Introduction

Maternal health refers to the care of women during pregnancy, childbirth and after delivery in order to reduce maternal morbidity and mortality. Maternal morbidity refers to serious diseases, disability or physical damage caused by pregnancy complications. Maternal mortality is the death of a woman while pregnant or within 42 days of delivery from complications related to the pregnancy and not from accidental causes. The United Nations is committed to reducing the mortality rate by three quarters of the maternal mortality ratio between 1990 and 2015 and to provide universal access to reproductive health. This commitment is highlighted in UN Millennium Goal #5.

Maternal health is an important issue that needs to be addressed and it needs to be improved to keep mothers, families and societies alive. In this paper I discuss the issues of maternal health and share information regarding my experience at the University of Vanderbilt and how it has helped me better understand the role of medicine in helping women.

Why are Women Dying?

The 2010 World Health Organization (WHO) report states there were an estimated 358,000 maternal deaths globally or a mortality ratio of 260 maternal deaths per 100,000 live births. Sub-Saharan Africa and South Asia accounted for 87%, or 313,000, of the global maternal deaths. Maternal deaths also increase the number of vulnerable orphans. Children without parents have an increased risk of dying early resulting in loss of future generations and developments for these affected countries. WHO’s report also states that among the developing regions, Sub-Saharan Africa had the highest maternal
mortality rate of 640 deaths per 100,000 live births followed by South Asia with 280 deaths per 100,000 live births (Figure 1). Some factors that influence these maternal deaths include: delivery complications such as hemorrhages, sepsis and obstructed labor, lack of health care facilities, lack of supplies, lack of trained staff, and the culture and health status of many of the women.

Many women in developing countries live in remote villages that are often inaccessible by car. There are few health centers and many are too far from small villages to service rural women. In developing regions, there may not be enough money to build and supply health centers. According to the United Nations Population Fund, only 58% of women in developing countries deliver with the help of a trained doctor or midwife. In certain patriarchal countries such as Afghanistan, custom forbids women to travel without a male companion. Some cultures do not recognize the need for special care before, during and after pregnancy.

**The Solutions to End This Crisis**

Researchers are reporting a considerable drop in the number of women dying each year from pregnancy and childbirth (Figure 2). Studies have shown this decrease is largely due to lower pregnancy rates, higher incomes, women receiving more education and the increased availability of skilled attendants who help women deliver in developing countries. Even though progress is being made toward improving women’s health, there is still much work to be done.

The UN Human Rights Counsel resolution of June 2009 recognized maternal health as a human rights issue and this makes it a more important concern. Therefore, strategies need to be more aggressive. Research has shown that approximately 80 per cent of maternal deaths could be averted if women had access to essential maternity and basic health-care services.
There needs to be increased training of birth attendants and midwives, utilizing local women or local healers. Due to the potential high risk pregnancies, birth attendants should be trained in performing c-sections. Every effort should be made to provide supplies including protective equipment for attendants due to the high rates of HIV. Considering many of these women are young and malnourished, nutrient supplements should be distributed to women of childbearing age.

The risk of infections also could be addressed by providing antibiotics. Several NGO’s, such as Doctors without Borders, Save the Children, and UNICEF, are currently in developing regions helping the populations. Save the Children has set up maternity units in developing countries. UNICEF has provided training for midwives.

**Figure 1. Maternal mortality ratios per 100,000 live births, by region (2005)**

**Figure 2. Declines in maternal mortality ratio-developing regions (1990-2010)**
Doctors committed to women’s health issues can impact maternal health. They can provide direct care and support the efforts of the local midwives.

**My experience at Vanderbilt University**

I would like to be an obstetrician/gynecologist, providing care and leadership in the fight to improve maternal health. I have always been interested in science and medicine and have wanted to be a doctor for as long as I can remember. During the summer of 2012, I participated in the PAVE program at Vanderbilt University in Nashville, Tennessee. PAVE is a six week pre-college, pre-medicine program.

During my time on campus, I improved my problem solving, technical writing, computer knowledge, and laboratory skills through lecture classes in humanities, physics, chemistry and biology. In the lab, I conducted polymerase chain reaction (PCR) experiments and tested for the TAS2R38 gene. I attended an organ recital and inspected a human brain, a set of lungs and a human heart. I also had the opportunity of shadowing doctors at the Vanderbilt University Medical Canter. I was able to view a muscle biopsy, a laparoscopic appendectomy, the removal of cataracts and a hemorrhoidectomy (the removal of a hemorrhoid).

As I watched the doctors perform their procedures, I noticed all the technology and equipment they had to manipulate and master in order to complete their procedures. It occurred to me that the equipment allows the doctors to be more precise from the crystal clear cameras that show the inside of the body cavities in order to do an oscopy, to the cameras that allow doctors to perform a cataract removal. I realized medicine is more complicated and in order to succeed as a doctor, you have to be flexible and accommodate to changes such as technology improvements.
My experience at Vanderbilt provided me with college preparation and medical insight to better understand how to treat women and diagnose illnesses. This program also helped me solidify my decision to pursue my undergraduate studies in the medical field. I learned that I have to be serious about my education, manage my time and take advantage of every opportunity provided to me. Through my experience at Vanderbilt, I feel better prepared to pursue a career in the medical field and become an ob/gyn to provide better healthcare for women and help to end this global crisis.
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