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Reaching Millennium Development Goal Target 5.A.: Progress towards Improving Maternal Health

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TABLE OF CONTENTS

ABSTRACT

In September 2000, 189 countries agreed upon striving to reach Millennium Development Goal 5, making great strides to improving maternal health by 2015. The indicators that would prove the goal's success were determined to be directly correlated to a reduction of three-quarters of Maternal Mortality Ratio (MMR) from 1990 figures and having Skilled Birth Attendants (SBAs) present at all births by 2015 (United Nations, n.d.-a). Research has proven that while there has been a global trend towards reaching MDG 5, there is a large discrepancy amongst different regions and countries influencing its success. Through the usage of official United Nations documents and reports, peer-reviewed journals, and interviews ranging from various UN officials to mother in a developing country, the author was able to recollect the progress and effectiveness of the MDG 5. While many will argue that MDG 5 was the "right step in the right direction," there is a great amount of progress needed to improve maternal health, beyond the 2015 "due date" (Petra Lantz, 2013).
Keywords: Millennium Development Goal 5, Maternal Mortality, Skilled Birth Attendants

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INTRODUCTION

Maternal health has always been a popular topic of discussion amongst the United Nations agencies. However, until the establishment of Millennium Development Goal 5 (MDG 5), a part of the Millennium Declaration, in September 2000, the attention to bettering maternal health was unorganized and achieved little success. While efforts were made with good intention, the strategies were often convoluted and unable to achieve significant progress. Some claim that the establishment of the Millennium Development Goals (MDGs) was the most appropriate and effective initiative yet so far, with significant advances made amongst all the goals.

The United Nations and its partners established eight MDGs that would specifically target different aspects of development and hopefully be attained by 2015. These goals were to eradicate extreme poverty and hunger (MDG 1), achieve universal primary education (MDG 2), promote gender equality and empower women (MDG 3), reduce child mortality (MDG 4), improve maternal health (MDG 5), combat HIV/AIDs, malaria and other diseases (MDG 6), ensure environmental sustainability (MDG 7), and develop a global partnership for development (MDG 8) (United Nations, n.d.-a). While some of these goals have been achieved and are on track to be reached, there are varying factors that have influenced the progress.

In order to reach Millennium Development Goal 5, two targets must be reached. The first (Target 5.A.) is to reduce by three quarters, between 1990 and 2015, the maternal mortality ratio, and the second (Target 5.B.) is to achieve, by 2015, universal access to reproductive health. The indicators that were used to track Target 5.A. were the maternal mortality ratio and the proportion of births attended by skilled health personnel (United Nations, n.d.-a). In 2005, Target 5.B. was amended onto the MDG once it was recognized additional goals must be met in order to improve maternal health. The indicators used to track the progress of Target 5.B. was contraceptive prevalence rate, adolescent birth rate, antenatal care coverage (at least one visit and at least four visits), and unmet need for family planning (United Nations, n.d.-a).

The MDGs exemplify a unified front among 189 countries to strive to attain eight different goals that would significantly improve the living quality of people around the world (Ronsmans & Graham, 2006) . In 2000, it was established that while other efforts had been made in good intentions, they were lacking in several ways. The 1987 International Safe Motherhood Conference in Nairobi, Kenya established to reduce maternal mortality by 50% in 2000 by increasing antenatal care and training traditional birth attendants; however, it later became evident that the goals were far from achievable through those methods (Nour, 2008). While the goals set in Kenya were not achieved, the recognition of improving maternal health as an important focal issue helped as well as setting a clear definition on terms relating to the issue provided guidance for maternal health to be included in the drafts at the Millennium Declaration. The September 2000 conference confirmed that reaching all the goals, including improving maternal health, would only be attainable with collaborative efforts between governments, United Nations agencies, the private sector, and civil society (United Nations MDG report, 2012).

Both the Safe Motherhood Conference goals and the Millennium Development Goals helped established a unified definition to key terms regarding maternal health. Many cite the failure of results from training Traditional Birth Attendants (TBAs) as one of the main reasons for the Safe Motherhood Conference goals were unachieved. As a result, in the United Nations recognized the need to increase the presence of Skilled Birth Attendants (SBAs) during pregnancies to reduce maternal mortality rates and designated the proportion of births attended by SBAs as an indicator of progress. According to the WHO, a SBA 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” (World Health Organization, n.d.-a).

In addition, maternal mortality was established as a “priority area for the global health and development community” especially since the Safe Motherhood Conference (Hill et al., 2007). The WHO defines maternal death or mortality as “the death of a

woman during pregnancy or in the 42 days postpartum due to causes directly or indirectly associated with the pregnancy" (World Health Organization, n.d.-b). Maternal Mortality Ratio (MMR) was established as an indicator of MDG 5 progress and is the "annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth within 42 day of termination of pregnancy, irrespective of the duration and site of pregnancy, per 100,000 live births, for a specific year" (World Health Organization, 2012).

While the Millennium Development Goals may have its flaws, it has been very successful in various aspects. Waage et al., claim that the MDGs have succeeded in "encouraging global political consensus, providing a focus for advocacy, improving the targeting and flow of aid, and improving the monitoring of development projects (2010). The success in lowered mortality rates in countries such as Bolivia, Brazil, China, Egypt, Morocco, and Peru can be greatly attributed not only to the implementation of the policy but by the governments prioritizing the issue and "providing leadership through human and financial resources" (Nour, 2008). Although the Millennium Development Goals were targeted for 2015, the rates at which goals have been progressing prove that there will be patches in success. The progress achieved from MDG 5 has been applaudable, but improvements and amendments to future goals must be encouraged in order to continue progress towards reaching no maternal mortality.

METHODOLOGY

The original topic for my independent study project (ISP) was to concentrate on the differences between midwifery practices in developing and developed countries. During the initial research period, I encountered several articles that contributed the United Nation's Millennium Development Goals (MDGs) as a huge benefactor to lowering maternal mortality and improving maternal health starting 2000. My research topic shifted from looking solely at the differences in midwifery practices to the efforts that UN Organizations such as United Nations Development Programme (UNDP), World Health Organization (WHO), and United Nations Population Fund (UNFPA) have made in the field as well as a better understanding of these efforts from personal interviews.

My research was largely conducted through literature and online statistics but also relied heavily on interviews from a variety of individuals with knowledge on maternal health. In order to grasp a better understanding of maternal health issues, I first researched the topic on major UN Organizations' websites to collect official reports, trends, and definitions regarding the subject. In addition, databases such as lancet.com and PubMed were used to acquire peer-reviewed articles. During my stay in Morocco, I was able to conduct an interview with my host mom in Morocco regarding the quality of care she received during her pregnancy. After returning to Switzerland, the ability to meet individuals from different organizations during UN week allowed me to set up interviews during the ISP period. I conducted two interviews with individuals from the World Health Organization, one interview with a Swiss midwife who volunteered in Afghanistan from 1997-1998, one interview from a representative at the United Nations Population Fund, and one interview with someone from the United Nations Development Programme.

Interviews with the individuals from the UN organizations pertained more to the Millennium Development Goals and helped gain more insight on the subject from a bureaucratic standpoint as well as obtaining their professional and personal opinions and contributions on maternal health. The interview with the Swiss midwife allowed for a

better understanding of practicing midwifery in a developing country before implementation of the MDGs as well as understanding what the job implications of a midwife includes. The interview with the host mom allowed for an opportunity to gain insight on the conditions of receiving healthcare in developing countries. The range of interviews, from bureaucratic officials to a rural woman, allowed me to gain a multi-perspective look on current maternal health issues and the efforts that had been made since the implementation of the Millennium Development Goals.

RESULTS

Causes of Maternal Mortality

The establishment of MDG 5 was largely due to the high rates of maternal mortality and the recognition of its impact on the overall development of nations. Most of the causes of maternal mortality now have evidence-based interventions. Listed below are the appropriate interventions for the top causes of maternal deaths.

Table 1. Causes of Maternal Mortality with Evidence Based Interventions

Causes	**Percentage**	**Interventions**
Severe Bleeding	24%	Oxytocin and Manual Compression
Indirect Causes (i.e. Anemia, Malaria, Heart Disease)	20%	Iron Supplements, Malaria Intermittent Treatment and Antiretroviral for HIV
Infection	15%	Antibiotics Tetanus Toxoid, Immunization, Clean Delivery
Unsafe Abortion	13%	Family Planning and Postabortion Care
Eclampsia	12%	Magnesium Sulfate
Obstructed Labor	8%	Partogram
Other direct causes (Ectopic pregnancy, embolism, anesthesia complications)	8%	--

(Nour, 2008)

The high maternal mortality rates in resource-poor nations have been cited as a result of the “Three Delays.” The “Three Delays” are listed as the “delay to deciding to seek care, delay in reaching care in time, and delay in receiving adequate treatment” (Nour, 2008). The first delay is due to not recognizing life-threatening conditions within reasonable time binds during labor or in the first 24 hours post-partum period. The second delay is from reaching appropriate care in time and can pose as a huge barrier to women giving birth in countries with bad infrastructure. The third delay is the actual treatment received at health facilities, causing a delay due to inadequate care and

inefficient treatment (Frances McConville, 2013; Mwansa Nkowane, 2013; Nour, 2008; Wilma Doedens, 2013).

Observed Decrease in Maternal Mortality from 1990 – 2013

The Millennium Development Goals Report released every year by the United Nations has shown that since the implementation of the MDGs, there has been a significant amount of progress amongst all the goals. The latest data collection on maternal deaths produced by the official MDG report claims that "an estimated 287,000 maternal deaths occurred in 2010 worldwide, a decline of 47% from 1990 with the Maternal Mortality Ratio (MMR) showing a decrease from 440 in 1990 to 240 in 2010 for developing regions (United Nations, 2012).

Table 2. Maternal Mortality Ratio (MMR) per 100,000 live births and Number of Maternal Deaths in 1990, 2005, 2010.

Region	1990		2005		2010	
	MMR per 100,000 live births	No. of maternal deaths	MMR per 100,000 live births	No. of maternal deaths	MMR per 100,000 live births	No. of maternal deaths
World	430	576,000	400	536,000	210	287,000
Developed Regions	11	1,300	9	960	16	2,200
Developing Regions	480	572,000	450	533,000	240	284,000

(Shah & Say, 2007; United Nations, 2012; UNFPA, UNICEF, WHO, & World Bank, 2012)

Patchy Progress, Discrepancies in Lowering Maternal Mortality Ratio (MMR) between Developed and Developing Regions

While the global statistics on maternal mortality has reflected positively on the MDGs, when looking at country and region specific data, discrepancies on progress are evident. In order for a country to reach the reduction of maternal mortality ratio by 75%, an average decrease of 5.5% per year in the maternal mortality rate must have occurred since 2000, when the MDGs were established(Hill et al., 2007; Shah & Say,

2007). In reality, the rates of decline are far behind as countries that are middle-income with an initial ratio below 200 deaths per 100,000 live births were only able to reach decreases of 2.5% per year (Hill et al., 2007).

In addition, there is no uniformity on progress of maternal mortality with most the maternal deaths occurring in developing countries. While there was an influx in lowered maternal mortality between 2005 and 2010 data, the MMRs from developing regions continue to overwhelm at 15 times higher than MMRs from developed regions. Sub-Saharan Africa and Southern Asia accounts for 85% of maternal deaths in 2010, having accumulated 245,000 amongst the two regions (United Nations, 2012). However, even looking at developing nations, some regions are observed to be progressing at a faster rate than others. The latest MMR data in 2010 show that while both Sub-Saharan Africa and Eastern Asia are developing regions, there was a discrepancy of a MMR of 463, with Sub-Saharan Africa having a MMR of 500 and Eastern Asia having a MMR of 37 (United Nations, 2012).

Table 3. Comparison of Maternal Mortality Ratio (MMR) in different MDG regions between 1990 and 2010.

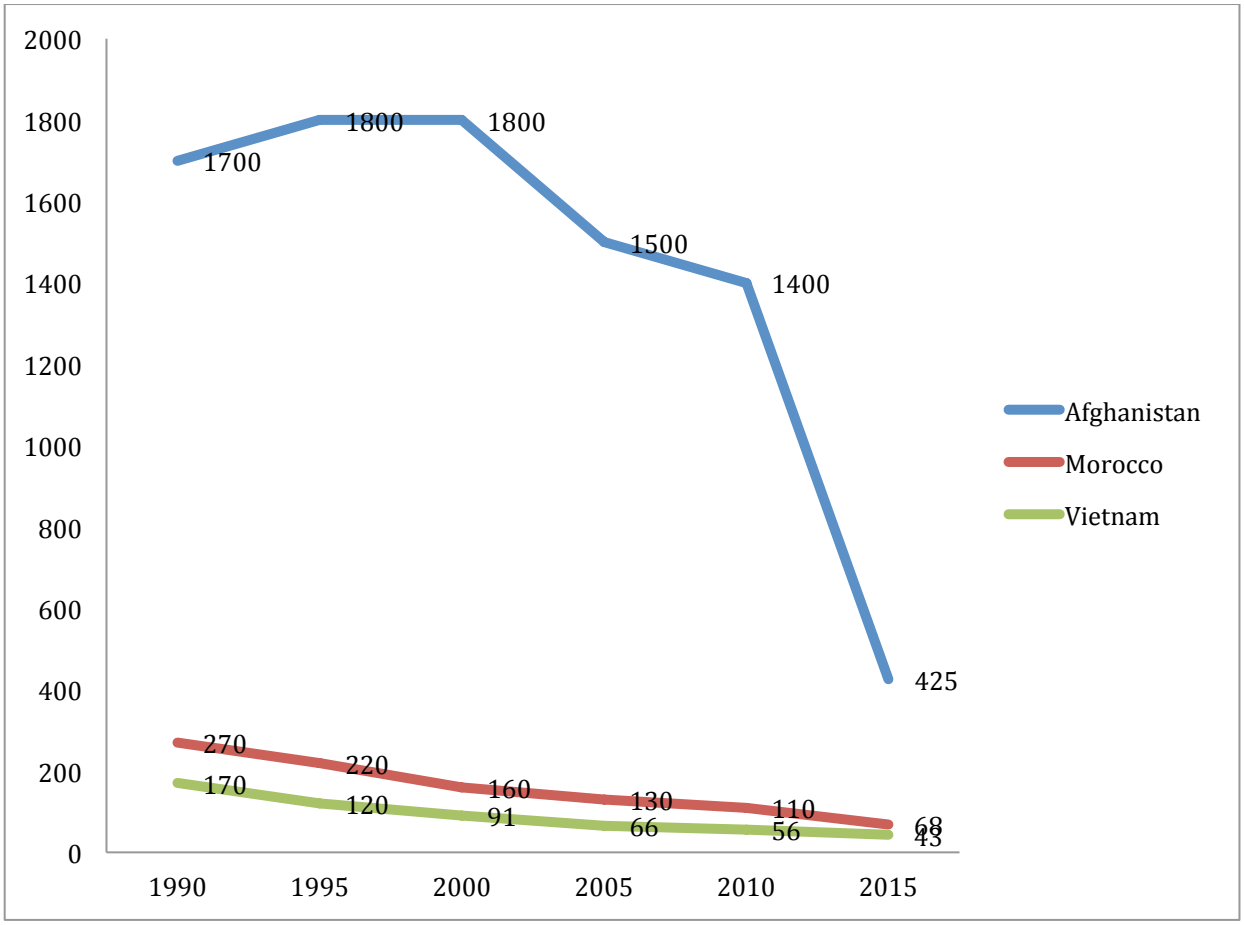
Region	MMR in 1990	MMR in 2010	Percent Decline
Eastern Asia	120	37	69%
Northern Africa	230	78	66%
Southern Asia	590	220	64%
Sub-Saharan Africa	850	500	41%
Latin America & the Caribbean	140	80	41%
Oceania	320	200	38%
Caucasus & Central Asia	71	46	35%

(UNFPA, UNICEF, WHO, & World Bank, 2012)

While Afghanistan, Morocco, and Vietnam are all developing countries; there are significant differences in the maternal mortality ratio (MMR) and their progress on achieving the MDG goal of lowering the MMR by 75% in 2015. Figure 1 depicts the trends in MMR of these countries. Unless drastic measures are adopted in Afghanistan, it is not predicted to reduce the MMR by three quarters by 2015. While Morocco has

been making progress in lowering the MMR, it is not sufficient to reach the 2015 goal. Vietnam is on track to reaching the targeted MMR by 2015. In 2010, Afghanistan demonstrated a 18% reduction, Morocco showed a 59% reduction, and Vietnam displayed a 67% reduction from their corresponding 1990 statistics.

Figure 1. Trends in Maternal Mortality Ratios (MMR) in Afghanistan, Morocco, and Vietnam.



(UNFPA, 2011)

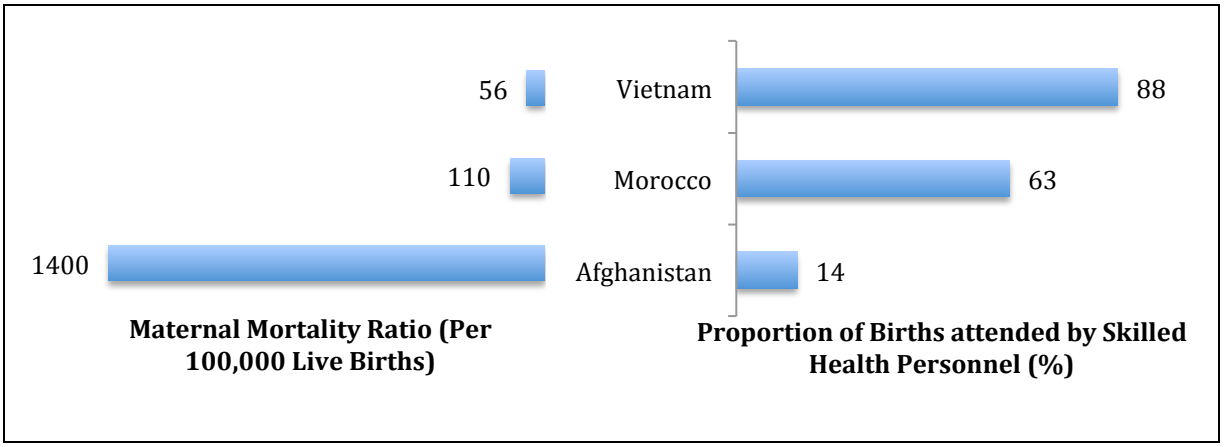
Addressing Skilled Birth Attendants, Reaching Indicator 5.2.

The United Nations Millennium Summit in 2000 established two indicators to monitor the progress of Millennium Development Goal 5, one of which was to ensure "skilled birth attendance for all" (UNFPA, 2011). The decision to gauge success in

improving maternal mortality by number of births attended by skilled birth attendant was different than the approach established in 1987 at the Safe Motherhood Conference, which emphasized antenatal care and training of Traditional Birthing Attendants (TBAs). While antenatal care was added onto the MDGs with Target 5.B. later, the World Health Organization (WHO) no longer recommends training Traditional Birthing Attendants nor consider TBAs as Skilled Birth Attendants.

The indicator was chosen to represent reduction in maternal mortality because "many studies proved a direct correlation between having skilled birth attendants during labor and decreased maternal mortality ratios" (Nour, 2008). Figure 2 shows the relationship between MMR and proportion of births attended by SBAs in 2010 of three developing countries at different points of achieving MDG 5. The Millennium Development Goals Report 2012 mentions that sub-Saharan Africa and Southern Asia have coverage with less than half. In addition, it states that Southern Asia, which Vietnam is considered a part of, had a impressive acceleration of SBA coverage since 2000 while Northern Africa and South-Eastern Asia, which Morocco is considered a part of, has shown slower progress of SBA coverage after 2000 (United Nations, 2012). However, studies have shown that while "the proportion of deliveries attended by skilled health personnel has increased in all regions except in sub-Saharan Africa, the effect on maternal deaths has not been substantial" (Shah & Say, 2007).

Figure 2. Relationship between maternal mortality ratio and proportion of births attended by skilled birth attendants in Vietnam, Morocco, and Afghanistan, 2010.



(UNFPA, 2011)

DISCUSSION

Maternal Mortality and the Three Delays Model

In the 2011 'State of the World's Midwifery' report by the UNFPA, they stated, "far too many women and newborns, mostly poor and marginalized in both rural and urban settings, are dying because they have no access to function health facilities or to qualified health professionals" (2011). As observed in Figure 1, there are interventions for most of the maternal deaths that are occurring in the world. However, most of these deaths are still occurring and are largely attributed to the delays categorized from the "Three Delays Model."

The first delay is the inability to recognize life-threatening conditions within a reasonable period during labor and in the first 24 hours post-partum. In a report on 30 developing countries, only 61% of women received post-partum care after delivering in a health facility, and the percentage receiving post-partum care was much lower if the birth was at home (Shah & Shay, 2007). This proves to be problematic because most maternal deaths occur within a week past delivery and the most common reason for mortality is severe bleeding (25%). Had a woman gotten the proper post-partum treatment with a proper birthing attendant, the delay in recognizing any warning signs and any subsequent consequences could be significantly decreased.

The second delay, the delay in reaching care once recognizing the life-threatening condition, is most relevant in countries that have poor infrastructure and modes of transportation. During her yearlong volunteer experience in Afghanistan as a midwife, Mrs. Louise Colassis recalled frustration and despair with transporting pregnant women to proper health centers. Geographic factors and the instability of the country due to Taliban unrest were and continue to be the largest barriers to reaching proper care in Afghanistan (Louise Colassis, 2013).

The third delay occurs after reaching a health facility and receiving inadequate care and inefficient treatment. Most of the resource-poor countries are lacking in the proper treatments often as well as being highly understaffed, especially in rural areas (Imame Khachani, 2013). Mrs. Najia Taib, my host mom from the rural village Farraha

near Ouazzane, Morocco, recalled when giving birth to her two children, the quality of care she received in the hospital was a huge delay. While the lack of resources is often the cause of the third delay, the competency and nature in health professional regards poses a huge barrier. She recalled the lack of respect herself and other villagers received in the local hospital was a large attributer to their going to their village midwife and birthing in home in uncomplicated birthing processes (Najia Taib, 2013).

Discrepancies amongst Regions in Reaching MDG 5

Official reports by the United Nations display significant progress towards lowering the maternal mortality ratio. A time-series analysis showed that the average decline in MMR was about 2.5% per year, however this decrease was "largely restricted to middle-income countries and those countries with initial ratios below 200 deaths per 100,000 livebirths" (Hill et al., 2007). In addition, in order to reach the 75% reduction in MMR by 2015, it is calculated that a 5.5% annual reduction is necessary, however, in 2005, only a 0.4% decline per year was observed with the total reduction between 1990 and 2005 being 5.4% (Shah & Say, 2007).

However, the trend towards improving maternal mortality is staggered and continues to "demonstrate dramatic differences across and within countries" (UNFPA, 2011). As observed in Table 2, there is a huge discrepancy in the MMR between developing and developed nations between 1990 and 2010. While the developing countries have made huge leaps in lowering their overall MMR, the discrepancy between developing and developed nations remains high and inconsistent. However, the discrepancy in MMR reduction is not only present between developing and developed countries, but within developing regions as well. Table 3 shows that while regions have made significant declines, MMR still remains high. Sub-Saharan Africa (41% decline) and Southern Asia (64% decline) both saw decreases in MMR between 1990 and 2010; however, the regions still produce and account for a large portion of maternal deaths (245,000 deaths combined) that occurred in 2010 (UNFPA et al., 2012; United Nations, 2012).

Comparing Progress in Afghanistan, Morocco, and Vietnam

Afghanistan, Morocco, and Vietnam are three countries with varying rates of decline in maternal mortality ratio. Afghanistan represents a country that has made very little progress, Morocco has been making progress but must increase their percentage in decrease rapidly by implementing more efforts in order to reach the target, while Vietnam has been on track and will definitely meet the targeted MMR.

In 2010, Afghanistan only showed an 18% decline from the 1990 ratio. This is speculated to be due to the cultural and geographic factors that pose large barriers to women accessing health services as well as the instability of the country to attribute to the lack of progress (Louise Colassis, 2013; UNFPA, 2011). Morocco has observed a 59% decline in MMR in 2010. The lowered MMR can be largely attributed to the increase in contraceptive and having better infrastructure and overall economic status than countries such as Afghanistan. However, the country still has a huge discrepancy in care and skilled birth attendants between rural and urban and continues to battle gender inequality and the status of women (Shah & Say, 2007; UNFPA, 2011). Vietnam is an example of a country that has made significant progress towards decreasing the MMR with a 67% decline reported in 2010. While densely populated, Vietnam has "experienced rapid economic growth" resulting in "higher living standards and significant rural-to-urban migration" and has implemented a population policy that led to a decline in fertility and better health indicators (UNFPA, 2011).

Skilled Birth Attendants as an Indicator

The second indicator in order to assess progress towards reaching MDG 5 was tracking the "proportion of births attended by skilled health personnel" (United Nations, n.d.-b). Currently, the WHO defines a skilled birth attendant (SBAs) as 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" (World Health Organization, n.d.-a). Studies have shown that there is a direct correlation between the

proportion of births attended by skilled birth attendants and the maternal mortality ratio which can be observed by the three countries in Figure 2 (Nour, 2008).

Trained traditional birth attendants (TBAs) are not considered in the definition of a birth attendant, although it was once considered the solution to lowering maternal mortality ratio at the Safe Motherhood Conference. The effort to train TBAs was a practical but was found inefficient solution to the discrepancy of births attended by educated birthing attendants amongst different regions. According the Wilma Doedens, the reason why training TBAs was an ineffective solution was because while these women had respect in society and may have learned from experience, they lacked several qualifications to be considered under the definition of an SBA. They were often "illiterate and had no formal training, did not deliver at least five babies a year, and did not have the proper supervision and referrals if something went wrong" (Wilma Doedens, 2013). After realizing the ineffectiveness of training TBAs, many countries such as Morocco, have been making efforts to produce a larger number of skilled birth attendants and distribute them throughout the country (Imame Khachani, 2013).

While the proportion of births attended by SBAs has increased to 63%, there is a huge incongruity between developed countries having 99% of births attended by SBAs while developing countries only have 59% of births attended by SBAs (Shah & Say, 2007). Shah & Shay also found the correlation between increasing SBA attendance and maternal mortality occurs only if coverage in the country reaches over 40% (2007). However, beyond the definition and training evaluations of SBAs set by the WHO, the competency of the attendants is assessable. So while the percentage of births attended by SBAs have increased, there is not enough information ascertain the actual capabilities and whether skills are truly standardized from provider to provider (Harvey et al., 2004). Harvey et al. also criticizes the WHO's statistics for categorizing anyone considered a "health personnel" to be qualified as a "skilled attendant" (2004).

The competency of Skilled Birth Attendants is varying amongst developing nations. However, the competency does not rely on the capability to perform the services of but rather the inability of these professionals. Harvey et al. saw a huge discrepancy amongst the healthcare professional competency because of the lack of

proper resources that were available, preventing these professionals to be unable to perform what is considered in developed nations, “basic preventative and lifesaving procedures” (2004). There are often shortages in supplies and inaccessibility to resources such as $MgSO_4$, an intervention for severe bleeding, the most common reason for maternal death (Harvey et al., 2004; Nour, 2008). The lack of resources and familiarity to the interventions result play a huge role in the consistency of competency of SBAs throughout the world.

Many developing countries will invest in educating their SBA workforce, yet experience severe “brain drain” because of several compounding factors. While increasing the workforce is important, it must also be a necessity to concentrate on retaining health professionals after educating them. In order to do so, Wilma Doedens and Petra Lantz vocalized the necessity for countries to be encouraged to train more midwives as well as giving the midwives more authority and value, empowerment, and decent salaries (2013). Louise Colassis, an English-trained midwife, mentioned the lack of respect and disregard local Afghanistan midwives received and that women would travel in order to give birth in her presence, even though her and Afghanistan midwives’ competencies were similar (2013).

Pitfalls in Obtaining Accurate and Representative Data

While maternal mortality is an important topic that must be spearheaded, the way upon which the MDG 5 tracked the decline of maternal mortality is not necessarily the most accurate. Obtaining any type of data on health and the population of countries poses a huge barrier especially to developing and underdeveloped nations. There have been significant improvements on measurement tactics; however, “in countries representing a quarter of global births there remains little empirical basis for estimating maternal mortality” (Hill et al., 2007). In addition, as with the competency differences of SBAs, there are a lot of variances in different regions and their methods and ability to collect data. The method used to collect data on maternal mortality usually relies on civil registration, and with many individuals unsure of the actual classification of maternal mortality, especially the post partum section, it is often underreported (Nour, 2008). The

under-reporting of maternal mortality is relevant in both developed and developing countries, as the definition of maternal death cannot be appropriated when the cause of death cannot be exacted (Shah & Say, 2007).

CONCLUSION

Since the establishment of MDG 5, the reduction of maternal mortality has been significant. While progress has been made towards reaching the 75% reduction in maternal mortality ratio, there is inconsistency globally. In 2010, there was an observed 47% reduction in MMR and an estimated 287,000 maternal deaths, indicating that there still needs to be a 25% decrease in 5 years in order to meet the MDG “due date” (United Nations, 2012). Shah & Shay calculated in 2007 that in order to meet the 75% decline, there must be an annual change of 5.5% both globally and regionally (2007). In addition, while the global trend has shown the 47% overall decrease, the rate at which maternal mortality is reduced is patchy from region to region. While some countries such as Vietnam have made incredible strides towards improving maternal health, countries such as Afghanistan and those in Sub-Saharan Africa are far from reaching the goal.

Although the goals will not be reached in some regions, efforts must be continued beyond the 2015 end date until maternal mortality is no longer an issue globally. MDG 5 was an applaudable effort as it lowered maternal deaths and improving maternal health; however, it had several flaws and must be amended when organizing post-2015 efforts. Tracking the maternal mortality ratio was “too narrow a view of maternal health” and was difficult to actualize the correct data (Waage et al., 2010).

In addition, Waage et al. articulates the lack of leadership and ownership by the fragmentation of responsibilities amongst the United Nations organizations to have convoluted the capabilities and progress towards improving maternal health (2010). Future efforts must be unified amongst UN agencies, governments, and individuals. In addition, maternal health should not spearheaded as a separate issue in post-2015 plans, but should be “built on a shared vision of development, and not on the building together of a set of independent development targets” (Waage et al., 2010). While reaching the MDG 5, lowering maternal mortality by 75%, was an important step towards improving maternal health, efforts must continue beyond 2015 to reduce MMR and have all births attended by skilled birth attendants.

WORK JOURNAL

Date	Journal
Feb 27	Initial meeting with Dr. Viladent regarding the ISP topic and question. Initial topic is to research the cross comparison of midwives in Switzerland, US, and Morocco. Went to do research until second meeting.
Mar 7	Second meeting with Dr. Viladent realizing research is difficult to conduct because of my elementary French. We refine the topic to look into the MDGs, maternal mortality statistics, and look primary on Switzerland, US, and Morocco.
Mar 23	Submitted my Literature Review titled “Maternity Healthcare with an emphasis on Midwifery.” This paper concentrated on the differences in midwifery of Switzerland, US, and Morocco. While doing research for this paper, I discovered an immense amount on the MDGs.
Mar 27	Went to a lecture on maternal health in hospital in Morocco. This lecture allowed me to talk to someone who had worked for the UN and was now an OB/GYN working in a developing country and was able to get a better understanding on maternal healthcare beyond the literature reviews. Lecturer: Dr. Imame Khachani
April 1	While living in the Farraha village (Morocco), I had the opportunity to interview my host mom, Najia Taib, and her experience with maternity care and the birthing process in Morocco. She was able to recollect a personal account on birthing in a hospital with a midwife and the conditions in which she was treated. This gave me a better understanding on how the three delays are actualized.
April 8 – 12	During the United Agencies Week (Program week 9), met Petra Lantz from UNDP lecture and Dorine Da Re-van der Wal from WHO who connected me to some of her colleagues at WHO to interview later. Became increasingly more interested in the MDG 5 and the efforts made

	by the UN agencies.
April 22 – May 16	During the ISP period I did a majority of my work in the United Nations Library, SIT office, and in my homestay in Bursinel. My research began with looking on different UN organizations' websites and obtaining statistics and official reports and documents from the pages. This allowed me to get a good basis of the progress and tracking process the organizations used to following maternal health. I also obtained a lot of peer reviewed articles that helped give another perspective on the works of the United Nations.
April 23	Conducted an in person interview with Ms. Mwansa Nkowane and Ms. Frances McConville from the WHO. During this interview, I learned more about the efforts WHO has done for maternal health and was given more information on what to research and the direction to hone my paper on. They were able to provide insight on their specific departments.
April 24	After a meeting with Dr. Viladent, I decided my research topic would be solely based on MDG 5. Before going to the meeting, I had researched more about the MDGs. Considering my great interest in maternal health, I decided to look solely at MDG 5.A. In addition, going to the UN week and meeting officials from different UN agencies furthered my interest in looking at the roles of these agencies and maternal health.
May 1	In person interview with Mrs. Louise Colassis, Swiss midwife with experience working for the ICRC in Afghanistan. She explained how it was like to work in Afghanistan and the sheer contrast between working there with minimal access to resources, cultural and geographic barriers, and in an unstable country compared to working in England and Switzerland.
May 7	In person interview with Ms. Petra Lantz from UNDP and Ms. Wilma Doedens from UNFPA. During this interview, I was able to learn more about their roles and their respective organizations' works towards the MDG and maternal health. Ms. Doedens gave me the "State of the

	World's Midwifery" report and the emergency pregnancy kit distributed to pregnant women in crisis in this meeting.
May 21	Presentation of ISP topic. The title of the presentation was titled "Reaching Millennium Development Goal Target 5.A.: Progress towards Improving Maternal Health"
May 20 – 24	During the last week I retouched my paper and made the proper edits. Submit date: May 24

REFERENCES

Frances McConville. (2013, April 23). Interview with Technical Officer, Department of Maternal, Newborn, Child and Adolescent Health, WHO, Geneva.

Harvey, S. A., Ayabaca, P., Bucagu, M., Djibrina, S., Edson, W. N., Gbangbade, S., … Burkhalter, B. R. (2004). Skilled birth attendant competence: an initial assessment in four countries, and implications for the Safe Motherhood movement. *International Journal of Gynecology and Obstetrics*, *87*, 203–210.

Hill, K., Thomas, K., AbouZahr, C., Walker, N., Say, L., Inoue, M., & Suzuki, E. (2007). Estimates of maternal mortality worldwide between 1990 and 2005: an assessment of available data. *The Lancet*, *370*(9595), 1311–1319.

Imame Khachani. (2013, March 27). *Moroccan Women's Hospital Lecture by Dr. Imame Khachani*.

Louise Colassis. (2013, May 1). Interview with Swiss midwife.

Mwansa Nkowane. (2013, April 23). Interview with Technical Officer, Nursing and Midwifery, Department of Health Systems, Policies and Workforce, WHO, Geneva.

Najia Taib. (2013, April 1). Interview with Rural Village Host Mom, Farraha, Morocco.

Nour, N. (2008). An Introduction to Maternal Mortality. *Reviews in Obstetrics & Gynecology*, *1*(2), 77–81.

Petra Lantz. (2013, May 7). Interview with Directrice, Bureau de représentation du PNUD, à Genève.

Ronsmans, C., & Graham, W. (2006). Maternal mortality: who, when, where, and why. *The Lancet*, *368*(9542), 1189–1200.

Shah, I., & Say, L. (2007). Maternal Mortality and Maternity Care from 1990 to 2005: Uneven but Important Gains. *Reproductive Health Matters*, *15*(30), 17–27.

UNFPA. (2011). *Main Report - State of the World's Midwifery 2011*. UNFPA. Retrieved from http://www.unfpa.org/sowmy/resources/en/main.htm

UNFPA, UNICEF, WHO, & World Bank. (2012). *Trends in Maternal Mortality:1990-2010*. World Health Organization. Retrieved from http://www.unfpa.org/public/home/publications/pid/10728

United Nations. (2012). *The Millennium Development Goals Report: 2012*. New York: United Nations.

United Nations. (n.d.-a). unstats | Millennium Indicators. *Millennium Development Goals Indicator: The Official United Nations site for hte MDG Indicators*. Retrieved from http://unstats.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm

United Nations. (n.d.-b). United Nations Millennium Development Goals. Retrieved May 16, 2013, from http://www.un.org/millenniumgoals/

Waage, J., Banerji, R., Campell, O., Chirwa, E., Collender, G., Dieltien, V., … Unterhalter, E. (2010). The Millennium Development Goals: a cross-sectoral analysis and principles for goal setting after 2015. *The Lancet*, *376*(9745), 991–1023.

Wilma Doedens. (2013, May 7). Interview with Technical Adviser, Humanitarian Response Branch, UNFPA, Geneva.

World Health Organization. (2012). *World Health Statistics 2012 - Indicator compendium*. Geneva, Switzerland: WHO.

World Health Organization. (n.d.-a). WHO | Skilled birth attendants. Retrieved from http://www.who.int/maternal_child_adolescent/topics/maternal/skilled_birth/en/

World Health Organization. (n.d.-b). WHO | Maternal mortality ratio (per 100 000 live births). Retrieved May 14, 2013, from http://www.who.int/healthinfo/statistics/indmaternalmortality/en/