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Going Dutch: The Netherlands' Maternal Health Care Framework as a Model for Sierra Leone

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The Netherlands' Maternal Health Care Framework as a Model for Sierra Leone

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Abstract:

The West African nation of Sierra Leone has received a large amount of attention for its especially high numbers of maternal mortality. Women in that country face a 1 in 8 chance of dying in childbirth or of related complications (WHO, 2011). In response, in 2010 Sierra Leone instituted a policy of free medical care to pregnant women and children under age 5. The Free Health Care Initiative, as it is called, emphasizes physician and clinical care, an approach that seems top-heavy considering the severe lack of physicians in the country. This study will compare the Free Health Care Initiative of Sierra Leone to health care policy in the Netherlands, where midwife care and home birth are more common than any other industrialized nation. A comparison of maternal health care in Sierra Leone and the Netherlands is interesting, because both countries have a large number of births taking place at home, with a large number of midwives, and important, because these factors have not been compared in any previous study. While the consensus among development-minded organizations such as the World Bank, favors a modernization theory-based approach, this study argues that that more attention should be paid to the Dutch model of health care, and that more resources should be devoted to community-based health care.

Glossary of Terms

CHC- (Community Health Center) - A government clinic of Sierra Leone that covers a population of 10,000 to 20,000.

CHP- (Community Health Post)- A government clinic of Sierra Leone that covers of population of 5,000 to 10,000, or a small town. These are staffed by nurses and MCH Aides.

Eesterlijn- The primary, or general, level of maternity care in the Netherlands; this level is attended by either a midwife or a *huisarts*.

FHCI- Sierra Leone's Free Health Care Initiative; begun in April, 2010. It abolished all fees for care administered to pregnant and lactating women and children under five in all government-run health facilities.

Huisarts- In the Netherlands, a family practice doctor, or a general practitioner.

Indicatielijst- The indications list that determines when complications in pregnancy and childbirth in the Netherlands will be referred to a different level of care. An English version of this list can be found at http://europe.obgyn.net/nederland/richtlijnen/vademecum_eng.htm.

KNOV- (*Koninklijk Nederlandse Organisatie van Verloskunigen)* The Royal Dutch Association of Midwives.

MCH Aide- Maternal and Child Health Aide, Sierra Leone.

MDGs- Millennium Development Goals; markers set by the UN for achievement in reducing world poverty and similar goals by 2015.

PHU- Periphery Health Unit, in Sierra Leone, the first line in health services, these refer more complicated cases to District Hospitals.

Policlinic- A Dutch birthing clinic, administered by midwives, for women to give birth in a semi-clinical setting, within a hospital.

Primaat- A preference for Dutch midwives, this policy was discontinued in 1995. When it was in effect, a healthy woman seeking maternity care was required to use a midwife if there was one working in her neighborhood.

STCHN- Sierra Leone's State Enrolled Community Health Nurses

TBA- Traditional birth attendant. I use the term in reference to Sierra Leone, but these can be found in many developing countries and various cultures worldwide.

Tweedelijn- Specialist care in the Netherlands. In the case of maternal care, an obstetrician/gynecologist.

WHO- The World Health Organization

Ziekenfonds- "Sick Fund"; This Dutch government program mandates health insurance coverage for those making less than a specific amount per year. It determines a standard package of benefits and health services in the Netherlands

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CHAPTER 1*: Introduction*

Maternal Health Worldwide

The issue of global maternal health is important enough to be listed as one of the United Nations' Millennium Development Goals (MDGs). These goals seek to improve the quality of life worldwide in such areas as reducing the number of people living in poverty, furthering universal childhood education and providing sources of clean drinking water to every person in the world (Fraser 2005,36). Improving maternal health is one of the issues within the framework of the MDGs that is threatened by non-completion as the Goals' 2015 deadline draws near. By the World Health Organization's estimate, over 530,000 women die from childbirth complications each year, leaving behind infants who, in most cases experience death rates in the first two years that are three to ten times higher than other children (Fraser 2005,37). The death of so many mothers is also detrimental to developing economies. Fraser writes that the gap left by the deaths of these young reproductive-aged women and young children costs African countries alone 45 million dollars in economic productivity each year (Fraser 2005,37).

Several strategies have been widely identified as effective in curbing the number of maternal deaths in developing countries, and there is currently great consensus among health officials worldwide that the implementation of two key interventions can affect drop in deaths; they are: the provision of at least some sort of skilled attendant to assist at birth, and also reliable emergency obstetric care with a swift referral system so that when labor complications arise, women receive professional care as quickly as possible (Fraser 2005, 38). There is debate,

however, over how to define a 'skilled birth attendant'. While in the West, it is common practice for women to give birth in a hospital setting under the care of a physician, some point to the use of alternative approaches, such as midwifery as potential aids in lowering maternal mortality rates. Many cultures' traditional medicine practices also include the care of Traditional Birth Assistants (TBAs) for women in childbirth. There are those in the international health community who see these women as central to combating maternal mortality, since they are the culturally acceptable provider of maternal care in most instances. However, there is a new opinion that when complications in childbirth arise, the skills necessary to keep the mother and baby alive are far beyond the training that most TBAs would be able to achieve (Fraser 2005, 38). There tends to be a hesitancy of TBAs to refer the women under their care when emergency care becomes necessary, for a variety of reasons. In some cases, the TBA does not wish to relinquish power over to government health officials by referring a patient; in other cases, the TBA simply does not have enough knowledge to recognize when the life of the mother is threatened, and in some instances the TBA does not want to lose the small compensation the pregnant woman's family will provide her upon delivery (Fraser 2005, 38). These factors have contributed to the growing opinion that rather than providing current TBAs with training, governments ought to instead focus on building a health care network, and providing professional clinical care to pregnant women. Fraser urges that developing-country governments to devote larger shares of their GDP to healthcare, specifically maternal care, and for rich countries to provide more funds to those countries which cannot afford to finance care (40).

In sub-Saharan Africa specifically, governments face an exodus of qualified medical personnel upon completion of their degrees. Green and Pearson write that in many sub-Saharan

African nations, the current number of healthcare workers, doctors and nurses, would have to double and even triple by 2015 for these countries to be able to provide care to all citizens (2006, 42). The authors' analysis of data from 117 countries suggests that availability of doctors and nurses is key to maternal survival after child birth, and that "the pro- portion of births conducted by doctors versus midwives is a powerful correlate of maternal mortality" (Green and Pearson 2006, 43). Rather than simply focusing on whether there are skilled attendants (TBAs) for all deliveries, these findings suggest it is also important to emphasize the accessibility of emergency obstetric care provided mainly by doctors. To provide this accessibility, countries facing staffing shortfalls will have to take action to prevent the further loss of trained professionals and implement recruiting techniques to draw in international doctors and nurses. Professionals typically leave these sub-Saharan countries for reasons including… "salary, social security and benefits, job satisfaction, organizational environment and career opportunities, and availability of resources (infrastructure, equipment and supplies)" (Green and Pearson 2006, 44).

As would be expected, coverage and staffing issues are worse in rural and isolated areas. Some facilities claim to provide care to emergency cases after-hours, but this is often not the case, as staff cannot be contacted to come to the clinic. Health professionals themselves become very frustrated at the lack of support they receive and many experience 'burn out' early in their careers and choose to relocate and practice someplace with more resources. Health professionals who do stay often find themselves unable to give quality care because of the large numbers of women who await their assistance. One nurse in Kenya stated,

> "At the workplace there are always staff short- ages. This hospital is very busy. We have about 80 deliveries in 24 hours. So you can

> imagine how I manage with my skeleton staff. It has not been very easy. You cannot satisfy your clients. Because if there are long queues, you are trying to fight to finish the long queue and you don't have time to talk to your client to counsel her... So you don't satisfy the client and you don't satisfy yourself you are also frustrated. The queue is too long. You become so irritable. You don't even want to hear anybody talking. Then you frustrate the employer since you are not giving quality services." (Green and Pearson 2006, 45).

Another study conducted in Haiti, found that the distance from a woman's home to the nearest health facility is crucial in care-seeking behavior. Poor roads, mountainous terrain and availability of transportation greatly impact number of institutional births in the country (Gage and Calixte, 271). With only two hospitals in the country, both in the capital, many women view professional care as inaccessible and do not attempt to deliver their babies in a clinical setting. Interestingly the researchers found that the educational level of a given community does not seem to influence care seeking behavior. Also, the availability of household transportation affects pre-delivery health visits, but not the seeking of actual childbirth care (Gage and Calixte, 271). It can be assumed that even women who see visits to a healthcare professional as necessary during pregnancy would rather not travel many miles over mountainous terrain while in labor, but instead prefer to stay at home under the guidance of a local TBA. Gage and Calixte concluded that, in Haiti, "increasing the number of accredited health professionals with midwifery skills working in well-equipped facilities within rural communities is of critical importance if rural Haitian women are to have safer and healthier pregnancies" (286).

Maternal Health in Sierra Leone

The West African nation of Sierra Leone is ranked 180th on the United Nations Development Scale, making it the third least developed country in the world (UN Development Programme, 2009). This small nation faces a development and rebuilding challenge after being struck by an eleven year civil war, lasting from 1991 until 2002 (Globalsecurity.org, 2010). The war displaced thousands of Sierra Leoneans, killed or maimed thousands more and left the country's infrastructure in shambles (Globalsecurity.org, 2010). The health care system of the country, in particular, is severely lacking. Sierra Leone is one of the world's most dangerous places to deliver a child; one in eight women of reproductive age will die in childbirth or from childbirth-related complications (UNICEF, 2008).

Mossman's *Gender Equality in Post Conflict Sierra Leone* (2008) details the health care situation in Sierra Leone before the Free Health Care Initiative (FHCI). Mossman states that before the civil war, distance to care facilities and expense of treatment were seen as the most prohibitive factors in seeking care (123). Other than TBAs few healthcare professionals were available to women in rural areas, and the cost of services and medicines placed the care outside of the financial reach of most women. A few women polled by Mossman said that they did not seek care from a health professional because the women had little or no confidence in quality and effectiveness of the service (2008, 124). Women also expressed that because the cost of delivering in a government clinic was so high that the general feeling among rural Sierra Leoneans is that women who die in childbirth die from poverty rather than from childbirth

complications. Without access to the care that could easily spare their lives, most women accept the risk of dying in childbirth as a normal part of their lives (Mossman 2008, 125). Sierra Leone's civil war devastated what little there was of the country's health infrastructure and left most healthcare initiative up to the non-governmental aid agencies that came afterward to rebuild the nation. Organizations such as Doctors Without Borders provided what care they could in the circumstances but as Mossman writes "The ability of these organizations and individuals to provide adequate health care depended on their own mandate and resources, and this provision is clearly not long term in nature" (2008, 135). Doctors Without Borders, a group known for providing medical assistance to victims of war, was the most commonly noted NGO providing health care in the immediate post-conflict period, and while it was certainly fulfilling an essential emergency medical service, this is not a long-term or systematic solution (Mossman 2008, 136). This presents a situation in which the healthcare availability and quality have returned essentially to pre-war conditions instead of experiencing improvement.

Healthcare is still lacking especially in rural areas, and even though medical personnel are often moved from Freetown to rural areas, often these individuals do not comply and instead disappear from the country's healthcare network (Mossman 2008, 136). A large part of the nation's healthcare is provided in part by NGOs and as a result is not systematized and leaves many gaps. "While there should be a clear transition from the services provided by the international community to those provided by the government, it is clear that the government is currently unable to take on this service provision in a holistic way, simply by looking at the current level of health care provided by the government" (Mossman 2008, 139).

In response to the dire situation for pregnant women in Sierra Leone, the government instituted a policy of free healthcare to all pregnant and lactating women and their children under the age of five. This measure, adopted in April 2010, was made possible by a 20 million dollar loan from the World Bank in cooperation with the United Nations International Children's Fund (M2PressWire, 2010). While the free health care initiative is certainly a tremendous step in establishing care for women, staffing and supply problems, confusion about plan components, and financial sustainability are seen by some to pose immediate obstacles in the path of effective implementation of free care (M'Cormack, 2010). These issues will be discussed in subsequent chapters.

The Netherlands

The Netherlands is well known in the maternity care field for having a large number of home-births and a low level of medical interventions in childbirth. About 30% of all births are performed at home, by a midwife (DeVries, 2010, 28). The Dutch system has several elements that make it different from other Western industrialized countries in the area of healthcare during pregnancy and childbirth. Dutch pregnancies are divided into the physiological and the pathological. All low-risk pregnancies are referred to either a general practitioner or a midwife, according to the choice of the woman. Physicians specializing in obstetrics only treat risky pregnancies, once the referral is made by the midwife or general practitioner (in Dutch, called *huisarten,* or "house doctors"). Midwives attend about 50% of all births in the Netherlands, some of these in conjunction with a specialist, and independently care for 36% of women at the time of birth (DeVries, 30). This system essentially guarantees work to midwives and general practitioners. Professional midwives receive intensive, specialized training, and are independent practitioners qualified to provide full care to women with uncomplicated pregnancies and childbirth. Midwives are assisted by maternity home care assistants, who provide much of the primary care to women at home, allowing midwives to take on a larger number of cases at a time.

Dutch culture is largely responsible for the form its maternity care system takes. The Dutch put an emphasis on "acting normally" toward childbirth. To act normally (*doe maar gewoon*) is to prize intimacy and coziness, to practice thriftiness, to avoid heroics, to be stoic and

to work cooperatively (Berlinger, 47). Childbirth is seen as a family event, which should take place in the family home, if possible. Even in cases of hospital (policlinic) birth, mother and child are returned home usually within 24 hours of birth, and are attended at home for up to ten days, covered by medical insurance, by a midwife's assistant who provides care, health education, and performs some household tasks. Dutch government policy provides for the regulation of the number of midwives, assuring that the profession is protected, as well as funds research on the benefits of the "Dutch way of getting babies" (Benoit et al, 729).

Midwives in the Netherlands are highly organized and well equipped to educate health care professionals from other countries in their unique system of obstetrics. The Royal Dutch Organization of Midwives (*Koninklijke Nederlandse Organisatie can Verloskundigen* or KNOV) has its own *Buitenlands Bureau* (Foreign Office) which assists international visitors seeking to learn more about Dutch midwifery. KNOV also functions as a labor union for midwives, and has been very effective in the past twenty years in lobbying for better working conditions and wages for midwives in Holland (DeVries, 93-97). The political power that Dutch midwives have been able to attain has been one of the primary reasons for the prevalence of midwife-attended births in recent years. While women in virtually every other Western nation normally give birth in hospital settings, Dutch women continue to choose home birth and midwife care. The ways in which the Dutch system has come to be will be discussed at length in chapter 6.

CHAPTER 2: *Health Care in the Netherlands*

In the Netherlands, about half of all births are attended by a midwife (DeVries, 28). 30% of births take place in the home, 70% of these attended by a midwife (28). These statistics represent a very different attitude toward childbirth and pregnancy than that of the United States and many other similar countries. How is it that the Netherlands, a highly developed Western country, can have such a unique approach to obstetrics? A close look at the health care policy of the country, and a brief history of these policies developed helps to shed some light.

The Dutch system of health care provides for both private and public sector funding. Those with an income below a certain level per year (about two-thirds of the population) must be insured by the *Ziekenfonds* (Sick Fund). The Sick Fund is an insurance system organized by the government, but administered by private insurance companies. Premiums are paid by a combination of employee and employer contributions, much like Social Security in the United States. All Sick Fund insurers must provide the same "standard packet policy", which includes coverage dictated by the government. Coverage is regulated by a set of rules decided by the Sick Fund committee, determining what medical services will be compensated. Under these rules of coverage, maternity care is divided into two main categories when it comes to pregnancy. Normal, healthy women remain in the care of the *eerstelijn*, either a midwife or a *huisarts* (house doctor). Huisarts are neighborhood doctors who are similar to American family practice physicians. The huisarts provide basic care and serve as gatekeepers to other medical services

(DeVries, 29). Only women whose pregnancies involve some sort of complication can receive insurance compensation for care in the *tweedelijn,* or specialist care. These referrals are made by the primary care giver (midwife or huisarts) who might, in some instances, remain with the case. In more serious complications, care is completely taken over by a specialist. (DeVries, 39-57)

The hierarchy of Dutch maternal care starts with specialist obstetric physicians. These doctors only treat women who have been deemed by the indications list to have a complicated pregnancy, as referred by either a general practitioner or a midwife. Next in the hierarchy of care is the *eesterlijn*, which is divided between huisarts (house doctors) and midwives. Prior to 1995, midwives had a distinct advantage. A policy known as the *primaat* required all women in the insurance group known as the "sick fund" to be treated primarily by a midwife, should there be one in the area. Effectively, women did not have a choice in who would provide maternity care. If only huisarts practiced in an area, the women there had no other option; on the other hand, if a midwife was available, women had to go there for care. Below midwives, akin to nurses for doctors, are *kraamverzorgenden,* or midwives assistants. These professionals train for three years in specialized schools. They provide prenatal and antenatal care in the home to new mothers, babies and families. Their work is covered for up to five days by insurance.

Through the structure of health care and the rules governing compensation and insurance policies, midwives are given a limited amount of competition. This allows them to be major players in the health sector, on equal footing with physicians when it comes to birth. This does, however limit the choices of women in the Netherlands. A normal, healthy woman cannot choose an OB/GYN to attend the birth of her child, or rather, if she would like to make that

choice, she must pay for the care out-of-pocket. Her insurance policy will not cover any of the expenses of her prenatal care or delivery under the specialist.

There is a second, and more direct way that Dutch midwives have been promoted by the health care policy of the Netherlands. Until 1995, midwives benefitted from something known as the *primaat*; coverage rules required that in locations with at least one practicing midwife, women insured under the Sick Fund had to use their services, rather than a huisarts. This was what constituted the so-called 'protected position of the midwife' in the Netherlands. Under the *primaat* midwives were the only caregiver option for healthy pregnant women. The *primaat* shaped the experiences of Dutch mothers for decades, and several generations in the Netherlands were born under the care of midwives. This became the norm in Dutch society, and thus, even though huisarts are free to attend deliveries, today we still see the prevalence of midwifery.

An important feature of the Dutch system of health care is the *indicatielijst,* or indications list (DeVries, 58). This list is a set of guidelines that specifies the conditions for referrals between primary and specialist care givers. The indications list determines when a woman should be referred from her midwife to an obstetrician. This provides for safer home birth, since there is no doubt about when complications indicate that intervention is needed. Also important is the agreement that surrounds the contents of the list: it is accepted by all caregivers and followed carefully to avoid dangerous mistakes in diagnosis. Having this screening system for distinguishing pathological from physiological births allows the Dutch to avoid both unnecessary costs associated with intervention in childbirth, and the risks of unmonitored labor and delivery.

As unique as the Dutch system is, it is useful to look back on its history and formation to understand how the Netherlands arrived at their current policies.

To begin with, midwives in the Netherlands benefitted from municipally sponsored education and regulation from as early as 1463. At that time, the town of Leiden appointed a municipal midwife who was paid a small salary to see to the care of the town's pregnant women. She was required to call a physician for help in complicated cases, and was also directed to provide instruction to aspiring midwives. By the eighteenth century most towns had followed the example of Leiden by appointing midwives of their own (Marland, 1997). The 1818 Health Act was the first national law regulating midwifery. In the Act, midwives were given their own sphere of practice, and their duties were distinguished from those of men-midwives and obstetric doctors. The Act also limited the practice of midwifery to normal births, or "those births which were natural processes or could be delivered manually, so that the midwife may never use any instruments for this purpose" (Marland, 299). In a subsequent 1865 Act, midwives were regulated again, this time to attend "such deliveries that were the work of nature, or which could be executed by hand" (Marland, 305).

With midwifery firmly ensconced in the medical regulations of the day, the question of training these women came to the forefront. Between 1824 and 1828 six 'clinical schools' for midwives were opened in Amsterdam, Rotterdam, Middelburg, Haarlem, Hoorn, and Alkmaar (DeVries, 63). Despite these new schools, still in 1850 less than one-third of the 811 licensed midwives in the Netherlands had received formal training (DeVries,64). These numbers began to improve after the opening of the first state school for midwives in Amsterdam in 1861, and then

a second in Rotterdam in 1882. The training program in these schools lasted two years and covered anatomy and physiology, the care of infants and sick women, and both theoretical and practical midwifery. In 1920 a third year was added to allow for further training in infant and prenatal care. (DeVries, 64).

The politics of health care in the Netherlands are a very important reason why midwives have such a favorable position in that country. As previously mentioned, Dutch midwives are organized by their national association, KNOV. Dutch midwives first organized in 1898, creating the *Bond van Vrouwelijke Verloskudigen* (Alliance of Female Midwives). This professional organization experienced some splits and changes, the most significant being the departure of Roman Catholic midwives to their own organization (the *R-K Bond van Vroedvrouwen)* in 1921 (DeVries, 74). These two groups, the neutral Alliance of Dutch midwives, as it came to be called, and the Catholic Association of Midwives, coexisted until 1975. At that time they joined together into the association that exists today. KNOV organizes yearly meetings, publishes its own journal, and represents the interests of midwives to the government, other professions and the public (DeVries).

The power of KNOV and midwives in general was made apparent in the beginning of 2000. Between 10 P.M. on December 31, 1999 and 2A.M. on January 1, 2000, midwives in Amsterdam refused to deliver babies at home or in the policlinic. At this time the media outlets in the Netherlands were planning to run a story on the first baby born in the new century. The midwives were seeking public attention for their plea to improve the working conditions of their profession, and their clever strategy worked. Media attention was paid not just to the millennium

baby, but to the protest of the midwives against high workloads and low salaries (DeVries, 93). On March 26, a group of 40 midwives in the Hague accomplished their own work stoppage by symbolically turning in their midwives bags, and from noon until midnight refused to attend births. (In both instances, an emergency birthing room was set up in a nearby hospital, staffed by volunteer midwives to attend the births of women who normally would have delivered at home.) The entire month of March was a protest for midwives, timed to coincide with a debate in parliament about the growing crisis in midwife care. On the day of the debate 2,000 midwives converged on the *Binnenhof* in the Hague, where the Dutch parliament is housed. (DeVries)

The feeling had been growing for some years among Dutch midwives that, although they had a privileged position compared to much of the world, they were working very hard and not receiving a salary equivalent to their status and responsibility. The formula for compensation for attending a birth was as follows: the government established an expected yearly salary for midwives, then divided it by the number called the "standard workload", or the number of births a midwife was expected to attend per year. Prior to 2000, the standard workload was 150 births per year, a daunting number when the amount of care per birth is taken into account. A midwife desiring to only work for 40 hours per week would only deliver 117 births per year. These midwives, however, could not receive their full salary. For the heavy workload of 150 births, midwives were paid 30,000 euros. This salary was far smaller than those paid to other medical professionals.

As a result of the debate in parliament, and the protests by the midwives, the rules were changed to require a workload of 120 births per year, and salaries were raised to 45,000 euros.

Support offices were also set up to assist midwives in activities not related to client care, such as negotiating with insurers and hospitals, so that midwives would not have to work as many hours per birth. To quote DeVries, the success of Dutch midwives in the *Binnenhof* show them to have "a political power not commonly found in an occupation that is dominated by women and lacks the prestige of a university education" (97).

The Dutch system sets itself apart from other maternal care systems around the world, due in large part to the work of its midwives. Through an excellent system of training, a well-defined role in the larger health care structure, and political activism, Dutch midwives are able to assert their independence and professionalism. Nowhere else in the world are midwives able to practice so freely and effectively. It is an example that other countries (specifically Sierra Leone) should take under consideration.

CHAPTER 3*: Sierra Leone and the Free Health Care Initiative*

In November 2009 President Koroma of Sierra Leone announced at a donors' conference in London that his government would institute a program of free medical care to pregnant and lactating women and children under five. This program would begin on April 27, 2010, just 5 months away (Donnelly, 2011). This monumental announcement came as a surprise and as relief to the development world. Maternal mortality in Sierra Leone is not just a government priority; it is a global priority. Life expectancy at birth in Sierra Leone is 39 years old for men and 42 years for women (Bailey et al, 2011). The World Health Organization estimated the maternal death rate at 2,100 deaths per 100,000 births (2010). This is one of the very highest maternal mortality rates in the world. It was hoped that the Free Health Care Initiative (FHCI) would be the cure to this staggering problem.

In Sierra Leone, one of the biggest problems is the lack of health care personnel attending births. In 2010, 42% of births were attended by some kind of skilled health personnel, to include deliveries by health care workers other than doctors and midwives. These other health care workers are in large part MCH (Maternal and Child Health) aids. MCH aids are trained in providing delivery, immunization, monitoring growth and minor ailment treatment (National Health Sector Strategic Plan, 2009). MCH aids differ from traditional birth attendants (TBAs) and from midwives. They receive less training than a midwife, but more than TBAs (who generally have no training). Before the FHCI, TBAs delivered an estimated 90% of births in rural areas (M'Cormack).

Lack of formally trained health staff remains a huge problem in Sierra Leone. WHO's 2010 estimates state that the country has 95 physicians, less than .5 per 10,000 population. Nursing and midwife personnel are also lacking: 991, 2 per 10,000 population. These numbers are far below the WHO's African region average, which, for physicians, is 174,510, or 2 per 10,000 people and for midwives/nursing staff, 11 per 10,000 or an average of 802,076 physicians in the country. In urban areas of the country, 67% of births are attended by a skilled worker, in rural areas, that number is only 33% (WHO, 2010). This marked difference makes clear the stark reality of health care in rural Sierra Leone. Where a woman lives and gives birth can make a big difference on the care she will be able to access. The chart below comes from Sierra Leone's National Health Sector Strategic Plan (2009). It demonstrates the acute need for increased medical staff in rural Sierra Leone. (WA indicates Western Area, the district containing the nation's capital, Freetown.)

TABLE 1: Medical Personnel in Sierra Leone

Area of specialisation/study	Number	Location				Needed	Gap	%Shortfa
		WA	South	North	East			
Public health	24	15	3	3	3	30	6	20%
Surgery/Surgeons	5	3	0	1	1	26	21	81%
Physician	3	3	0	0	0	26	23	88%
Clinical Pharmacologist	1	1	0	0	0	24	23	96%
Pharmacist	33	32	1	0	0	52	19	37%
Nephrologists	0	0	0	0	0	8	8	100%
ENT	1	1	0	0	0	8	7	88%
Neuro-surgeons	0	0	0	0	0	8	8	100%
Gastro-enterologist	0	0	0	0	0	8	8	100%
Neurologist	0	0	0	0	0	8	8	100%
Paediatrician	2	2	0	0	0	30	28	93%
Ophthalmologist	1	1	0	0	0	22	21	95%
Haematologist	1	1	0	0	0	6	5	83%
Obstetrician/Gynaecologist	5	4	1	0	0	26	21	81%
Dentists	6	4	1	0	1	30	24	80%
Anaesthesiologist	1	1	0	0	0	12	11	92%
Radiologist	1	1	0	0	0	30	29	97%
Psychiatrist	0	0	0	0	0	12	12	100%
Dermatologist	1	1	0	0	0	6	5	83%
Medical Officers	115	97	5	8	5	150	35	23%
NURSES								
Midwives (Practicing)	95	95	0	0	0	300	205	68%
SECHN	635	425	60	80	70	1,500	865	58%
Nurse anaesthetist	20	15	2	1	2	34	14	41%
SRN	245					600	355	59%

The infrastructure of health care in Sierra Leone is organized into 12 districts and the Western area, where the capitol, Freetown, is located. Each district hospital supports its own Periphery Health Units (PHUs) which are of three types: Maternal and Child Health Posts (MCHPs), Community Health Centers (CHCs) and Community Health Posts (CHPs). At the village level, there is the MCHP, where MCH Aides offer antenatal care, supervised deliveries, postnatal care, family planning, growth monitoring for children under 5, and immunizations. For larger populations (5,000- 10,000) there is the CHP. At these posts State Enrolled Community Health Nurses (SECHNs) along with MCH Aides provide all the services of an MCHP as well as

prevention and control of communicable diseases. For larger towns CHC have a community health officer, MCHAides, SECHNs, and an environmental health assistant to provide prevention and control of communicable diseases as well as environmental sanitation, along with the referrals made by smaller posts. All of these PHUs are supported by district hospitals in the largest towns, which provide outpatient services and simple inpatient procedures. (National Health Sector Strategic Plan, 2009) The following chart, taken from the National Health Sector Strategic Plan (2009), details the distribution of each of these facilities throughout the country.

TABLE 2: Health Facilites in Sierra Leone

	Government					Mission		Private		NGO	
District	CHC	CHP	MCHP	Clinics	Hospital	Hospital	Clinic	Hospital	Clinic	Clinic	Total
Bo	23	12	50	1	1	1	6	0	11	3	**108**
Bombali	16	20	49	0	2	2	3	1	3	0	**96**
Bonthe	9	9	20	0	2	1	2	0	0	2	**45**
Kailahun	9	34	12	0	2	1	1	0	0	0	**59**
Kambia	11	8	31	0	1	0	2	0	0	1	**54**
Kenema	21	17	63	1	2	1	2	0	3	1	**111**
Koinadugu	12	6	33	1	1	0	0	0	0	1	**54**
Kono	11	15	46	0	1	0	1	0	4	4	**82**
Moyamba	12	6	56	1	2	0	5	0	0	1	**83**
Port Loko	11	21	55	0	2	1	4	0	1	0	**95**
Pujehun	14	10	25	0	1	0	0	0	0	0	**50**
Tonkolili	9	8	65	0	1	2	1	0	0	1	**87**
Western Area	20	10	15	7	12	2	11	2	23	3	**105**
Total	**178**	**176**	**520**	**11**	**30**	**11**	**38**	**2**	**45**	**17**	**1028**

Before the FHCI use of health facilities was low due to high out of pocket expenses (M'Cormack). Once Sierra Leone abolished charges or fees at all government run health facilities for pregnant women, lactating mothers and children under five, participation increased. This was not enough, however, to solve the problem of maternal mortality. In a 2010 report M'Cormack states that problems were primarily ones with informing the public about plan components, capacity for increased use of facilities, financial sustainability, and finally, a lack in the supply of prescription medications.

Confusion about plan components mainly centers on the provision of the FHCI that criminalizes the reception of monies for services rendered to target groups (M'Cormack). Health care providers are fearful of being in violation of the "no monies" rule that sometimes all members of the community are getting free care, just so the MCH Aide or STCHN can be on the safe side. The FHCI has also shut TBAs out of health care provision. These workers are not eligible for government salaries as are MCH Aides or STCHNs. Additionally, in very rural areas, knowledge about the FHCI is limited, with some women remaining unaware of the opportunity for free care.

As soon as the FHCI was adopted, clinics and PHUs were inundated with people desiring to take advantage of the free care. The shortage of trained staff continues, now with an increased workload of new patients (M'Cormack). This shortage of staff is compounded by the discontinuation of payment to non-formally trained workers, and TBAs. Beyond staffing, capacity is lacking in the infrastructure, such as hospital beds, equipment and supplies that fall short of the new demands (M'Cormack).

Donor contributions have funded much of the FHCI, and the government states that it will take over in five years (M'Cormack). An estimated 80% of current costs are being supplied by donors (16), which could be difficult to sustain. The target group of the FHCI was the population using health services the most, therefore the health system's main source of income has been taken away. M'Cormack recommends that Sierra Leone must arrive at some solution for the FHCI to fund itself, if the program is to continue.

One of the problems that has been most prevalent in the FHCI's implementation is that of drug availability. Those interviewed by M'Cormack expressed frustration at the lack of prescriptions provided to the clinics, and frequent errors in drug shipment. This is one area that should improve in the future, however. A second wave of implementation is predicted to respond more efficiently to the demands of health facilities (16).

Sierra Leone's infrastructure remains one of the most serious problems. Most hamlets and towns are not accessible by road, and very few intra-city roads are paved, making transportation even more difficult in the rainy season (Jambai, 274). Many women, especially in rural villages are unable to get to PHUs when time for delivery arrives. There has been an attempt at providing ambulance services, but these remain constrained by the lack of usable roads.

CHAPTER 4: *Drawing Comparisons*

On the surface, it would seem that Sierra Leone and the Netherlands are two countries with very little in common, especially in the area of health care. Upon closer analysis, however, several similarities become apparent. First, in both countries' health care systems, there are more midwife-type caregivers than clinical physicians.

TABLE 3: Maternal Care in Sierra Leone and the Netherlands

	Maternal Mortality Ratio (per 100,000 births)	Number of Gynecologists	Number of Midwives	Percentage of Births Attended by a Skilled Attendant
The Netherlands	6	699	1726	100%
Sierra Leone	2,100	5	991*	42%

*this is the total number of nursing and midwife personnel, including MCH Aides.

In Sierra Leone, outside of the area of Freetown, there are very few physicians, still fewer gynecologists. A woman in rural Sierra Leone seeking health care would be doing well just to see a general practitioner; most care is provided by MCH Aides. These MCH Aides are another area of similarity. They are comparable to the *kraamverzorgenden,* or midwives' assistants, in the Netherlands. MCH aides receive some training from the ministry of health in Sierra Leone, but not as much as the three years required in the Netherlands. Birth is also more common in the

home in both countries. As discussed, there are a multitude of reasons for the Netherlands' home birth rate, and in Sierra Leone, this is due more to a former lack of an alternative to home birth, before the FHCI. When women in Sierra Leone do give birth in a clinical setting, it is most commonly (outside of major cities), in a small facility much akin to the Dutch policlinic. In terms of territory, both the Netherlands and Sierra Leone are small countries. The Netherlands has a much more developed national infrastructure, compared to Sierra Leone, but it must be pointed out that this is developing.

It is important to keep in mind that the UN Millennium Goal 5 recommended that there be 1) the provision of at least some sort of skilled attendant to assist at birth, and 2) a reliable emergency obstetric referral system so that when labor complications arise, women receive professional care as quickly as possible (Fraser 2005, 38). The "skilled birth attendant", as has been demonstrated, must not necessarily be a physician. The definition of what determines a skilled birth attendant can have a huge effect on the shape a maternal care system takes. A key change that Sierra Leone should make to the FHCI is the stance it takes toward TBAs. Under the current rules, TBAs have been effectively shut out of the system, since they are not paid salaries, and are outlawed from taking payments from individuals. TBAs are important to maternal care, especially in rural Sierra Leone, where it can be extremely arduous to get to a periphery health unit (PHU). This is because TBAs are members of the communities that use their services; they are local in a way that a government health center cannot be- there are far too many small villages to establish a clinical setting in each one. It would be best, of course, if every woman could reach her desired birth facility in time for her labor and delivery, but this is often not the case. Transportation costs alone can prevent a woman from leaving her village to give birth. This is why it is important to have trained personnel in each community, and TBAs are most able to

fill this role. In order to bring TBAs into the FHCI, they should be trained, in a similar fashion to MCH Aides, and given salaries. TBAs are available, cost less (they don't need housing, for example), and are already engaged in maternity care. Midwives and MCH Aides in Sierra Leone should organize themselves, in a union, for example, to gain political recognition. The group could then move forward to lobby for desired policy, and hopefully, get results. Desired policy outcomes might include: inclusion of TBAs in the payment system, provision of training to TBAs, additional training for MCH Aides, and training and payment for a larger number of midwives as well. By bringing TBAs into the government operated health system, more voices from across the country would be heard. This is, of course, assuming that these varied voices would agree, so as to speak in unison. It is obvious that this would not be simple, or straightforward, but nonetheless a worthwhile goal.

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One of the problems with the FHCI that M'Cormack points out is over-reliance on donor funding (16). In a recent WHO news bulletin, this issue was addressed. Donors say they remain committed to building up Sierra Leone's health sector, and that the World Bank has committed funding over the next three years and will join DfID (The United Kingdom's Department for International Development) in the government's effort to achieve full coverage. The Global Fund to fight AIDS Tuberculosis and Malaria has also provided $ 45 million to strengthen health systems in Sierra Leone. " (WHO,2012). The World Bank has often been criticized for its modernist approach to development issues. I suggest that here, in the case of Sierra Leone's FHCI, a Western view of medicine was used to plan how care would be implemented. The FHCI puts emphasis almost solely on clinical care, and centralized hospitals. This approach misses the advantages that can be gained from looking at alternate health care systems, such as that of the Netherlands. It would be best to tailor a solution to high maternal mortality to Sierra Leone, and

to its unique characteristics. There will be no progress made with a "one-size-fits-all" approach. I would also argue that, as discussed earlier, Sierra Leone more closely resembles the Netherlands than the US, or the United Kingdom, both countries who contributed much of the donor funding for the FCHI (WHO Bulletin).

Discussion

From what the researcher has been able to gather, the Free Health Care Initiative is not as successful as it could be. Obviously, this is an extremely limited study of current health care conditions. The only definite way to get a good reading of how the FCHI is being implemented is to travel there first-hand. This proved too costly for the researcher at the time. This study is also limited by the small amount of current research concerning Sierra Leone, post FCHI. The only study that has been conducted to-date is often cited here (M'Cormack) and more studies are needed. Literature from the Netherlands is limited due to the shortage of English-language research done on maternal care**.** It is apparent, however, from the recent research coming from Sierra Leone (M'Cormack) that the FHCI puts undue emphasis on clinical care, physician attended birth, the use of prescription drugs, and centralized hospitals. This approach misses the advantages that can be gained from looking at alternate health care systems, such as the midwife system of the Netherlands. Steps should be taken to tailor a solution to high maternal mortality in Sierra Leone, based on its unique characteristics.

One theory of development that has been historically followed by the World Bank and similar intergovernmental organizations is modernization theory. This theory stresses modernization of society, such as industrialization, urbanization, and free trade, in order to raise the quality of life in impoverished countries. The FCHI bears many characteristics that resemble

a modernization theory led approach. The FCHI seems to attempt to move Sierra Leone's health care system into one that would closely resemble the United States, or other Western countries. This change would come in the form of a shift from the traditional practices, to more "modern" practices, such as having births in hospitals, rather than at home.

The Netherlands, as we have seen, is an example of a fully modern, Western country that uses a drastically different structure of maternal care. This system of care could work in Sierra Leone as well. The Netherlands and Sierra Leone closely resemble each other on one very crucial point: they both rely heavily on midwife (rather than physician) care at birth. The FHCI is an attempt to shift primary responsibility for maternal care to the clinical setting, but this is not the best approach, because it does not take advantage of the vast resource of midwife care givers. The TBAs in Sierra Leone are not utilized under the FHCI, and this is a mistake. TBAs, as it has been demonstrated, were already involved in maternal care in Sierra Leone, before new policy marginalized them. All the TBAs would require is training, and they could serve as qualified birth attendants as MCH Aides already do. Of course, circumstances are different in every country, and there cannot be a one size fits all or best-practice approach, but it is more logical to take the Netherlands as an example for Sierra Leone, as a starting point.

An important consideration that must not be ignored is that complications in pregnancy will always arise. Hospitals and clinics are still necessary parts of a good maternal health care system. These resources should only be tapped, however, when they are required. In uncomplicated pregnancies, women should be treated by low-level care givers, so that physicians and nurses can be free to help more serious cases. Sierra Leone's acute shortage of doctors makes this point all the more important. An efficient and reliable referral system, like the one in the Netherlands, is crucial. Some version of the Dutch indications list, as discussed in chapter 3,

would be helpful to use as a guide for Sierra Leone. One of the hallmarks of good maternal care is post-delivery supervision (WHO). Since, most maternal deaths occur after birth, supervision of mothers is desperately needed, so that any problems that occur can be referred to a physician. It is unreasonable to ask a woman living in rural Sierra Leone to travel the distance to a hospital after giving birth so that she can have a checkup. These new mothers have babies to care for, and very little money to spend on transportation. After giving birth to a healthy baby, it is unlikely that a woman would go to such lengths to attend to her own health, even though post-delivery fistulas and infection, both of which would go unnoticed unless diagnosed by a trained health professional. It isn't necessary to require women to travel to a city or large town for this care, the health workers should be located in the small villages. (WHO, 2012).

CHAPTER 5: *Conclusions*

In this research, I set out to give an analysis of maternal health care in Sierra Leone and the Netherlands, and to show how the health care development taking place in Sierra Leone could benefit from following some of the policies used in the Netherlands. These policies are: 1) the utitilization of a large number of midwives/TBAs as primary birth attendants, 2) a localization of maternal care, 3) a swift referral system governed by a formal indications list, and 4) in-home postnatal care for mothers.

As has been demonstrated, the Netherlands relies on midwifery far more than any other modern nation. With 699 practicing gynecologists and 1,726 practicing midwives in 2002, it is clear that the midwife is the primary care giver for pregnant women. Statistics in Sierra Leone draw a similar picture, but with only 5 gynecologists in the country and 95 formally trained midwives, Sierra Leone must rely more heavily on its nursing and maternal health aides, of which there are 991 (WHO, 2010). Under the rules of the FCHI, pregnant women can receive free care at government facilities where these midwives, nurses and MCH Aides work, but transportation problems in the rural parts of the country make this difficult to access. Sierra Leone should increase its number of skilled birth attendants by training the TBAs and allowing them to provide free care in these small communities and villages. This will require drawing TBAs into the government health care structure and providing them with salaries.

Both the Netherlands and Sierra Leone are small countries in terms of territory, but the Netherlands has the advantage of a very efficient transportation infrastructure. This makes health care seeking much easier for pregnant women in the Netherlands than in Sierra Leone when complications in childbirth arise. Rather than waiting for each small village to be connected by a

reliable system of roads, it would be better to localize primary maternal care in Sierra Leone. The presence of a trained maternal care giver in every community would allow pregnant women to receive antenatal checkups without the burden of commuting to a larger town or city. More antenatal care would mean more diagnosis of risk factors in pregnancy, and the provision of advanced care when necessary. Women with complicated pregnancies could make plans ahead of their delivery times to travel to a hospital or clinic for childbirth. While travel is expensive, a woman who is informed by her health care provider as to the risks for her particular pregnancy would be better able to make the right choice for her own health and that of her unborn child. This would lower the number of emergency cases in rural areas, and save healthy women the trouble and expense of travelling long distances for care.

The Netherlands' maternal care system is ruled by a document known as the *indicatielijst,* indications list. It is a set of symptoms and conditions, that when encountered, require referral to the next level of care. Midwives use the list to determine when a patient should be sent to a gynecologist for treatment. Such a list, if it were implemented in Sierra Leone, could enable trained workers, such as MCH Aides and TBAs, to feel confident in attending births and treating pregnant women, because it would allow them to know when more advanced care was needed. This list would make it clear when an emergency referral is required, so that women in serious danger could be transported as quickly as possible to clinic or hospital, and resources could be reserved for these emergencies. This reservation of resources is vital in Sierra Leone, where the number of doctors and hospital beds is limited. This higher level of care should be only for those cases that require it; a stipulation that is necessary in a country where the advent of free health care has caused a huge influx of pregnant women into the nation's hospitals**.** The cases that are filling up hospitals and clinics are not screened by any primary care giver, and do

not all require medical intervention. An indications list would serve as a gateway to more advanced medical treatment, so that limited resources go to those who truly need them.

The final element of maternal care in The Netherlands that should be implemented in Sierra Leone is postnatal care for new mothers. In The Netherlands, this care is administered by midwives' assistants in the home. Women are closely monitored for any after-birth complications, and assisted with the care of their newborns. In Sierra Leone, infection is one of the leading causes of postnatal death (WHO,2012), and can be easily prevented by primary care. Other risks, such as bleeding, can be minimized by basic medications, that could be administered by TBAs in the home. Allowing new mothers to stay home and receive postnatal care would be extremely beneficial in lowering maternal mortality rates.

Bibliography

Bulletin of the World Health Organization. December, 2010. Volume 88: No. 12. p 877-953. http://www.who.int/bulletin/volumes/88/12/10-021210/en/index.html

DeVries, Raymond. *A Pleasing Birth: Midwives and Maternity Care in the Netherlands.* 2004: Temple University Press.

Donnelly, John. "How did Sierra Leone provide free health care?". Aspen Global Health and Development. April 23, 2011. TheLancet.com

Fraser, A. (2005). Approaches to reducing maternal mortality: Oxfam and the MDGs. *Gender & Development*, *13*(1), 36-43. Retrieved from Academic Search Premier database.

Gage, A. and Calixte, M. 2006. "Effects of the Physical Accessibility of Maternal Health Services on Their Use in Rural Haiti". *Population Studies*. 60:3. (271-288). Accessed from JSTOR database, September 2010.

Globalsecurity.org. 2010. "Military: Sierra Leone" <http://www.globalsecurity.org/military/world/sierra_leone.htm#>. (September 22, 2010).

Jambai, Amara and MacCormack, Carol. 1996. "Maternal Health, War and Religious Tradition: Authoritative Knowledge in Pujehun District, Sierra Leone". *Medical Anthropology Quarterly* (June): 10-2. Accessed from JSTOR database September 21, 2010.

Lerberghe, W.V. and Kegels, G. *Safe Motherhood Strategies.* Studies in Health Services Organisation & Policy, 17, 2001. The European Commission.

M'Cormack, Fredline. "Pressing Through in Hard Times: Civil Society, Public Goods Provision and the State in Post-War Sierra Leone. *American Political Science Association.* September, 2010.

Mossman, L. 2008. "Gender Equality in Post-Conflict Sierra Leone". Accessed from JSTOR database September 2010.

M2PressWire. 2010. "UN Backed Maternal and Child Health Drive Kicks off in Sierra Leone". April 28. Accessed from Academic Search Premiere database. September 23, 2010.

Pearson, S. and Green, N. 2006. "The Implications of Shortages of Health Professionals for Maternal Health in Sub-Saharan Africa". *Reproductive Health Matters*. (May) 14: 27. P 40-50. Accessed from JSTOR database September 2010.

UN Development Programme. 2009. "Statistics of Human Development Report". United Nations. September 2010.

World Health Organization, 2012. "Maternal and Child Health". http://www.who.int/mediacentre/factsheets/fs348/en/index.html