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The Current Status of Maternal Health in Samoa

Maternal Health Perspectives According to Professionals and Women

Yesenia Pedro Vicente

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Academic Director: Jackie Fa'asisila

S.I.T. Samoa, Spring 2012

Abstract

Countries that face pressure to develop at a rapid pace under the western model must adapt to social change and adopt new policies that will secure their well-being. In an attempt to guide these countries, the United Nations has established the Millennium Development Goals as a framework for national development. The United Nations recognizes the importance of improving maternal health and has established it as one of the eight Millennium Development Goals (MDGs) agreed to by member states. Samoa has agreed to these Goals and is said to be "on track" for improving maternal health by the year 2015. This study will attempt to understand what "on track" really means and will explore how progress in Samoa is measured regarding MDG 5: Improving Maternal Health. The actual health practices of women will be surveyed and similarities and discrepancies between reported behavior and actual practice will be discussed, including insight from health professionals interviewed on the topic. The study will conclude with suggestions for future progress towards meeting MDG 5.

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Contact: In person

Dedication

I dedicate this work to my mother, who is my strength and my inspiration.

She lost a daughter once.

There were no doctors or clinics near her village.

She came to an unknown country and has found a second home.

Despite hardships, she pushes me to be a better person—kind and patient—everyday.

I dedicate this work to perseverance and limitless love;

a faith that cannot be broken;

the strength to continue each day;

the hope for a better tomorrow;

and joy in the simple things.

May maternal and child health always be ensured.

Acknowledgments

I would like to thank the guidance and support of my advisor, Suzie Schuster. Thank you for sparking in me the desire to learn more about maternal health and for getting me all worked up about solving the world's problems.

Thank you to all of the people who helped me in creating this product: representatives from the WHO, Ministry of Health, and the national hospital. Thank you also to Dr. Lei. Your patience in allowing me to drop in and chat is greatly appreciated. Your insights helped me understand a good deal more about public health.

Thank you to the library staff at USP, especially Laine, who kindly took time to help me translate and edit my surveys. It's always nice to feel welcome.

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Introduction

With globalization increasing and countries feeling the pressure to 'modernize' under the western paradigm, significant social change is occurring around the world. Often, this change includes the transition from traditional agricultural subsistence economies to market economies and consequently, a change in lifestyle. As a developing nation, Samoa, along with other Pacific island countries, is facing this pressure and is simultaneously attempting to deal with the "double burden of disease" brought on by the emergence of non-communicable diseases in conjunction with existing infectious disease. Unfortunately, when social change does occur, women and children often face the brunt of transition since they typically hold a lower position in society than men and their well-being is often interrelated. In order to address the issues of development in the new millennium, the largest gathering of heads of state met in New York, USA, to adopt the United Nations Millennium Declaration (World Health Organization, *Making Pregnancy Safer*, 1). Within this accord, world leaders agreed to strive for eight goals, known as the Millennium Development Goals (MDGs), which would help combat poverty and accelerate sustainable human development (1).

Out of the eight MDGs, two of them relate to reducing child mortality and improving maternal health, "pointing to the importance of these health factors in global development and poverty reduction." The hope is that the MDGs remind planners and policy-makers that "for the world's poor motherhood still carries a high risk of morbidity and mortality" (WHO, *Making Pregnancy Safer*, 1). The United Nations (UN) recognizes the importance of improving maternal health and in establishing it as one of the eight MDGs hopes to accomplish this by the target year of 2015. As a member of the United Nations, Samoa has agreed to these Goals and is said to be "on track" for improving maternal health by the year 2015. In an attempt to gain

greater insight into the fields of global and public health, specifically as it relates to maternal health, the primary objective of this study is to determine the current status of maternal health in Samoa. In this pursuit, the study will first attempt to understand what "on track" really means and will explore how progress in Samoa is measured regarding MDG 5: Improving Maternal Health. Second, after detailing Samoa's standing on the indicators for MDG 5, the actual practices of women surveyed on maternal health behaviors and awareness will be compared and contrasted with what is stated in governmental literature. The survey on maternal health will also consider what women know about reproductive health and where they attain this knowledge. And finally, similarities and discrepancies between reported behavior and actual practice will be discussed, including insight from health professionals interviewed on the topic. The study will conclude with a summary of findings and recommendations for the improvement of maternal health in Samoa.

Millennium Development Goal #5: Improving Maternal Health

Policy-makers and Stakeholders

Once the UN Millennium Declaration was adopted, its actual implementation was decided upon by multiple parties within and outside of the independent nation of Samoa. As described in its *Millennium Development Goals: Second progress report 2010*, the Government of Samoa acknowledges that the progress report is "useful for international and regional benchmarking and comparison, [but] its real value is that it is part of Samoa's national planning, monitoring and review process and a useful basis for national discussion and actions to address key development challenges and priorities identified" (3). The Government of Samoa has placed a high policy priority on the MDGs in its national plans and strategies and considers the Goals

when allocating the national budget and development resources (3). This of course cannot be possible without the collaboration of Samoa's health sector—comprised of two separate legal entities: the Ministry of Health (MOH) and National Health Services (NHS)—the World Health Organization (WHO), and other public entities of the health sector (World Health Organization, Country Cooperation Strategy: Samoa 2012-2018, 17). In terms of responsibility for implementing the MDGs, the Government of Samoa retains the core responsibility of creating public policy, setting standards and regulations, and mobilizing resources. The Ministry of Health is responsible for policy, planning, monitoring and regulating the health sector as a whole, while National Health Services is responsible for providing care (17). The WHO's greatest and unique contribution to the health sector is the training provided for health professionals (31). In regards to funding, financial aid for development is provided by New Zealand, Australia, and China. Other donor partners include the World Bank and the United Nations. According to the WHO Country Cooperation Strategy, which outlines WHO's priorities and focus areas, "Australia, New Zealand and the World Bank contribute to a pool of funding for the health sector. United Nations organizations contribute to specific areas of the sector that are relevant to their respective mandates" (9, 25). Finally, the United Nations Development Program (UNDP) assists in the implementation of the MDGs by providing "leadership and assistance...in compiling National MDG reports and organizing national and regional workshops on MDG-based planning, costing and budgeting" (UNESCAP et al. 13). Once funding and policy-making responsibilities are handed out, the MDGs are then attuned to Samoa's specific demographics.

Definition of Maternal Health

An understanding of maternal health is necessary for establishing the targets and indicators that are used to measure MDG 5. The Samoa Demographic and Health Survey 2009 (SDHS) defines 'maternal health' as "the health care that a mother receives during pregnancy, at the time of delivery, and soon after delivery" (109). When discussing the importance of maternal health and the benefits of family planning, with a focus on the achievement of the MDGs, Singh et al. expand the definition and state that maternal and child health care "consists of routine antenatal and delivery care by trained professionals, care for complications that arise during pregnancy and delivery (including emergency obstetric and newborn care, as well as care for abortion complications), and timely postpartum care for both mothers and newborns" (7). Both sources stress the importance of antenatal care, delivery, and postnatal care for the survival and well-being of the mother and child. This understanding of maternal health came to include access to reproductive health when the International Conference on Population and Development (ICPD) was held in Cairo in 1994 (6). At the time, participants of the Conference "defined reproductive rights as human rights, recognized sexual health as a component of reproductive health and called for universal access to reproductive health care by 2015." Since maternal health and reproductive health are intimately connected, via family planning and use of contraceptives, the MDG for maternal health was expanded to include access to reproductive health in 2007 (7).

Targets and Indicators for MDG 5

The MDG for maternal health encompasses two targets: Target 5A and Target 5B.

Target 5A calls for a 75 percent reduction in maternal mortality between 1990 and 2015; Target

5B aims to achieve universal access to reproductive health by 2015 (Government of Samoa 36). As mentioned earlier, MDG 5 was expanded in 2007 to include Target 5B. Within each target there are specific indicators for measuring progress towards achieving the Goal. Target 5A has two indicators, 5.1 and 5.2. Indicator 5.1 measures maternal mortality ratio, which is presented as the number of maternal deaths per 100,000 live births (36). Indicator 5.2 measures the proportion of births attended by skilled health personnel as a percentage of total deliveries (37). Target 5B has four indicators: 5.3, 5.4, 5.5, and 5.6. Indicator 5.3 measures the contraceptive prevalence rate amongst women. Indicator 5.4 measures adolescent birth rate, which is the number of births per 1000 women between the ages of 15 and 19. Indicator 5.5 actually has two components: one which reflects the number of women who had at least one antenatal care visit and another measuring the proportion of women who had at least four antenatal consultations. Unfortunately, there is not enough data to calculate the second percentage and so only the first component is discussed. Lastly, Indicator 5.6 measures the percentage of married women who have an unmet need for family planning (37-39).

Status of Maternal Health in Samoa According to the MDGs

Now that the two targets and six indicators have been presented, a deeper look can be taken at the current statistics for Samoa. An analysis of each target and indicator will report progress that has been made. Successes and challenges for meeting each target and indicator will also be discussed. Included in this analysis is secondary research from World Health Organization publications, the Government of Samoa's *Millennium Development Goals: Second progress report 2010*, the Samoa Demographic Health Survey, and former School for International Training student Kirsten Stobenau's independent study project. Primary research

regarding the targets and indicators will come from interviews with various stakeholders in the field, such as the Country Representative for the World Health Organization, members of the Sexual and Reproductive Health division of the Ministry of Health, the Program Coordinator of the Samoa Family Health Association, and Dr. Francis Maru of the national hospital's maternity ward.

Target 5A: Indicator 5.1 Maternal Mortality Ratio

Currently, Samoa's maternal mortality ratio is low and is labeled as "on track" for meeting the 2015 goal. Dr. Yang, the WHO Country Representative for the Western Pacific Region, believes Samoa has "made good progress" in achieving this target (2012). This sentiment is also echoed in the WHO's 2012 *Country Cooperation Strategy* where they report "74 maternal deaths per 100 000 live births" for 1990 but in 2002, "mid-way through the 25-year period from 1990 to 2015," there were only "46 maternal deaths per 100 000 live births." This demonstrates a 38 percent reduction in maternal mortality, which represents steady progress for meeting the 75 percent reduction goal (7).

Target 5A: Indicator 5.2 Births attended by skilled health personnel

Indicator 5.2 is also labeled as being "on track," according to the Government of Samoa. As of 2006, as much as 93 percent of births had been attended by skilled health personnel for the period between 2002 and 2005. The 2009 *Samoa Demographic Health Survey* gave an estimate of 81%, based on a smaller sample size so the estimate may not be as accurate, but it still depicts high rates skilled care (36). The importance of having skilled health personnel present is in order to prevent any misfortunes, since "the highest incidence of maternal and perinatal mortality

occurs around the time of birth with the majority of deaths occurring within the first 24 hours after birth" (Black 1). For this reason, the WHO "advocates for 'skilled care at every birth" so that obstetric complications can be prevented or managed and the lives of women and newborns saved. This percentage only includes accredited health professionals who have sufficient training to manage uncomplicated births, childbirth, and know when and where to refer complications in women and newborns. This includes midwives, doctors, and nurses (1). The percentages would surely increase if the care of Traditional Birth Attendants (TBA) was included—a topic that is currently being debated, but is dependent on whether or not TBAs are knowledgeable enough to be considered qualified.

Target 5B: Indicator 5.3 Contraceptive prevalence rate

The contraceptive prevalence rate is "at risk" of not being met (Government of Samoa 36). Measured in 1991 to be at 18 percent, the latest estimate in 2009 places the rate at 17.8 percent—a slight decrease from the baseline indicator. There was a slight increase in contraceptive use during the 90s, but with the latest estimate, there is "evidence of a downward trend in contraceptive use over the past decade" irrespective of the type of method being used (modern or traditional) (37). Reasons given for the possible decline include constraints in "Awareness, Access, and Acceptance" (38). Based on the low percentages, it is evident that there is a lack of knowledge regarding contraceptives and their use in family planning and preventing sexually transmitted infections. Furthermore, as Manu Samuelu, the Program Cooordinator of the Samoa Family Health Association, explained in an interview, many people (especially teenagers) are afraid to ask for contraceptives. They fear that someone they know

will see them walk into the clinic and will spread rumors (2012). This point also ties into the fact that pre-marital sex is socially unacceptable and use of contraceptives would suggest otherwise.

Target 5B: Indicator 5.4 Adolescent birth rate

The baseline estimate for adolescent birth rate (between the ages of 15 to 19) for 1992 was 26 births per 1000 adolescent women. The 1999 and 2000 figures from the SDHS were 38 and 24 per 1000, respectively. The latest figure, from the 2009 SDHS, reported a value of 44 births per 1000 adolescent women (Government of Samoa 38). Based on this data, it appears to be that the adolescent birth rate is increasing. Even more noteworthy are the differences between urban and rural rates. As stated in the *Millennium Development Goals: Second progress report* 2010, "the 2009 SDHS reports a value of 30 per 1,000 for women in urban areas compared to 48 per 1,000 for women in rural areas of Samoa" (38). These alarming numbers place Indicator 5.4 in the "at risk" category. There is not much data explaining the increase in teenage pregnancy, but low contraceptive use rates could further exacerbate the situation. Further investigation should be conducted.

Target 5B: Indicator 5.5 Antenatal care coverage

Due to lack of data, the percentage of women who received antenatal care four or more times will not be analyzed. However, the rates for the percentage of women who received antenatal care at least once are promising enough to place Indicator 5.5 "on track." For 1991, the baseline value was 55 percent, which increased to 89 percent in 2006, and has reached a high of 93 percent according to the SDHS (Government of Samoa 38-39). When asked about MDG 5, Dr. Yang attributed its successes to the fact that "antenatal care is [a] high priority in this

country" (2012). Furthermore, this percentage increases to 96 percent if visits to a Traditional Birth Attendant (TBA) are included, although the role of TBAs (who have no official training) in providing prenatal care is still being discussed (Maru 2012).

Target 5B: Indicator 5.6 Unmet need for family planning

Unmet need refers to the gap between women's reproductive intentions and their contraceptive behavior; when women are sexually active but have the desire to avoid or delay pregnancy but are not using any form of contraception (Government of Samoa 39). Although the 2009 SDHS is the only data source for this indicator, the rate is still very high, placing this indicator "at risk" of not being met. A total of 46 percent of married women have unmet need for family planning, with approximately 25 percent of women wanting to limit the number of children and 20 percent wanting to space their births (40). Former SIT student, Kirsten Stobenau predicted this unmet need when she reflected in her independent study paper "...a question that should have been addressed; 'How many children do/did you want to have?' This question would have helped to show if there is an unmet need of contraception in Western Samoa and whether or not women are using family planning as effectively as they would like to" (21). Similar to the case of increasing teenage fertility, and decreasing contraceptive prevalence rate, awareness must be raised regarding the uses of contraceptives and any misconceptions must be dissuaded.

Reflections and Possible Solution

As the WHO *Country Cooperation Strategy* suggests, Samoa has the potential to achieve MDG 5 (7). It is certainly on its way to achieve Target 5A, reduce maternal mortality by 75

percent. Samoa's efforts to reduce maternal mortality will find support in the fact that "there is now a global consensus on what must be done to eliminate the menace of maternal deaths once and for all" and a joint statement by the WHO, the United Nations Population Fund, UNICEF, and the World Bank has called on countries to ensure that maternal and newborn health is secured by "an accredited and competent health care provider who has at her/his disposal the necessary equipment and the support of a functioning healthy system, including transport and referral facilities for emergency obstetric care" (World Health Organization, *Making pregnancy safer*, 1).

That being said, MDG 5 will not be met if Target 5B is not addressed. Unfortunately, three out of four of the the indicators for Target 5B, achieve universal access to reproductive health services, are at risk of failing. In order for MDG 5 to be met, aggressive effort will have to be made to increase access to and knowledge of family planning services and contraceptive use. Decreasing adolescent birth rates will be difficult since the problem will only be addressed once sexual education becomes common practice in schools (and at home) and sexuality is no longer a taboo subject. This in itself will take time because it requires changing cultural norms, but unhealthy living conditions can only be 'swept under the rug' for so long before they must be confronted.

There is a great deal of work to do to accomplish Target 5B and it will take a multi-prong approach to do so, but there is at least one organization that is concentrating its efforts on maternal and child health in conjunction with family planning. During an interview with the Program Coordinator of Samoa Family Health Association (SFHA), it became evident that the non-governmental organization has a comprehensive approach when attempting to provide sexual and reproductive health services. SFHA is "the only sexual and reproductive health

Parenthood Federation but maintains communication with the Samoa Ministry of Health when surveys and studies are conducted. SFHA provides antenatal care, family planning services, gynecological services, STI testing and treatment, sexual and reproductive health counseling, and youth services out of its Apia-based office. In addition to providing primary care services, SFHA also reaches out to village communities and hosts teenage pregnancy awareness programs for secondary schools. They preach the message of "save sex and safe sex", i.e. practice abstinence but if you are sexually active then be "safe" and use protection. SFHA helps community members make informed choices about their reproductive health. It also manages a mobile clinic that is run periodically and goes out to remote communities "to make sure to meet the unmet needs of all the family planning and pregnant mothers." They recognize that "in order to improve their [the villagers'] reproductive health and maternal health, we have to go to their respective areas and help and provide in family planning and contraceptive efforts" (2012). SFHA's program model is advisable if Samoa is to strive to achieve Target 5B, and eventually, MDG 5.

Survey of Women Regarding Maternal Health: A Basis for Comparison

Introduction

After analyzing various reports on the MDGs and using secondary research to learn about health behaviors of Samoan women, primary research was conducted via a survey in order to compare and contrast personal findings with figures reported for the MDG indicators. In addition to serving as a basis for comparison with reported figures, the survey has three other objectives: to collect information on women's prenatal experiences and knowledge; to observe

women's responses to questions concerning family planning and the use of contraceptives; and to determine the source of women's knowledge concerning maternal health. Data gathered from this survey will help contextualize and provide greater detail about women's health beliefs and actions and how these affect the realization of MDG 5.

Methods and Procedure

This study was completed between April 19 and May 11, 2012. Due to limited knowledge of the Millennium Development goals, specifically MDG 5, secondary research was conducted during the first week in order to have some background information before beginning primary research. Reports from the Government of Samoa, Samoa Ministry of Health, and the World Health Organization were read. There was one relevant Independent Study Project from discussed family planning that was also consulted. Previous study of anemia in pregnant women provided excellent background for exploring maternal health and proved useful when referencing the *Samoa Demographic Health Survey* 2009.

After gathering sufficient secondary research to form a basic knowledge of the MDGs, and after having conducted interviews with representatives of the World Health Organization, Samoa Family Health Association, and the national hospital, a draft survey was created. The survey included fourteen open- and close-ended bilingual (English and Samoan) questions on frequency and quality of prenatal care; knowledge of a healthy pregnancy, family planning, and contraceptives; and awareness of pregnancy programs. The survey was reviewed by Jackie Fa'asisila and feedback was given. After revisions were made Laine, a librarian at the University of the South Pacific in Alafua, helped edit a final copy. The consultation of Jackie and Laine in the creation of the survey served to minimize (if not eliminate) any biases towards

regular, skilled prenatal care present in this part of the research. Since it was close to the end of the second week, surveys were printed and distributed that same day to women on campus. Over the next couple of days, 44 surveys were distributed to women of varying age and education in various locations around the Greater Apia area. The librarians from the University helped immensely by taking some of the surveys home to be completed over the weekend.

On Monday of the final week Laine helped with translating Samoan responses to the survey so that data could be recorded into a database. The final three surveys were picked up Tuesday morning and were added to the rest of the gathered information, making the number of completed and returned surveys 35 total. The final days of this study were then spent organizing and analyzing responses in order to compare it to standards established in the MDGs. While lack of fluency in Samoan language could have been a major setback, help from bilingual friends and resources reduced barriers to a minimum.

Survey Results and Data

A total of 44 surveys were distributed but ultimately 35 were returned and completed. Most of the women were between 40 and 49 years of age, with the average age being 42.3 years. Ages ranged from 21 to 69 years of age. When asked about their education level, women were given the option of years 1-8, 9-11, 12-13, and university. This reflects primary, junior secondary, senior secondary, and university levels, respectively. Interestingly enough, 11 women chose to not give a response but the next most popular answer was completion of years 12-13, also known as senior secondary school, with 10 women indicating this as their response. Women were then asked for the number of pregnancies they have had. Of the 32 women who gave a response, the average number was 3.7 pregnancies.

The first question in the survey asked for the woman's age when she had her first child. The average age for a first pregnancy was 22.4 years. The youngest age recorded for a first pregnancy was 17, while the oldest was 30 years. Women were then asked how often they went to the hospital. This question was left open-ended and responses varied from "many times" to hardly." Most women gave an absolute number, 9 times being the most common answer, implying monthly visits during the period of pregnancy. When asked why they sought prenatal care, most women responded with one of two answers: "for the health and well-being of me and the baby" and "for the safety of me and my baby." This indicates that women are aware that prenatal care is necessary to monitor the health and progress of the pregnancy.

The next couple of questions were close-ended and multiple choice. Question 4 asked women how often they believe a woman should go to the hospital or doctor for check-ups during pregnancy. The options given were a) two times a month, b) once a month, c) every two months, and d) only when feeling sick. The purpose of this question was to gauge women's knowledge of the recommended number of prenatal visits. Seventeen women selected b) once a month and 14 women indicated a) two times a month. This is promising because it shows that most women have some understanding of the need to visit a health professional on a regular basis. The next couple of questions asked about women's prenatal experience. Since most women have had multiple pregnancies in different contexts, they were allowed to mark all of the answers that applied. Question 5 asked women where they received prenatal care. An overwhelming majority, 16 out of 38 selected locations, indicated that the hospital was the location of prenatal care, as opposed to a private clinic, public health center/district hospital, at home or in the village, or other. Question 6 asked women "Who looked after your pregnancy?" Provided with the options of doctor at the hospital, doctor at a private office, nurse or midwife, traditional birth attendant, village healer, or no one, 23 women responded that at least one of their pregnancies was supervised by a doctor at the hospital. The second most common response was "nurse or midwife" with 10 votes. Question 7

asked the women "Where were your children born?" to which 22 of 41 total responses indicated "at the hospital in Apia or Tuasivii", which are the main hospitals on each island. Question 8 asked women to identify who attended to their birth. Again, there were multiple answers for this question because some women received prenatal care from different health attendants for each of their births. The most popular answer, with 24 votes, was "doctor" followed by "nurse" with 14 votes. The last multiple choice question asked women if they were taught about pre-natal care and having a healthy pregnancy. Thirty-one women said yes, two said no, and two did not give a response.

Finally, questions 10 to 14 were open-ended in order to draw out detailed responses from women. Question 10 asked women how they learned about pregnancy and pre-natal care. The four most popular responses (in order from most to least) were: doctor, nurse or midwife, school, and mother. Women stated that they either learned from these bodies directly or attended informative seminars directed by these groups. Question 11 asked women to explain what they know about having a healthy pregnancy. The response was overwhelming. Twenty-six of the women responded with some variation of eating healthy and balanced meals, doing exercise, and avoiding smoking and drinking. Practically all of these responses mentioned eating fruits and vegetables as an important part of having a healthy pregnancy. Question 12 was asked in order to measure the percentage of women who use family planning or contraceptives. Of the 35 women, 19 women responded that no, they did not use family planning or contraceptives, 15 said yes, and one woman did not respond. This amounts to a contraceptive prevalence rate of 44.1 percent. If a woman indicated that she did use family planning or contraceptives, she was asked to detail which method(s) was used. Of the 15 women who used family planning, 6 said they used contraceptive pills, 6 used injections (that last 3 months per dose), one woman did not respond, and one woman used both injections and the calendar method (a natural method based on a woman's menstrual cycle). Question 13 asked women what they know about family planning or contraceptives. Seventeen of the women surveyed gave a positive response, stating that family planning is used to space out having children so that the mother is not pregnant every year and the children can grow healthy and strong. One woman even included economics in her response, explaining that it is important to consider the mother's health and the costs of raising children. In addition, three women indicated that family planning helps prevent unwanted pregnancies and allows the mother time to become strong to care for the new child. Five women did not give a response and 3 admitted that they do not know what family planning is. Two other responses indicated that family planning is bad, while two other women believe the use of contraceptives is good for some but not for others. Finally, Question 14 asks women which programs are available for expecting mothers. Twelve women gave a response that generally referred to health and well-being programs, exercise programs, labor preparation programs, and breastfeeding information groups. Six women admitted to having no knowledge of prenatal programs, two of whom attribute this to lack of knowledge to not having children recently.

Analysis of Results

As stated earlier, the purpose of the survey was to provide another basis of comparison for the indicators for MDG 5. Questions 1, 2, 4, 8, and 12 in particular refer to specific indicators. The last five questions of the survey were included to gain greater insight into women's perspectives on pregnancy, prenatal care, and the use of family planning. It is believed that understanding women's beliefs and attitudes about this topic will help shed light on their behaviors regarding prenatal and postnatal care. This knowledge can then be used to change beliefs and behaviors into ones that are more aligned with the Millennium Development Goals. Any discrepancies in the data results may be attributed to lack of cultural competency and misunderstandings in the formulation of the survey questions as well as any linguistic barriers when translating questions and responses. It is also acknowledged that unanswered survey questions can also attribute to skewed statistics. Although an effort was made to survey a

diverse, representative population of women, the small sample size is not reflective of the entire female population of Samoa.

In regards to fertility in Samoan women, the average number of pregnancies for the women surveyed was 3.7. According to the *Samoa Demographic and Health Survey 2009*, the total fertility rate (the average number of children a woman will have at the end of her reproductive years) for Samoan women is 4.6, meaning that the women surveyed had a lower fertility rate than the national average. The lower fertility rate for the women in this study could be attributed to the high percentage of them who admitted to using contraceptives (44.1 percent) which is significantly higher than the 17.8 percent reported by the Government of Samoa.

Now, specifically referring to questions that relate to the MDG indicators, an analysis will be made comparing the survey findings with reported figures in the *Millennium*Development Goals: Second progress report 2010. Question 1, which asks the age of women when they had their first child, is related to Indicator 5.4: Adolescent birth rate. In the survey, four of the women surveyed had their first child between the ages of 15 and 19. This means that 11.4 percent of the women surveyed had teenage pregnancies, a rate significantly higher than the 4.4 percent (44 births per 1000 adolescent women) reported in the Second progress report 2010. While these figures are interesting to note, the significant difference between the two figures can be attributed to the cross-generational scope of the survey, whereas the figure given by the Government of Samoa considers only teenagers of the present generation.

Question 2 and Question 4 relate to Indicator 5.5: Antenatal care coverage. In Question 2, women were asked how often they went to the hospital or doctor when pregnant. While 9 visits was the most common answer, all but one woman reported going to the doctor at least once, producing an attendance record of 97.1 percent. This figure correlates with the 93 percent

of women the Government of Samoa reported in its *Second progress report 2010* as having received antenatal care at least once by skilled health personnel. Question 4 asked women how often they believe a woman should go to the hospital or doctor for check-ups during pregnancy. Thirty-one women indicated at least once a month, further emphasizing women's knowledge about the need to visit the doctor regularly. In fact, one of the women surveyed reported that monthly visits are standard but bi-weekly visits are encouraged as the due date approaches. In this case, the survey data supports reported figures.

Question 8 asks women "Who attended your birth?" and is related to Indicator 5.2: Births attended by skilled health personnel. Of the 45 responses gathered, 38 women were seen by a doctor or nurse (who have sufficient training to qualify as a skilled health personnel). This means that 84.4 percent of women received adequate prenatal care by a health care provider. This correlates very closely with the 81 percent reported by the *Samoa Demographic and Health Survey 2009* (115-116). However, this figure is a little lower than the 93 percent reported by the Government of Samoa in the MDGs *Second progress report 2010*. Either way, survey data correlates with the statistics provided in national publications.

Finally, Question 12, regarding the use of family planning or contraceptives, relates intimately with Indicator 5.3: Contraceptive prevalence rate and Indicator 5.6: Unmet need for family planning. As mentioned previously, the maternal health survey of this study found a contraceptive prevalence rate of 44.1 percent, a number significantly higher than the reported 17.8 percent in 2009 (Government of Samoa 37). Of the 15 women who used (or are currently using) family planning, an equal number of them use injections or pills as a method. When 22 of the women provided positive and informed answers to Question 13 ("What do you know about family planning or contraceptives?"), demonstrating their knowledge of the uses and advantages

and disadvantages of family planning, the data would appear to contradict the belief that contraceptives are not being used and there is an unmet need for family planning. An explanation for these disparities is not obvious, but upon reflection, it may be that the women surveyed were of higher educational status (since some of the women work at USP) than women in the greater Samoan population and this could contribute to skewed results.

In summation, Indicators 5.2 and 5.5 (Births attended by skilled health personnel and antenatal care coverage, respectively) are supported by the survey data. This proves promising for the improvement of maternal health and prenatal care. Indicator 5.4: Adolescent birth rate, Indicator 5.3: Contraceptive prevalence rate, and Indicator 5.6: Unmet need for family planning are not necessarily supported by survey results but this may be because the sample population is not representative of the greater Samoan population and this study is too broad in scope to delve further into greater detail for each indicator. It is worth noting, however, that these last three indicators are the indicators of Target 5B, Universal access to reproductive health by 2015, that are listed as being "at risk" (Government of Samoa 36-39). If a future study were conducted, care would have to be taken to survey only the corresponding populations for each indicator.

As for insights gained form the last questions in the survey, it appears to be that the women understand the use of family planning and contraceptives. Although 55.9 percent of the women did not use contraceptives, a significant minority did use them and did not mention any complaints in question 13 where they were asked to detail what they know about family planning or contraceptives. This gives hope that as more and more women use contraceptives, positive messages will be spread and eventually overcome the "negative messages" that hinder its use (Anonymous 2012). What was learned from question 14 is that women are aware that health, exercise, and nutrition programs are beneficial during pregnancy, but a follow-up question was

not asked to see how many women actually attended these programs. Also, all of the programs that were mentioned were broad and generic. No one mentioned the specific name of a program or organization that puts these lessons together. This could suggest that women *know* they must attend health or prenatal programs, but they do not know of any in particular that are available in Samoa. From interviews with the Program Coordinator at the Samoa Family Health Association, the existence of prenatal programs is confirmed but it appears to be that women are unaware of them. This would be a topic for further study since meeting this need would help educate women on reproductive health and contraceptive prevalence rates would increase, thus helping the unmet need for family planning.

Professional Perspectives on the Status of Maternal Health

Introduction

Considering the fact that the international community, individual patients, and health professionals are the three largest stakeholders in the delivery and quality of health care, this study will voice the perspectives of health professionals as it attempts to understand the status of maternal health in Samoa. The role of health specialists cannot be underestimated, as they are the mediators—they are the link—between the internationally adopted Millennium Development Goals and patients, in this case expecting mothers. Often, they are the ones who ultimately decide the direction that health policy will take. For this section of the study, the opinions of Dr. Yang of the WHO, Dr. Maru of the Tupua Tamasese Meaole National Hospital, Manu Samuelu of SFHA, representatives of the Division of Sexual and Reproductive Health (SRH) of the Ministry of Health, Dr. Lei Asaua a private-practice obstetrician-gynecologist, and Suzie Schuster a guest health lecturer, will be stated.

Methods and Procedure

These interviews were conducted during the months of March and May. The interviews with Dr. Asaua and Suzie Schuster were conducted in March 2012 as a part of another miniresearch project on the prevalence of anemia among Samoan women. The interviews with Dr. Yang, Dr. Maru, Manu Samuelu, and the representatives (who wish to remain anonymous) of the Division of SRH at the Ministry of Health were conducted between May 1 and May 2, 2012. They were contacted in person or via e-mail and although difficulties arose because of a lack of a mobile phone device, the interviews progressed without major setbacks. Interviews took place in each informant's respective office or department except for Suzie Schuster, whose interview occurred at Amani's Restaurant in Fugalei near downtown Apia. Notes were taken during the interview and with Dr. Asaua, Dr. Yang, and Dr. Maru and Manu Samuelu, the interview was recorded.

Interview Data and Key Themes

In an interview with Suzie Schuster on March 21, 2012 the importance of ensuring a mother's health was stressed. As Schuster spoke of maternal health, she described it as a "cycle of health vessels" wherein the health of the mother often determines the health of the baby *in utero* and its health for the rest of its life, including that of its future offspring. In the case of anemia, for example, if there is not enough iron in the pregnant mother's blood, the fetus will get necessary iron from her bones. As the baby takes iron from the mother, it also affects her breast milk. What ends up happening is that the mother who is anemic gives birth to a child that is at risk of becoming anemic and that child is then fed with iron-deficient milk. Ultimately, you see

a "dumbing down of society" in which children who are chronically anemic are already years behind their healthy peers and face low levels of optimal health. Anemia "cuts across all economic classes" and the solution comes down to behavior changes. Shuster concluded that a major part of remedying the situation is the family (2012).

Dr. Lei Asaua noted a similar solution to Schuster. When interviewed on March 22, 2012, Dr. Asaua stated that many problems in maternal health are not due to a lack of healthy foods but a lack of knowledge and action. She believes that the solution to changing women's health priorities lies in education. Often in Samoan culture, women have other priorities besides their health. First and foremost, Samoans worry about familial relationships and their standing within the family. This makes sense since the extended family is the central social structure in Samoan society. According to Dr. Asaua, Samoan priorities are as follows: 1) God is first—this includes anything with the church, 2) Family and ceremonies, and 3) health. Dr. Asaua recognizes that it takes a while for someone to change his/her behavior, but she believes education is important and creates slight, subtle changes over time (2012).

When asked about maternal health in Samoa, Manu Samuelu described the four "nots" involved in ensuring maternal and reproductive health: "pregnancy should not be too early, not too late, not too close, and not too many" (2012). He believes pregnancy should not be too early where children are underage and face a high-risk pregnancy. The same could be said of a mother who is late in her reproductive years, hence "not too late." Pregnancy should also not be too close, referring to the need to space out births and allow mothers to recover and regain their strength after a delivery. And finally, a woman should not have too many pregnancies because it will affect the general health of the mother and the family. Samuelu explained that a family with too many children and a low income often struggle to provide adequate nutrition and attention to

the children. By providing antenatal services, family planning, reaching out to school communities, and encouraging men to care for their partners, Samuelu argues that Samoa Family Health is working to help achieve MDG 5 (2012). He stresses a multi-prong approach to meeting health needs.

The representatives of the Division of Sexual and Reproductive Health of the Ministry of Health elaborated on a point that Samuelu had made: reproductive health is not only about the reproductive system, sex, and pregnancy. Unfortunately, many people think it only includes that. In fact, reproductive health affects multiple aspects of a family's life, such as the likelihood of a mother to develop gestational diabetes that can lead to infant obesity and eventually type II diabetes. Like Samuelu, they also mentioned the negative effect that too many children can have on the economic situation of a home. In discussing the increasing rates of adolescent fertility and low of contraceptive prevalence rates, they stated that "the accessibility is there" but sometimes husbands or some religions "don't allow contraceptives" (2012). During a health fair in 2010, there was a reproductive health booth and the representatives of the SRH division found that most women know what family planning is but have "many misconceptions and misunderstandings" about contraceptives. Some women said they were scared to use contraceptives because of body changes, such as a change in their menstrual cycle or weight gain. Along with physical changes, some women mentioned psychological changes that resulted in decreased desire to engage in sex with their partner. The representatives believe that it is by word of mouth that women spread negative messages about bad experiences with family planning to each other and this ultimately contributes to decreased use of contraceptives (2012). When asked about the high rates of adolescent fertility, the SRH representatives stated that there

need to be more awareness programs for girls to prevent pregnancy. Although it is a sensitive issue, girls (and boys) need to change their behavior (2012).

The interview with Dr. Yang included many statistics previously mentioned, but he also addressed some of the current challenges in meeting the health-related MDGs. The first challenge is the need for an improved health information system. Aside from the *Demographic and Health Survey*, there is no routine data from which to base policy on. Unfortunately, Samoa is lacking the infrastructure to maintain yearly records of health indicators. Another challenge in meeting the MDGs involves the evaluation methods used to track them. For small countries like Samoa, it is difficult to maintain steady statistics because "one death or two" makes a greater impact on statistics based on units of thousands or hundred-thousands (2012). Despite these constraints, he applauds Samoa on the efforts it has made and suggests increased collaboration between organizations at the regional level to meet their goals.

Dr. Francis Maru of the maternity ward in the national hospital described their services as geared toward antenatal care and high-risk pregnancies. The maternity ward provides labor and delivery services for more than 80 percent of all of Samoa. Providing care for women and attending their births is inherent in achieving the MDGs. Where he sees improvement, though, is in encouraging the extended family to support the patient. Often times, the "extended family helps a lot with describing the condition and treatment [to the patient]" (2012). This improves patient compliance, which is not too great and contributes to declines in maternal health. Dr. Maru also pointed to the ambivalent position of traditional healers as an issue that needs to be addressed in the field of maternal health. He fears that sometimes a traditional birth attendant (TBA) may not know his/her limit and does not recognize the risk he/she is placing on the mother. He recommends that TBAs come in and deliver the baby at the hospital so that trained

staff is nearby to provide help if the delivery is complicated. Currently, the ward is helping to educate mothers by having educational programs on prenatal health and breastfeeding for all of the mothers who come to receive care (2012).

Conclusion

Summary

As countries attempt to deal with development, international policies are mandated on a global scale and it is the responsibility of national governments to decide how they will adapt these policies to their development strategies. These decisions ultimately affect the lives of everyday people. This applies in all sectors of society, including maternal health. Since adopting the Millennium Development Goals, Samoa has made great strides in achieving one of the targets, namely reducing maternal mortality. Thirty-eight percent of maternal deaths have been reduced since 1990 and approximately 93 percent of women have a skilled birth attendant during delivery (Government of Samoa 36). The second target, which aims to achieve universal access to reproductive health by 2015, is at risk for not meeting three out of four of its indicators (36). Currently it is stalled and it will slow down Samoa's progress if it is not addressed. Women who were surveyed in this study showed lower rates of adolescent fertility, higher rates of antenatal care, higher rates of family planning and contraceptive use, and greater understanding of the purpose of family planning than the survey pool for the Samoa Demographic Health Survey 2009. While this study included a significantly smaller group of women, it demonstrates that improvement can occur. As the interviews with health professionals has proven, efforts are being made across the health sector to meet this demand. General lack of education concerning reproductive health, possible non-compliance or regulation by traditional

birth attendants, and a faulty health information system make it difficult to achieve and monitor progress, but different parties recognize similar themes and issues. Because the family is such a strong social structure, Dr. Maru and Dr. Asaua have a point: change can come from it. With aid from the churches, health and well-being can receive greater priority in the minds of Samoans—without taking away from the family and the church.

Recommendations for Further Study

Had there been more time, greater attention would have been paid to ongoing health promotion programs and their communication methods. Some of the women interviewed had mentioned ads and commercials heard over the radio and seen on television. It would have been interesting to see how people perceive these informational programs. Furthermore, with the adoption of a new health education curriculum in the schools, changes in sexual education will be interesting to observe, especially because schools were cited by survey informants as one of the top four sources of information regarding pregnancy. If the suggestions of the health professionals mentioned above are taken seriously, and women use their communication systems to promote reproductive health, together with implementing policies that target "at risk" areas more aggressively, Samoa will be able to meet MDG 5—possibly not by 2015, but soon after. And as health-related MDGs are met, Samoa will proudly be able to promote "cycles of health vessels" that are truly "healthy."

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Appendix A: Survey Questions

Maternal Health Survey

| Village/ <i>Nu'u</i> : university/ <i>univesite</i> | Education level/maualuga o 'ao 'ao ga: 1-8; 9-11; 12-13; | | | |
|--|--|--|-------------------------|--|
| Age/Tausaga: | # of pregnancies/ 'E fia ma'itaga: | | | |
| 1. How old were you when you ulumatua? | u had your first child? | 'E fia ou tausaga ina ua fanau | lau tama | |
| 2. How often did you go to the <i>le taimi o le ma'itaga?</i> | hospital or doctor wh | en pregnant? 'E fa'afia ona e vo | ā'ai se foma'i i | |
| 3. Why did you seek prenatal of ma'itaga? | care? Aisea nā 'e alu d | ai e siaki ma va'ai le foma'i i le | taimi e te | |
| 4. How often should a woman ona siaki se fafine tō e se foma | _ | octor for check-ups during pregi | nancy? <i>E fa'afia</i> | |
| a) two times a month fa'alua | i le masina | b) once a month fa' | atasi i le masina | |
| c) every two months ta'ilua lagona le ma'i | masina | d) only when feeling s | sick <i>pe a</i> | |
| 5. Where did you receive prena a) hospital <i>i le falema'i</i> c) public health center/district d) at home or in the village d) other | b) private clir hospital falema'i fa' i le fale/nu'u | nic foma'i tuma'oti | | |
| 6. Who looked after your preg | nancy? 'O ai sā va'ai | a lou ma'itaga? | | |
| a) doctor at the hospital o se lona ofisac) nurse or midwife o se tan | • | b) doctor at a private officed) traditional birth attendant | o se foma'i i | |
| tua | ia iia i iausi soijua | a) traditional office attendant | o se ja atosaga t | |
| e) village healer o se fofo | | f) no one <i>'E leai se isi</i> | | |
| 7. Where were your children b <i>sa'o</i> . a) at home <i>i le fale/nu'u</i> | orn? Mark all that app | oly. O fea sā fanau ai lau fanau | ? Maka uma tali | |
| b) at the village hospital/health | - | e le nu'u | | |
| c) at the district hospital <i>i le</i> d) at the hospital in Apia or Tu | falema'i fa'aitumālō pasivij i le falema'i i | Ania/Tuasivii | | |
| e) other | isi mea | | | |

- 8. Who attended to your birth? 'O ai sā fa'afanau 'oe?
- a) doctor o se foma'i
- b) nurse o se tama'ita'i tausi soifua
- c) midwife or traditional birth attendant o se fa'atosaga i tua
- d) village healer o se fofo
- e) no one *'E leai se isi*
- 9. Were you taught about pre-natal care and having a healthy pregnancy?
- a) yes 'Ioe
- b) no Leai
- 10. How did you learn about pregnancy and pre-natal care? *E fa'apefea ona 'e maua lou malamalamaga e uiga i ma'itaga ma le vā'aiga o fafine tō*?
- 11. What do you know about having a healthy pregnancy? 'O ā ni mea 'e tatau ona e iloa ina ia manuia lou ma'itaga?
- 12. Did you use family planning or contraceptives? What methods? $S\bar{a}$ 'e fa'aaogaina se \bar{a} 'iga fuafuaina? 'O \bar{a} metotia?
- 13. What do you know about family planning or contraceptives? 'O le a sou iloa fa'atatau i le a'iga fuafuaina ma auala e fa'atino ai?
- 14. What programs are available for pregnant women and expecting mothers? 'O ā ni polokalame fa'apitoa mo tina ma'itaga ma tina fa'atalitali?

Appendix B: Interview Questions

Questions for interviews:

- 1) What is the relationship between the WHO and the MOH?
- 2) Is there a relationship between the WHO and the Nutrition Center?
- 3) Are the MDGs part of Samoa's national planning and review process? Do the MDGs have a high priority in policy-making?
- 4) What role can the government and inter/national organizations have in increasing access to reproductive health? Which health campaigns are currently ongoing?
- 5) How is your department contributing to the achievement of MDG 5?
- 5) How do you define 'skilled health professional'?

If you define it as doctor, nurse, or midwife—what about *fa'atosaga*? What are the differences between nurse, midwife, TBA, and *fa'atosaga*? Are midwives the same as Traditional Birth Attendants, who have received some form of training from hospitals/MOH or is there a difference between mid-wife, TBA, and *fa'atosaga*.

6) Recent data shows evidence of a downward trend in contraceptive use over the past decade. The low percentage of contraceptive usage for both males and females has been identified as a combination of the following constraints; Awareness, Access and Acceptance. (38)

What is currently being done to combat this? How are we increasing the three As? If it is due to cultural norms and the taboo of talking about sex, how can we change this?

- 7) The 2009 Samoa DHS reports an increase in adolescent fertility. Why do you think that adolescent fertility has increased?
- 8) What disparities can be found at rural vs. urban level regarding maternal and reproductive health? What is being done about it?
- 9) According to the Samoa 2009 DHS report, 93% of women received antenatal care at least once. Why is antenatal care at such a high rate, but there is is an unmet need for family planning? Could the two work together, at least for pregnant women, to increase family planning?
- 10) What role do civil societies and NGOs have in addressing these issues (of health services and promotion)?