to provide to pregnant women." He used his medical training on a daily basis by examining the standards of care, which facilities had the basic equipment they need (like the blood pressure machine and a scale), as well as the condition of the health facilities beds. Kasunga was also involved in the training of other midwives and working with the Maternal and Child Health Coordinator to plan projects.

I asked Kasunga about the condition of the clinics and other health facilities in the area. He stated that:

> "Generally, I can say it's on average. We are doing basically fine. As regards to the number of nurses, compared to where we are coming from, the Minister of Health has sent a lot of general nurses now. I can safely say in all the facilities, we do have at least a general nurse…We are doing pretty well. But where we have a challenge is in equipment."
>
> "For midwives, we don't have enough. We have general nurses, more of general nurses, but midwives, we don't have enough. We find that most of the facilities are just run by the general nurses. We are encouraging the general nurses from these facilities to go and be trained in midwifery."
>
> "At this time, we have a lot of facilities that have been constructed and the Ministry has done a lot in terms of sending more staff in the facilities…The Ministry is also trying to improve further in terms of seeing to make sure that we have more infrastructure. But so far, we have done very well."

Kasunga was very informative in terms of understanding the physical condition of existing rural facilities and staffing available. However, Kasunga talked a lot about the improvements that

were being made to infrastructure and in training more midwives, which goes against the prior research and data that I had found from the WHO before coming to Zambia.

Due to Kasunga being a trained midwife and health official, he worked in both urban and rural areas. This allowed me to ask him about the differences he saw in the quality of care given. He focused mostly on the education the patients had prior to coming into the clinic:

> "In urban areas, the people that we are caring for are educated. Most of them, they listen to news, they listen to the TV news, the radio, and all that. Most of them are learned on average. But, when you go deep now in the rural areas, you would find that we may have skilled staff at the facility, you need to educate the community because of the levels of education. You find they won't learn, they won't take it up. You would find that you encourage the woman to go and deliver, to come and deliver at the clinic. For them, because of the levels of education and the cultural beliefs that are there, you would find that this woman won't deliver in the facility."
>
> "When it comes to deliveries, you'd find that even deliveries when a woman maybe has delivered twice, she will say 'no, I am experienced. I can deliver at home in the community.' Until, maybe, they have a complication, that's when they are brought at the facility – only when it's too late."

Kasunga implies that the educated women are smart enough to deliver in the clinic, they listen to the news. However, the women in the rural areas are uneducated and do not realize the risks associated with pregnancy, in his eyes. Therefore, the women "will deliver in the community" because of cultural beliefs and the educational levels.

Towards the end of our interview, Kasunga talked about his experiences with traditional birth attendants before the passage of the health policy:

> "The TBAs used to delay referrals. You would find that the woman has a complication, they would rather keep the woman until she delivers, and then they get something. So, cloth, soap, and even money. But you'd find that it increased in terms of the numbers of women who died in those times. Why can't we use TBAs for another thing?"

Analysis: Midwives

The concepts of medicalization, notions of risk, and the technocratic birth model are all intertwined in the responses given by these midwives.

Knowledge and education were frequently discussed among the midwives. Thandi believed that the TBAs did not have the knowledge to deal with complications – the most common sentiment among the health workers. Trina parroted this notion, stating that "If there are complications with a delivery with the TBA, they may not be able to manage the complications." Angela demonstrated this sentiment by describing how a birth attendant managed a hand prolapse through traditional means. All of these sentiments show that midwives considered themselves to be more culturally significant than the traditional birth attendants because they had training and were recognized by the government. The introduction of biomedical knowledge, especially in rural areas, "often displaces or competes with indigenous practices and may disorganize or extinguish local forms of knowledge" (Ginsburg and Rapp 1991:318). The biomedically trained midwives have been taught that birth is complicated and dangerous, and that only they have the necessary knowledge to combat those dangers.

The notions of risk described are directly related to the government's desire for women to shift towards facility-based delivery. The midwives generally believed that traditional birth attendants did not have the training to deal with the risks associated with birth – and that women should deliver in health facilities to mitigate that risk. As stated in Trina's interview: "The reason why [mothers] go to the health center and not the TBA is because they want a safe delivery." This perfectly describes the technocratic birth model, as women have been convinced that their body – as well as their natural bodily processes, like birth – are defective (Davis-Floyd 1994:1127). Birth is so complex, according to the ideology, that it requires modern technology and biomedicine to properly function (Davis-Floyd 1994:1126). Facility based delivery falls

back onto science and modern industrial technology, reinforcing birth as too risky a process to be handled by the traditional birth attendants at home.

The belief by midwives that women should deliver in health centers was countered by the belief that there were not enough midwives in Zambia. This common statement among all the midwives I spoke to is not false. According to UNICEF, in 2010 (the same year the policy was passed), there was a density of 80 midwives per 100,000 people in Zambia (UNICEF 2017). The highest rates of skilled birth attendant delivery and health center delivery was among urban populations living in wealthy households (UNICEF 2017). Moving away from the capital, data from 2014 showed that between 45-70% of women were delivering in health centers – considerably lower than the institutional delivery rate that Zambia desired with the health policy. It is clear that there is a health worker shortage in the country, and this is commonly known among the midwives. The health official that I spoke to also recognized this fact, who simply stated that, "Midwives – we don't have enough."

The shortage of midwives and health facilities in Zambia would make it challenging to reduce maternal mortality. There was some debate between the midwives that I spoke to surrounding the reduction of maternal mortality. For example, Jika doubted that the maternal mortality reduction would take place because there were not enough health facilities. She said that, "The minister says they will accomplish [maternal mortality reduction] because they want to build health facilities." When I asked if this had occurred, she responded "no." Thandi on the other hand, believed that Zambia would achieve these reductions. However, she believed that the communities needed to realize that the TBAs did not have the knowledge to aid in delivery – midwives were needed to reduce the maternal mortality ratio.

All of these statements – the desire for midwives to be the primary birth attendant, the encouragement of women to give birth in facilities, and the goal of reducing maternal mortality – are ultimately the result of the health policy passed in 2010, which is based on health metric estimates. Claire Wendland's work, "Who Counts? What Counts? Place and the Limits of Perinatal Mortality Measures," describes how health metric estimates can cloud a policymaker's decision making. It is doubtful that the maternal mortality ratio in Zambia is actually 224 deaths per 100,000 live births (World Health Organization 2015). The MMR could be much higher or much lower, and proper health reporting and infrastructure would be required to accurately estimate the statistic. Yet, the estimated maternal mortality ratio "can push policymakers and clinicians to focus narrowly on place of birth – specifically whether birth happens inside or outside of a clinical facility – and in doing so to neglect other factors vital to the well-being of mothers and their newborns" (Wendland 2018:278). The midwives, in their interviews, made it clear that the main goal of facility-based delivery is to reduce the maternal mortality ratio – but in rural areas, this may not be the best option for mothers.

Overall, the interviews with the midwives displayed that they truly cared about women's health and ensuring a safe delivery. These birth attendants bring medical skill and training, such as the ability to identify complications, to the table. This is what allows the midwives to provide what they consider to be a good birth. This differs from what the traditional birth attendants, discussed below, provided their mothers during delivery – as they were integrated within their communities and offered mothers a familiar attendant.

Traditional Birth Attendants

The day before I was scheduled to meet with the traditional birth attendants in a rural clinic, I spent a majority of my time preparing my documentation. As you might imagine, running out of the right papers is a considerable problem – compounded with the fact that I had to find a printer in a town that consisted of a single main road. After running around and asking shopkeepers, I ended up at an outdoor printshop, paying the employee twice the standard price of printing in appreciation of the shop existing. Later that evening, I sat in my bed to staple together the consent forms and background information on my project, nervous for the interviews to come. Had I outlined the right questions and done the right background readings to discover what I set out to find?

The group loaded up the Land Cruiser the next day, cramming our excessive amount of luggage in the back. Amadi first drove to the local health center to pick up an official who accompanied us to the clinic, and later became an interviewee. Setting off for the health center, Amadi drove faster than usual. The road was recently paved and surrounded by a field of knee-high grass. The sun was shining, and I was sweating in the back seat – a combination of nerves and the impending excitement of getting started with the traditional birth attendant interviews. We pulled into a village and drove in front of a two-roomed, concrete building surrounded by villagers and a few of the traditional birth attendants. The building was two-toned, the bottom half painted blue and the top half painted grey. There was a small seating area on a veranda outside of the office with a few of the villagers sitting on the wooden benches, taking cover from the sun.

I walked into the interior of the building, a room that seemed to function as the main office for the clinic. The room had concrete floors with benches immediately on my right, lining the walls. Sitting on the wooden benches were the traditional birth attendants I was set to

interview. After introducing myself and chatting with each of the women briefly, I attempted to acquaint myself with the contents of the office. Every square inch of the walls was covered with health posters, as well as a map of the villages surrounding the clinic. The posters were outlining different health messages and programs put forth by the Ministry of Health. The midwife who ran the clinic came to introduce herself and she explained the significance of the map – the villages surrounding the clinic each had a TBA turned SMAG living in them and the hand drawn map denoted their locations.

After placing my things on the desk, I sat down in front of the TBAs and introduced myself again. I explained the purpose of my project, the goals that I set out to attain, and how important their knowledge was to me. I was extremely excited to get started with the interviews and was also very humbled to be learning from these health professionals – many of whom had to walk numerous kilometers to be there. Each of the women: Hellen, Lushomo, Megai, Suria, and Malindi had significant stories to tell of their interactions with patients and the government after the passage of the health policy. I am extremely grateful to these women and am looking forward to sharing each story with you.

Interviews: Traditional Birth Attendants

Traditional Birth Attendant: Hellen

The traditional birth attendants I interviewed were typically older than the midwives, ranging in age from 45-65. Hellen was around 50 years old at the time of our interview and had to walk 2.5 km to the clinic from her village to participate. Hellen was trained by Doctors Without Borders in 2010, where she was trained "in conducting deliveries, HIV tests, and family planning." I was curious about how she was selected to be a TBA and able to participate in the training. Hellen told me that:

> "I was selected by the community because I can be trusted, and I am considered a highly respected person in the community."

She later told me that she had more respect as a SMAG after the health policy was passed than when she was a traditional birth attendant. This is because she had been trained by the government to perform her duties and she now conducts meetings in her community.

Hellen's interview demonstrated the extent of the infrastructural issues present in rural Zambia. Below is an excerpt from our interview where she talks about the cost associated with getting women to the clinic, which is 2.5 km away from her village.

> Tyler: "When you refer patients, how far do they have to go and how much does it cost for them to get to the clinic?"
>
> Hellen: "They have to travel two and a half kilometers and 150 kwacha."
>
> Tyler: "So, generally, it's very expensive everywhere. When I spoke to another TBA, they said that it cost 250 or 300 kwacha from her village. It's very expensive. Why is it so expensive?"
>
> Hellen: "There are very few cars and the other mode of transportation is the ox cart."

Hellen demonstrated the financial constraints present on women trying to go to the clinic during labor. Due to the limited availability of cars, it is very expensive for women to be transported to

the clinic and that's if a car can be located to take them. If no cars are available, the laboring women will have to be taken to the clinic in an ox cart 2.5 kilometers away.

Despite the infrastructural issues in getting women to the clinic, Hellen supported the passage of the policy. Hellen said:

> "I did appreciate the coming of the new policy because in the old days, people didn't prefer coming to the hospital when they were pregnant. Maybe one is HIV positive and after the delivery the mother dies and the baby. Nowadays, when they bring them here, they check for HIV or such kind of things."

Hellen was happy with the policy because she felt that with women delivering in the clinic, the midwives and nurses will be able to pick up on aspects of health that would otherwise be invisible to the TBAs. The clinic would be able to treat someone who is HIV positive for example.

Traditional Birth Attendant: Lushomo

Lushomo was one of the younger TBAs I interviewed, as she was around 45. She lived farther away from the clinic, 5 kilometers away, and also walked in order to participate in my study. Due to traveling a long way, she requested that I conduct the interview relatively quickly, so I only had time to ask the key questions associated with my study. Lushomo was trained by the local district health office in 2009 in conducting deliveries and in nutrition. She was also selected by her community and she explained the process of being selected to me:

> "I was appointed by the community. In the community, they have a system where if there's anything that the government wants to do, they call for a meeting for the entire community, and then they vote. People are free to say 'my proposal is this person and I think they can do the work and then they give the reasons why.' I was appointed in this way by a community of 900 people."

Being selected by the community was a commonality in all of the interviews I conducted with the traditional birth attendants. They were selected for numerous reasons, but mainly because they were compassionate and trustworthy.

This interview also demonstrated the personal connection that some traditional birth attendants felt with delivering. Lushomo said that:

> "I still miss conducting deliveries. I feel like it was one way of helping the community and I feel like I have a responsibility to contribute something to the community."

She stated that she missed delivery but then went on to describe why she believed the policy was beneficial to Zambia. Lushomo viewed the policy:

> "in a good light, it is reducing the death mortality rate. Because people – whenever there is a complication in the hospital, the doctors, they have the machines to do anything."

I found this response to be surprising and it was made by a few of the traditional birth attendants during the interviews. The TBAs would talk about issues concerning infrastructure, especially the inability of the women to get to clinics and then discuss their support for the policy. I found this particularly interesting in Lushomo's case because she stated that she missed conducting deliveries in the community.

Traditional Birth Attendant: Megai

Megai was different from the other traditional birth attendants I interviewed. She was not trained when she was a TBA but did receive SMAG training from the government after the passage of the health policy. She also was not a supporter of the health policy. The section of our interview that I want to highlight is her experience with the government after she makes an emergency delivery, as well as her negative feelings towards the health policy.

Halfway through our interview, I asked if she had ever had to make an emergency delivery after the health policy was passed. Below is an excerpt from the interview:

> Tyler: "Do the clinics or the government get upset with you if you have to do an emergency delivery?"
>
> Megai: "Sometimes they get upset. It depends on the type of cloth I use to wrap the baby and to tie the [umbilical] cord. Just in case of infection. So, sometimes they do get upset, the doctors will be upset."
>
> Tyler: "How do you wrap the cord?"
>
> Megai: "We are advised to use a pin and we are told to buy them ahead of time just in case of an emergency."
>
> Tyler: "So you buy your own supplies?"
>
> Megai: "Yeah."

Megai highlights a key issue, where the SMAGs are sometimes forced to conduct a delivery in the community. If the SMAGs do not use the proper methods of tying the umbilical cord, if they use cloth instead of a pin, the doctors will be upset. However, the supplies are not given to the SMAGs and they are required to purchase the pins on their own. The SMAGs are not paid for their help and typically have other jobs on the side to support themselves. Having to purchase their own supplies hinders their ability to provide emergency care and can also get the SMAGs into trouble if they cannot afford the proper materials.

Megai also spoke about the lack of health infrastructure in Zambia. As mentioned previously, this was a common complaint for both the midwives and the TBAs. When asked about her happiness with the health policy, Megai said:

> "The clinics were not here. So, women have to cover a long distance to go to one clinic. We'd find that in five, ten communities around, they use one clinic, and it's very far. You have to cover kilometers. Now, with the coming of these clinics, at least closer to each other, the change will be well received."

Megai mentions that the SMAGs will be happier with the health policy once there are more clinics near communities. They are unhappy currently because the laboring mothers have to

travel a significant distance to get to the clinic. Once more clinics are built, as the government promised with the passing of the health policy, the TBAs will be happier with it.

Traditional Birth Attendant: Suria

The two main points that I pulled from Suria's interview were her confusion over why the health policy was passed and the differences in respect given to her before and after the passage of the health policy. When Suria was a practicing traditional birth attendant, she was given training from Doctors Without Borders. Like the other TBAs who received training from this organization, she was taught about conducting deliveries and how to try and identify the symptoms associated with certain risk factors. She was also selected by her community to be a birth attendant.

After providing me with this information, Suria began to talk about her confusion surrounding the passage of the health policy. Below is an excerpt from the interview I conducted with her:

> Suria: "I don't know the reason why they changed from the TBA to the SMAGs. They were harmless. They were just told to stop conducting the deliveries and start referring. The government, they sent someone to tell us the reasons, but unfortunately, before he arrived, the one who was appointed to train us and tell us the reasons why the health policy was passed, he passed away."
>
> Tyler: "Do you miss conducting deliveries?"
>
> Suria: "I am okay with the referral, but given a chance, I would still be willing to conduct a delivery. I have never experienced any kind of difficulty conducting a delivery. If the clinic is too far, I will still conduct."

This quote supported something said by Charles to me earlier in the trip. He told me that the TBAs were not even informed by the government about the policy change and that many continued to conduct deliveries until they heard about the policy from another source.

Another aspect about Suria's interview that I found particularly interesting was her response to my question about respect:

> Tyler: "Do you feel like you hold the same respect as a SMAG that you held as a TBA?"
>
> Suria: "The respect that we were given [as TBAs] was more because we were able to conduct deliveries in the community. So, as a result, because of the distance from [the village] to the clinic, people in the community, they preferred going to the TBA and we could successfully conduct the deliveries. Now, because of the change from the TBA to the SMAG, where the government requires the TBA to refer, people sometimes disregard us."

This quote displayed the impacts of the health policy that existed beyond the medical. The policy deeply impacted the cultural ties of the TBA to the community that she used to serve, and while some TBAs transitioned to SMAGs, they no longer held the same amount of respect in the community.

Traditional Birth Attendant: Malindi

Malindi's interview demonstrated the work of a SMAG and how she prepares patients to be transported to the clinic. Malindi was also trained by Doctors Without Borders in 2002. The beginning of the interview provided information similar to what has been described above. However, she began to talk about her duties as a SMAG and how she handled the lack of easy transportation to the clinic when a woman goes into labor. Below is the excerpt from the interview:

> Tyler: "How frequently are you used as a SMAG? How often do you interact with patients?"
>
> Malindi: "There are a lot of people that come to me because they know I am a SMAG. They know they can receive some kind of advice."
>
> Tyler: "Education?"

> Malindi: "Education. All such kind of things. So, it's frequent, very often they call me."
>
> Tyler: "What kind of advice do you give expectant mothers?"
>
> Malindi: "Not overworking while she is pregnant, preparedness, and networking transportation so that whenever she has a problem or a complication, she can go to the clinic. They will call me immediately, then I am able to check for them and look at the symptoms, the signs or such kind of thing. Then I can say whether it's time to go to the hospital."

I found Malindi's advice on networking transportation to be interesting. She wanted to make sure that her patients have the proper transportation lined up before they need it. That way, if a complication occurs, the woman can get to the hospital as quickly as possible and not have to worry about the minimal transportation available to the clinic.

Analysis: Traditional Birth Attendants

The main topics discussed by the traditional birth attendants were selection by the community and infrastructural barriers. Traditional birth attendants, unlike the midwives, are typically selected by the community they live in for various reasons. For example, Hellen stated that, "I was selected by the community because I can be trusted, and I am considered a highly respected person in the community." Lushomo went into depth about how the community selected her:

> "I was appointed by the community. In the community, they have a system where if there's anything that the government wants to do, they call for a meeting for the entire community, and then they vote. People are free to say 'my proposal is this person and I think they can do the work and then they give the reasons why.' I was appointed in this way by a community of 900 people."

The community was heavily involved in the selection of the birth attendants – meaning that the attendants were respected members of, and were culturally significant to, the community. This naturally differs from the significance of the midwives, who simply apply for training and go to

school to become skilled birth attendants. The midwives then return to a health center to begin conducting deliveries. While the midwives believe that they are more significant because they have training and are supported by the government, the TBAs have community support.

However, after the passage of the health policy in 2010, the community support for some TBAs waned. Suria stated that "Now, because of the change from the TBA to the SMAG, where the government requires the TBA to refer, people sometimes disregard us." This implies that the cultural significance of the TBA has declined since the passage of the policy. Some of the mothers, now, do not ask the TBAs for advice or to aid in health care matters, they go to the clinic.

As discussed in reference to the midwives, and in the introduction, medicalization is a "double-edged sword" (Ginsburg and Rapp 1991:318). The significant downside to medicalization is that the introduction of a biomedical model can essentially remove more traditional modes of healing. This is what happened with the passage of the health policy – rural mothers now rely on midwives and clinics that are kilometers away instead of seeking the advice of the local traditional birth attendants turned SMAGs. Therefore, the policy has had a negative impact on the cultural significance of the TBAs.

The other topic that was heavily discussed by the traditional birth attendants was infrastructure, especially concerning the cost of transporting a woman to the nearest clinic. Hellen stated that her patients would have to travel 2.5 km to the closest clinic in order to deliver, and the transportation was spotty at best. Hellen said that the cost ranged from 250 to 300 kwacha to hire a car to the clinic, and if a car was unavailable "the other mode of transportation was the ox cart." This leads to serious financial concerns because as of 2015, the percent of the population living on less than $1.90 per day in Zambia was 57.5% (World Bank 2018).

Therefore, the cost for a ride to the clinic is significant for a majority of the population. The government was supposed to construct clinics that were closer to communities, but the clinics were to be completed by 2030, around 20 years after the health policy was passed.

While there were numerous issues for the rural traditional birth attendants surrounding the health policy, there were some attendants who supported the passage. Lushomo, for example, viewed the health policy "in a good light, [as] it is reducing the death mortality rate." She went on to state that:

> "Because people – whenever there is a complication in the hospital, the doctors, they have the machines to do anything."

A few of the TBAs that I talked to support the policy because it took the pressure off of their work – the birth attendants would no longer be responsible if any deaths occurred. Suria, on the other hand, did not really understand why the policy was passed. She viewed the TBAs as harmless and they were just told to stop delivering and begin referring.

These traditional birth attendants, like the midwives, touched on issues of risk involved with pregnancy – though there was debate over whether the TBAs actually caused harm. Rachel Chapman writes on the subject of risk associated with pregnancy, ultimately concluding that risk is a poor predictor for pregnancy outcomes (Chapman 2006:493). This goes without saying that the concept of risk surrounding maternal death could be inflated, as the maternal mortality ratio is nothing more than an estimate – and likely not a very accurate one in Zambia due to infrastructural downfalls (Wendland 2018:280). The traditional birth attendants were likely overly scrutinized for their part in contributing to maternal mortality in Zambia – and I believe this is the root of their disagreement. Despite the difference in opinion on the reasoning behind the health policy, many of the TBAs missed delivering and would do it again.

Chapter 3: Policy Ramifications

Ramifications

Zambia now relies on the use of midwives to aid in the delivery of infants – despite the staff shortages in rural areas. Midwives have considerable training, according to a joint brief published by the World Health Organization in conjunction with numerous other NGOs (World Health Organization et al. 2018). This brief outlines the requirements to become a skilled birth attendant, which include education through an accredited program, in-service training, and strict regulations (World Health Organization et al. 2018). In Zambia, for example, nurse-midwives undergo three years of nursing training and one year of additional midwifery training (World Health Organization et al. 2018). Due to this, midwives have the capability to provide education to their patients, recognize complications, and provide the necessary interventions. One multi-paper analysis (Filby et al. 2016) found that even with the additional training, the increase in the use of skilled birth attendants still did not equate to lower maternal mortality ratios. This study, which was conducted using a systematic review of literature, found that "The increased access to skilled birth attendance at birth in low and middle-income countries has not resulted in expected reductions in mortality." The explanation was that midwives have been spread too thin, due to a shortage of necessary skilled birth attendants, to provide quality maternal care to each patient. It is evident that there is a shortage of midwives in the rural areas of Zambia as well. This study implies that a similar scenario could be seen in Zambia in the coming years.

One of the strongest arguments made for the passage of the 2010 health policy barring traditional birth attendants is that Zambia will see reductions in maternal mortality. However, according to the studies mentioned above, that may not necessarily be the case. The World Health Organization, which trained TBAs in the 1970s, has shifted away from suggesting traditional birth attendants be used for delivery because declines in maternal mortality were not seen (Vieira et al. 2012). But, the expected reductions in maternal mortality have also not been

seen with the implementation of skilled birth attendants – such as midwives – because the health workers cannot keep up with the demand (Filby et al. 2016). This could lead to worse health outcomes for pregnant mothers.

While midwives have been used as the trained alternative to traditional birth attendants, they do not have the same cultural significance. This is because TBAs are often selected for spiritual reasons or are highly regarded in the community (Sialubanje et al. 2015). A study conducted in Zambia in 2015 found that a traditional birth attendant's skills are learned "through apprenticeship that involved both observation and imitation, and [she] is often highly regarded by the community that chooses her to assist women in childbirth" (Sialubanje et al. 2015). Another study conducted in Ghana supported Sialubanje's findings and also found that, "spiritual directions or revelations guided the practices of most TBAs" (Aziato et al. 2018). The traditional birth attendants integrated the use of herbal medications, as well as "myths" and cultural beliefs, into their practices. The women going through labor get psychological value from the TBAs and the cultural knowledge they add to the delivery experience. These practices have a special cultural significance to pregnant women, influencing whether or not they choose to deliver in a health center.

Acknowledging the cultural importance of traditional birth attendants could be beneficial in the overall goal of reducing maternal mortality. A few studies have examined the possibility of integrating TBAs into the new health system, including a multi-country, multi-paper analysis conducted in 2015, which contended "Specifying roles for TBAs acknowledges their cultural and social acceptability and the important role that they play in supporting the health of women and newborns and linking women, families, and communities to the formal health system" (Miller and Smith 2015). The author went on to describe the possible new roles, which include

"encouraging and accompanying women to attend antenatal and postnatal care and have skilled care during birth, providing companionship to women during and after childbirth, as well as broader roles they can play in community-level health" (Miller and Smith 2015). The study demonstrates that the cultural significance of traditional birth attendants should not be ignored, as they have potential skills to offer women and the health care system.

As a result of the declines in health care infrastructure and the differences in cultural significance between skilled birth attendants and TBAs, there have been debates over the effectiveness of barring traditional birth attendants. The ramifications – both positive and negative – surrounding this health policy are seemingly endless. Positive effects, according to the same study by Cheelo et al. in Zambia, include "early detection of complications and faster transportation of women to health facilities for further management, enhanced hygiene/clean deliveries, HIV/AIDS prevention, reduced deaths in the community and thus reduced criticisms of TBAs", and many more (Cheelo et al. 2016). One of the respondents in the study stated that "If a complication arises while at the clinic it's easier for someone to contact the hospital unlike in our homes because some of us come from distant places and our roads are very bad" (Cheelo et al. 2016). All of these benefits, however, are contingent on women actually being able to make it to a health facility. As stated numerous times previously, the clinics in rural areas of Zambia are typically spread out, requiring women to travel significant distances while in labor. By removing traditional birth attendants and lacking the health infrastructure necessary to handle the influx of patients, the positive benefits of the health policy are greatly reduced. By barring traditional birth attendants from deliveries in rural areas, the Zambian government is taking away someone who is at least partially "skilled" in delivering a child.

Negative effects of the health policy exist for both traditional birth attendants and midwives. According to Cheelo et al., negative effects for TBAs ranged from "having extra work to do, loss of respect, recognition and feeling neglected, increased cost of lodging at a health facility, and loss of social support from communities" (Cheelo et al. 2016). These negative effects differ from the effects felt by midwives. For example, according to a multi-paper analysis conducted by Filby et al., "midwives expressed feeling undervalued in their economic and professional contribution to society, had low or absent wages, experienced gender inequality in the workplace, and felt stretched too thin" (Filby et al. 2016). These negative ramifications deal with cultural and societal issues – whereas the ease of access and availability deal with issues of infrastructure.

I believe that the Zambian government had good intentions when passing the health policy in 2010 – the goal of which was to reduce maternal mortality. However, given the evidence provided, I also believe that the health policy will have mainly negative ramifications for maternal health in Zambia. It is evident that there is a severe lack of health infrastructure in rural areas, especially concerning midwives. As midwives are the primary health care providers for pregnant women in rural areas, and they have taken on an even larger role after traditional birth attendants were barred from delivering, I believe midwives will be stretched far too thin to handle the influx of patients. This will result in a lower quality of maternal healthcare provided to women.

Conclusion

My thesis aims to answer three questions: (1) How do midwives and traditional birth attendants understand their changing role in maternal health care after the passing of a 2010 health policy barring TBAs from delivering?; (2) Do midwives believe that the passage of the health policy will reduce maternal mortality?; and (3) How has the cultural significance of midwives and traditional birth attendants changed since the passage of the health policy?

Midwives and traditional birth attendants believed that their roles in maternal health care changed significantly after the passage of the heath policy. The midwives considered themselves to be crucial healthcare workers to mothers as they had medical training backed by the government. The midwives could offer the mothers biomedical expertise – a skill that they strongly believed resulted in a "good birth" – and one that traditional birth attendants could not provide. Their opinions seemed to be further strengthened by the passage of the health policy, as the government scrutinized the supposed role the TBAs played in contributing to the high maternal mortality ratio in Zambia. The traditional birth attendants, on the other hand, understood that their roles in maternal health care were transitioning from a delivery provider to an educational provider. Many TBAs became Safe Motherhood Action Group Workers after the passage of the policy – charged with educating their villages and accompanying laboring women to health care centers.

My second question, surrounding the capability of the policy to effect change in the maternal mortality ratio in Zambia, had a vast array of opinions from the midwives. A few of the midwives believed that the policy would be effective in reducing maternal mortality – as women would deliver in clinics and not at home. Thus, these midwives believed that the biomedical model was always the most beneficial for women. However, there were also a handful of midwives who believed the policy would be ineffective. Their skepticism surrounding the policy

was primarily concerned with the lack of health infrastructure for women in rural areas. There were simply not enough midwives or clinics in the rural areas for the health policy to reduce maternal mortality, in their opinion. The midwives felt that having a birth attendant, even one who was technically outside of the biomedical field, was better than having no attendant at all. The dichotomy in answers was thoroughly present in my interview data.

My third and final research question focused on the cultural significance of the two birth attendants – a question that was likely too reductionist to have any "solid" findings. This is partially because the question was not easily understood by the interviewees – culture is such a broad term that it encompasses different meanings for traditional birth attendants and midwives. The midwives stated that they were more culturally significant because they had biomedical training and were thus deeply connected to biomedical culture. They gained recognition through the government and were distanced from traditional culture, as they were not appointed by their communities to conduct deliveries. The traditional birth attendants, in contrast, were all selected by their community and were once highly respected individuals. The TBAs could provide the mothers familiarity, as they served women for the duration of their pregnancies. The traditional birth attendants felt that they had lost cultural significance because they were now being bypassed as women sought out midwives in clinics. At the clinics, the women may interact with their midwife for the first-time during delivery – a significant change from being delivered by TBAs.

After doing further research upon returning home, I believe the question I should have asked was "How has generational authority changed after the passage of the health policy?" It is evident, after speaking with the young midwives, that there has been a shift in generational authority over the control of delivery. Where TBAs once held domain over the practice, due to

their age and experience as birth attendants, the authority over delivery has shifted to the government backed midwives. A question that a future researcher should look into: Is the shift in generational authority the result of the health policy passed or some other variable?

This thesis has also demonstrated the negative effects that World Bank and IMF policies have had on the health infrastructure of Zambia. Chapter One outlined, through a quantitative lens, the shortage of midwives and clinics in the country. A study from the World Health Organization stated that there were 14 physicians per 100,000 population and 201 nurses and midwives per 100,000 population (Kinfu et al. 2009:226-7). This study also found that Zambia was not training enough health care workers to service its growing population (Kinfu et al. 2009:228). Another report from Ndoyo demonstrated the shortage of hospital beds in the country (Ndonyo 2005:10). This was supported by the qualitative data from my interviews, with midwives, traditional birth attendants, and the rural health official all citing the shortage of midwives in the country. It became evident to me that World Bank policy, in this case, wreaked havoc on the health sector in Zambia – and that Zambia ignored these problems caused by development when passing the heath policy.

This thesis does not intend to demonstrate biomedical birth in a negative light. There are numerous aspects of institutional birth that are positive, especially in light of complications – like hemorrhage – that can arise during the delivery process. However, with the passage of the health policy in Zambia, the government has discounted the traditional ways in which birth had been conducted before the arrival of biomedical technologies. In reality, it is apparent that the Zambian government did not fully consider these broad issues when passing the policy and also did not allow adequate time for a transition – a critical mistake.

Works Cited

Aziato L. 2018. Initiation of Traditional Birth Attendants and Their Traditional and Spiritual Practices During Pregnancy and Childbirth. BMC Pregnancy and Childbirth; 18: 64. DOI: 10.1186/s12884-018-1691-7.

Barton, Stuart. 2016. "Introduction and Background." *In Policy Signals and Market Responses: A 50 Year History of Zambia's Relationship with Foreign Capital*, 1-18. Hampshire: Palgrave Macmillan.

Barton, Stuart. 2016. "What the Literature Already Tells Us." In *Policy Signals and Market Responses: A 50 Year History of Zambia's Relationship with Foreign Capital*, 19-38. Hampshire: Palgrave Macmillan.

Central Intelligence Agency. 2019. "Zambia." The World Factbook. https://www.cia.gov/library/publications/the-world-factbook/geos/print_za.html.

Chapman, Rachel. 2006. "Chikotsa: Secrets, Silence, and Hiding: Social Risk and Reproductive Vulnerability in Central Mozambique." In *Medical Anthropology Quarterly*; 20(4): 487-515. https://www.jstor.org/stable/4499705.

Cheelo C et al. 2016. Banning Traditional Birth Attendants from Conducting Deliveries: Experiences and Effects of the Ban in a Rural District of Kazungula in Zambia. BMC Pregnancy and Childbirth; 16: 323. https://dx.doi.org/10.1186%2Fs12884-016-1111-9.

Cheelo C. 2015. "Trained Traditional Birth Attendants' Perspectives on Governments' Decision to Stop Community-Based Deliveries in Kazungula District: A Qualitative Case Study of Mukuni Chiefdom." Master's Thesis, University of Zambia. University of Zambia Repository (513800523).

Cosminsky, Sheila. 2016. "Chapter 1: Midwives, Knowledge, and Power at Birth." In *Midwives and Mothers: The Medicalization of Childbirth on a Guatemalan Plantation*. Austin: University of Texas Press.

Crass, Sarah. 2019. "Safe Motherhood Action Groups in Zambia." World Vision International. https://www.wvi.org/maternal-newborn-and-child-health/video/safe-motherhood-action-groups-zambia.

Davis-Floyd, Robbie. 1994. "The Technocratic Body: American Childbirth As Cultural Expression." In *Social Science & Medicine*; 38(8): 1125-1140. https://doi.org/10.1016/0277-9536(94)90228-3.

DONA International. 2019. "What is a Doula?". https://www.dona.org/what-is-a-doula/.

Filby A et al. 2016. What Prevents Quality Midwifery Care? A Systematic Mapping of Barriers in Low and Middle-Income Countries from the Provider Perspective. PLOS One; 11(5). https://doi.org/10.1371/journal.pone.0153391.

Gill C et al. 2011. Effect of Training Traditional Birth Attendants on Neonatal Mortality (Lufwanyama Neonatal Surival Project): Randomised Control Study. British Medical Journal. https://doi.org/10.1136/bmj.d346.

Ginsberg, Faye, and Rayna Rapp. 1991. "The Politics of Reproduction." *Annual Review of Anthropology*. 20:311-343. https://www.jstor.org/stable/2155804.

Kinfu, Yohannes et al. 2009. "The Health Worker Shortage in Africa: Are Enough Physicians and Nurses Being Trained?" In *Bulletin of the World Health Organization*; 87: 225-230. doi: 10.2471/BLT.08.051599.

Kruske, Sue and Barclay, Lesley. 2004. "Effect of Shifting Policies on Traditional Birth Attendant Training." In *The Journal of Midwifery and Women's Health*; 49 (4): 306-311. https://doi.org/10.1016/j.jmwh.2004.01.005.

Lane, Karen and Garrod, Jayne. 2016. "The Return of the Traditional Birth Attendant." In *The Journal of Global Health*; 6 (2): 1-5. https://dx.doi.org/10.7189%2Fjogh.06.020302.

Lundgren, Ingela. 2010. “Swedish Women’s Experiences of Doula Support During Childbirth.” In *Midwifery*; 26(2): 173-180. https://doi.org/10.1016/j.midw.2008.05.002.

Miller T and Smith H. 2017. Establishing Partnership with Traditional Birth Attendants for Improved Maternal and Newborn Health: A Review of Factors Influencing Implementation. BMC Pregnancy and Childbirth; 17: 365. https://doi.org/10.1186/s12884-017-1534-y.

Mwanawina. 1993. “Zambia.” In *The Impact of Structural Adjustment on the Population of Africa*, edited by A. Adepoju 69-77. London: The United Nations Population Fund in Association with James Currey Ltd.

Ndonyo, R. Likwa. 2005. “Chapter 1: Introduction.” In *Assessing Quality and Responsiveness of Health Services for Women in Crisis Settings: Zambia Case Study Report*, 2-13. World Health Organization. http://www.who.int/hac/techguidance/pht/womenshealth/Zambia_report_women_in_crisis_August2005.pdf.

Sialubanje C et al. 2015. Reasons for Home Delivery and Use of Traditional Birth Attendants in Rural Zambia: A Qualitative Study. BioMed Central; Sept 11. https://doi.org/10.1186/s12884-015-0652-7.

Simutanyi, Neo. 1996. “The Politics of Structural Adjustment in Zambia.” In *Third World Quarterly* 17(4): 825-839. Taylor & Francis Ltd. https://www.jstor.org/stable/3993288?seq=1#metadata_info_tab_contents.

Thomas, Lynn. 2003. *Politics of the Womb: Women, Reproduction, and the State in Kenya.* Berkeley: University of California Press.

Thomson, Michael et al. 2017. “Structural Adjustment Programmes Adversely Affect Vulnerable Populations: A Systematic-Narrative Review of Their Effect on Child and Maternal Health.” In *Public Health Reviews; 38(13): 1-18*. https://dx.doi.org/10.1186%2Fs40985-017-0059-2.

United Nations Children’s Fund. 2017. Maternal and Newborn Health Disparities: Zambia. https://data.unicef.org/wp-content/uploads/country_profiles/Zambia/country%20profile_ZMB.pdf.

United Nations Children’s Fund. 2018. Maternal Mortality Fell by Almost Half Between 1990 and 2015. https://data.unicef.org/topic/maternal-health/maternal-mortality/

Vega R. 2018. How Natural Birth Became Inaccessible to the Poor. Sapiens. https://www.sapiens.org/body/indigenous-midwives-mexico.

Vieira C et al. 2012. Increasing the Use of Skilled Health Personnel Where Traditional Birth Attendants Were Providers of Childbirth Care: A Systematic Review. PLOS; 7: 10. https://doi.org/10.1371/journal.pone.0047946.

Wendland, Claire. 2016. “Estimating Death: A Close Reading of Maternal Mortality Metrics in Malawi.” In *Metrics: What Counts in Global Health*, edited by V. Adams 57-81. Durham: Duke University Press. https://www.dukeupress.edu/metrics.

Wendland, Claire. 2018. “Who Counts? What Counts? Place and Limits of Perinatal Mortality Measures.” In *AMA Journal of Ethics*; 20(3): 278-287. https://journalofethics.ama-assn.org/sites/journalofethics.ama-assn.org/files/2018-04/pfor2-1803.pdf.

The World Bank. 2018. Country Profile: Zambia. http://databank.worldbank.org/data/views/reports/reportwidget.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=ZMB.

World Health Organization. 1992. Traditional Birth Attendants: A Joint WHO/UNFPA/UNICEF Statement. http://apps.who.int/iris/handle/10665/38994.

World Health Organization. 2004. Making Pregnancy Safer: The Critical Role of the Skilled Attendant. https://apps.who.int/iris/bitstream/handle/10665/42955/9241591692.pdf?sequence=1.

World Health Organization. 2011.The State of the World's Midwifery: Delivering Health, Saving Lives. http://www.who.int/pmnch/media/membernews/2011/2011_sowmr_en.pdf.

World Health Organization. 2015. Maternal Mortality in 1990-2015: Zambia. http://www.who.int/gho/maternal_health/countries/zmb.pdf.

World Health Organization. 2017. "Chapter 2: Health and Development Situation." In *WHO Country Cooperation Strategy 2017-2021: Zambia*. 7-24. https://afro.who.int/publications/who-country-cooperation-strategy-2017-2021.

World Health Organization, United Nations Population Fund, United Nations Children's Fund, International Confederation of Midwives, International Council of Nurses, International Federation of Gynecology and Obstetrics, International Pediatric Association. 2018. Definition of Skilled Health Personnel Providing Care During Childbirth. http://www.who.int/reproductivehealth/publications/statement-competent-mnh-professionals/en.

World Health Organization. 2019. Midwifery. https://www.who.int/topics/midwifery/en/.

Zambian Ministry of Health. n.d. National Health Strategic Health Plan 2011-2015. 22-24. https://www.uhc2030.org/fileadmin/uploads/ihp/Documents/Country_Pages/Zambia/ZambiaNHSP2011to2015final..pdf.