MATERNAL MORTALITY

IN HERAT PROVINCE, AFGHANISTAN

THE NEED TO PROTECT WOMEN'S RIGHTS

A REPORT BY
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FOR HUMAN
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Printed in the United States of America
ISBN: 1-879707-39-X
Design: Glenn Ruga/Visual Communications
Cover photo: Lynn Amowitz, MD, MSPH, Msc

ABOUT PHYSICIANS FOR HUMAN RIGHTS

Physicians for Human Rights (PHR) promotes health by protecting human rights. PHR believes that human rights are essential preconditions for the health and well being of all members of the human family.

Since 1986, PHR members have worked to stop torture, disappearances, and political killings by governments and opposition groups; to improve health and sanitary conditions in prisons and detention centers; to investigate the physical and psychological consequences of violations of humanitarian law in internal and international conflicts; to defend medical neutrality and the right of civilians and combatants to receive medical care during times of war; to protect health professionals who are victims of violations of human rights; and to prevent medical complicity in torture and other abuses.

As one of the original steering committee members of the International Campaign to Ban Landmines, PHR shared the 1997 Nobel Peace Prize. PHR currently serves as coordinator of the US Campaign to Ban Landmines.

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PHYSICIANS FOR HUMAN RIGHTS RECENT WORK IN AFGHANISTAN

Long before the world was seized with the conduct of the Taliban regime, Physicians for Human Rights (PHR) undertook groundbreaking survey research of women's health and human rights, first in a 1998 report, *The Taliban's War on Women*, and most recently in a 2001 report, *Women's Health and Human Rights in Afghanistan*. The latter survey of over 1,000 Afghan women and men showed the stunning deterioration of women's health, both physical and mental, under the Taliban regime, and revealed that an overwhelming majority of Afghan people supported human rights including women's rights, and perceived the Taliban to be impeding the health and development of Afghanistan.

In January 2002, PHR released a report on conditions at Shebarghan Prison in northern Afghanistan concluding that the conditions at the prison were in grave violation of international standards for the treatment of prisoners, especially the Third Geneva Convention. PHR also issued a strong call for increased resources and support for the international security assistance force in Afghanistan.

In May 2002 PHR released its *Preliminary Assessment of Alleged Mass Gravesites in the Area of Mazar-I-Sharif*, Afghanistan, calling on the international community to assist the Afghan Interim Administration in protecting all alleged mass grave sites and undertaking a formal investigation.

Finally, while conducting the study presented here, PHR staff completed a population-based assessment of internally displaced persons (IDP) at the Shaidayee Camp in Herat City. The study found Pashtun IDPs disproportionately reported suffering serious human rights abuses and shortages of food and services related to the deteriorating security situation in the area.

PHR's data have been cited repeatedly by the media, government officials and non-governmental organizations drafting plans to meet the needs of Afghan women in the post-war environment. All PHR reports mentioned above are available to the public at www.phrusa.org.

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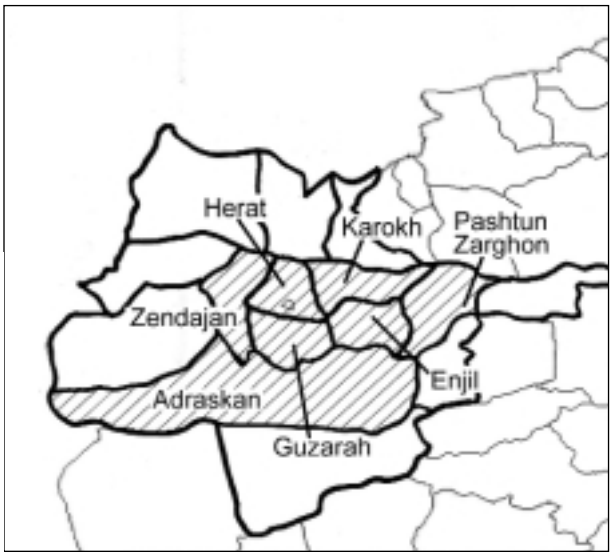
AFGHANISTAN PROVINCES

Map courtesy of ReliefWeb, e-mail maps@reliefweb.int. Boundaries and names on this map do not imply official endorsement.
Last updated 11 August 1997

REGIONS SURVEYED:

Adraskan
Pashtun Zarghon
Zendajan
Enjil
Karokh
Herat
Buzarah



ACKNOWLEDGEMENTS

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Holly Burkhalter, US Policy Director for PHR, contributed to the Executive Summary and Alicia Ely-Yamin JD, MPH, Assistant Professor of Clinical Public Health and Staff Attorney for the Law and Policy Project, Columbia University School of Public Health, contributed information on maternal mortality and human rights in the "Application of Relevant International Law" section.

The report is based on research conducted by Dr. Lynn Amowitz in March 2002. This was Dr. Amowitz's seventh trip to the region. In Herat Province, she assembled a team of 48 local surveyors to survey 5,014 households in 7 of the 13 districts.

The authors are grateful to Patrick Ball of the American Association for the Advancement of Science, Susannah Sirkin and Ms. Burkhalter of Physicians for Human Rights, and Frank Davidoff of the American College of Physicians-American Society of Internal Medicine for their assistance in reviewing the manuscript; Sayed Aqa Sahibzada of the François-Xavier Bagnoud Center for Health and Human Rights, Harvard School of Public Health, for his ongoing assistance; Ms. Ely-Yamin JD, MPH and Peter Salama of United Nations Children's Fund for reviewing the survey instrument. Finally, the authors wish to thank the researchers from Ansari Rehabilitation Association for Afghanistan who assisted in data collection and all of the women who participated in this study, to whom PHR is especially grateful.

This report was edited and prepared for publication by Barbara Ayotte, PHR Communications Director and Michelle Limaj, PHR Internet and Publications Coordinator.

Excerpts of this report appear in the September 11, 2002 issue of the *Journal of the American Medical Association.*

This research was supported by grants from The Morton K. and Jane Blaustein Foundation, Inc., the John D. and Catherine T. MacArthur Foundation, The Ford Foundation, and Gabriella Pichert, MD. At the time of the study, Dr. Amowitz was supported by the Fireman Foundation as the PHR Fireman Health and Human Rights Fellow.

GLOSSARY

Dauya: The Afghan (*Dari*) term for an untrained traditional birth attendant.

EOC: Essential Obstetric Care. A basic Essential Obstetric Care facility is one that can provide parenteral antibiotics, oxytocic drugs, and anticonvulsants for pre-eclampsia, manual removal of placenta; removal of retained products via manual vacuum aspiration, and perform assisted vaginal delivery.[1] A comprehensive EOC facility must be able to administer all of the basic services and perform surgery (i.e., caesarian section) and blood transfusions.[2]

Indirect Sisterhood Method: A measurement technique that involves obtaining information by interviewing respondents about the survival of all of their adult married sisters.

Lifetime risk of maternal death: [3] Takes into account both the probability of becoming pregnant and the probability of dying as a result of the sum of all pregnancies over the course of a woman's reproductive years.

Maternal mortality ratio: [4] The risk associated with each pregnancy, i.e., the obstetric risk. It is calculated as the number of maternal deaths during a given year per 100,000 live births during the same period. Although referred to as a maternal mortality rate, it is actually a ratio.

NGO: Non-governmental organization.

PHR: Physicians for Human Rights.

TBA: Traditional birth attendant. This study distinguishes between untrained TBAs, (i.e. those who have no formal medical training except what is traditionally passed down verbally) and trained TBAs, (i.e. those who have participated in a formal training program either with the World Health Organization or with a medical NGO). The skill level of trained TBAs is typically less extensive than that of midwives. For example, trained TBAs are not trained to handle complicated pregnancies or deliveries and under such circumstances are expected to refer women to hospitals and/or clinics with essential obstetric care.

UN: United Nations.

UNAMA: United Nations Assistance Mission in Afghanistan.

UNICEF: United Nations Children's Fund.

UNFPA: United Nations Population Fund.

WHO: World Health Organization.

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[1] United Nations Children's Fund. *Guidelines for Monitoring the Availability and Use of Obstetric Services* 1997. www.unicef.org. Accessed June 8, 2002.

[2] Id. Supra 1.

[3] Id. Supra 1.

[4] Id. Supra 1.

I. EXECUTIVE SUMMARY

This study demonstrates that women in Herat Province, Afghanistan have an extraordinarily high risk of dying during pregnancy and childbirth and the highest maternal mortality ratio in the world outside of Africa.[5] It shows that prenatal care, maternal health care facilities and trained health care personnel are virtually non-existent in the region and it provides evidence that violations of human rights contribute to preventable maternal deaths. These factors include access to and quality of health services, adequate food, shelter and clean water, and denial of personal freedoms such as freely entering into marriage, access to birth control methods and possibly control over the number and spacing of children.[6]

In Afghanistan, the combined effects of more than 20 years of war and persistent human rights violations, including Taliban imposed restrictions on women's rights, have had devastating health consequences for women.[7] Just as maternal health depends on the respect of women's rights,[8] maternal mortality can be an important indicator of the health and human rights status of women, their access to health care and the adequacy of the health care system and its ability to respond to their needs.[9] Disparities in maternal mortality rates may also serve as important indicators of health inequality on local, national, and international levels.[10] More than 515,000 women worldwide die annually of complications of pregnancy and childbirth[11] and 50 million women suffer preventable adverse health complications after childbirth annually. Most of these deaths could be prevented by cost-effective health interventions.[12]

In 1997, maternal mortality in Afghanistan was reported to be one of the worst in the world, 820/100,000.[13] This ratio was determined by a statistical modeling method[14] and no additional assessments of maternal mortality have been available since that time. Given recent opportunities to access populations in Afghanistan which were largely not accessible during the Taliban regime and the need to inform the

[5] See World Health Organization. www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002. NOTE: This does not exclude the possibility that some regions within a particular non-African country may not exceed that of Herat. However, data is not readily available for such comparisons. The maternal mortality ratio for Herat (593/100,000) also exceeds that of all six countries bordering Afghanistan: Pakistan (200/100,000), Iran (60/100,000), Turkmenistan (65/100,000), China (60/100,000) and Tajikistan (120/100,000). In contrast, the United States has an estimated ratio of 12/100,000.

[6] Although the majority of women stated that they had equal or primary control over number and spacing of children, more than half reported that their husbands had the right to beat them and that it was a wife's duty to have sex with her husband even if she did not want to. These stated beliefs appear to be in conflict with their assertions regarding their stated role in controlling the number and spacing of their children.

[7] See Amowitz LL, Burkhalter H, Ely-Yamin A, Iacopino V. *Women's Health and Human Rights in Afghanistan: A Population-Based Study*. Boston, MA: Physicians for Human Rights: May, 2001; Amowitz LL, Iacopino V: "Women's Health and Human Rights Needs." *The Lancet Perspectives*. 356 (s65), December 2000; Rasekh Z, Bauer H, Manos M, Iacopino V. "Women's Health and Human Rights in Afghanistan." *JAMA*. 280(5): 499-455, 1998.

[8] World Health Organization. *Advancing Safe Motherhood through Human Rights*. www.who.int/reproductive-health/publications/. Accessed January 4, 2002; Yamin AE, Maine DP. "Maternal mortality as a human rights issue: measuring compliance with international treaty obligations." *Human Rights Quarterly*. 21.3: 563-607, 1999.

[9] Id. Supra 7.

[10] See Amowitz LL, Burkhalter H, Ely-Yamin A, Iacopino V. *Women's Health and Human Rights in Afghanistan: A Population-Based Study*. Boston, MA: Physicians for Human Rights: May, 2001; Amowitz LL, Iacopino V. "Women's Health and Human Rights Needs." *The Lancet Perspectives*. 356 (s65), December 2000; Rasekh Z, Bauer H, Manos M, Iacopino V. "Women's Health and Human Rights in Afghanistan." *JAMA*. 280(5): 499-455, 1998.

[11] World Health Organization. *Advancing Safe Motherhood through Human Rights*. http://www.who.int/reproductive-health/publications/ Accessed January 4, 2002.

[12] See World Health Organization. *Advancing Safe Motherhood through Human Rights*. Reproductive Health Publications. www.who.int/reproductive-health/publications. Accessed January 4, 2002.

[13] World Health Organization. *The sisterhood method for estimating maternal mortality*. Available at: www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf.. Accessed January 4, 2002.

[14] Id. Supra 12.

reconstruction efforts underway in the country, PHR conducted a rapid, regional, population-based assessment to inform policies that may ultimately reduce preventable maternal deaths in Afghanistan.

PURPOSE OF THE STUDY

The purpose of this study was to 1) provide a rapid and accurate estimate of maternal mortality in Herat Province, Afghanistan, 2) assess violations of women's human rights that may contribute to maternal mortality,[15] and 3) assess maternal health services in the region.

STUDY DESIGN

The study included a randomized, population-based survey of 4,486 women from 34 urban and rural villages/towns in seven of thirteen districts in Herat Province (a province with 1,094,377 people in western Afghanistan, near the Iran border).[16] The women surveyed provided maternal mortality information on 14,085 sisters[17] in structured interviews with local Afghan researchers.

In order to gain insight into individual experiences of health care providers and family members, PHR also conducted more detailed qualitative interviews (case testimonies).

In addition, PHR conducted a comprehensive survey of all health facilities in seven of thirteen districts of Herat Province that were sampled (see map on page vii).

SUMMARY OF FINDINGS

The findings of the study indicate that women have an extraordinarily high risk of dying during pregnancy and childbirth in Herat Province. The study also provides evidence that ensuring the rights of women may prevent such maternal deaths. The primary findings of PHR's maternal mortality survey are as follows:

Maternal Mortality Ratio:

- The maternal mortality ratio for Herat Province is 593 maternal deaths/100,000 live births.
- There were 276 maternal deaths reported among 14,085 sisters.[18]
- Ninety-two percent of the 276 maternal deaths were reported from rural areas.

Demographics:

- The mean age of the respondents was 31 years (range 15-49).
- The majority of respondents were poorly educated with a reported average of 0.35 years of formal education.
- Eighty-eight percent of women reported they were married.

Health and Human Rights Considerations:

- Seventy-four percent of women reported their primary problems to be lack of adequate food, shelter and clean water.
- Respondents reported an average age at marriage of 15 years (range 5-39). However, the average age that respondents indicated would be a desirable age for marriage was 18 years (range 15-30).
- Most women (85%) stated that they wanted to marry at the time of their marriage, although 20% reported that they felt pressured by their family.
- Eighty-six percent of women thought they should have the right to choose a husband and enter into marriage.
- Women reported a mean 5.0 (range 0-20) pregnancies and 4.6 (range 0-18) live births. Only 11% reported having prenatal care.[19]
- Eighty-seven percent of women reported having to obtain permission from their husbands or male relatives to seek health care; however, only 1% of

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[15] Selection of these factors is based on established causes of maternal mortality reported in the literature and PHR's assessment of relevant regional conditions. For more information on human rights related causes of maternal mortality, see Yamin AE, Maine DP. "Maternal Mortality as a Human Rights Issue: Measuring Compliance with International Treaty Obligations." *Human Rights Quarterly* 21:3:563-607, 1999.

[16] World Health Organization. *Health Resources by District and Village in Afghanistan.* Herat Sub-Office, Afghanistan. (Unpublished) 2002.

[17] The Indirect Sisterhood Method is a measurement technique that involves obtaining information by interviewing respondents about the survival of all their adult sisters.

[18] Id. Supra 17.

[19] Prenatal care was defined as care for a pregnant woman in an area health care facility by trained health care personnel.

respondents related not being permitted to obtain health care.

- Less than 1% (0.83%) of women reported births that were attended by a trained health care worker.
- Ninety-seven percent reported that they had an untrained traditional birth attendant at the birth.
- Birth control methods were reportedly used by 12% of women whereas 23% of women indicated wanting birth control.
- Seventy-four percent of women stated that husband and wife made decisions about the number and spacing of children equally.

Assessment of Health Facilities and Essential Obstetric Care:

- Sixty-three percent of 27 facilities listed by WHO[20] as functional were found to be operating.
- Only one functional comprehensive Essential Obstetric Care (EOC) facility and four basic EOC facilities existed for the province — less than half of the recommended number of EOC facilities — and all were within a 10-30 minute drive from the center of Herat City.
- Only one district had EOC facilities that met WHO guideline standards and it was in an urban area.
- Fifteen of 19 female physicians were working at the Provincial hospital in Herat City, leaving the rest of the province without trained female health care providers.
- Fewer than half of the 17 operating facilities offered prenatal care.

Individual Interviews with Health Practitioners and Family Members Reported:

- Inadequate supply of medication and equipment are barriers to appropriate care.
- Traditional society requires that women deliver at home and obtain permission from male family members before seeking healthcare.
- Women and their families do not know the warning signs of potentially lethal conditions during pregnancy and childbirth and cannot therefore avert potential complications.
- Women often cannot afford to pay for health care services even when they know they are in danger.
- Lack of transportation from the villages impedes referrals to hospitals.
- Untrained traditional birth attendants in the villages stated they could save lives with better training and lamented their lack of capacity to deal with the most simple of complications such as infection or bleeding.
- Loss of a mother causes considerable physical and emotional hardship for the families they leave behind.

Families suffered tremendously with the loss of the mother. The story told by a 60-year old widower in a village in Zendajan captures the effects of maternal mortality.

> *The TBA did not know what to do so she [my wife] died in a pool of blood without holding or feeding her babies. I am trying to remember if I was by her side, but the years have removed many memories. There was no doctor to help. Even if there was one, I had no money to pay a doctor or a clinic. If I had money, I was going to take her [my wife] to a clinic in the city.*
>
> *The baby twins needed to be cared for so I brought them to a village woman who had milk in her breasts. One died after three months and the other at six months. I think she did not take good care of them.*
>
> *Only our two year-old did not understand what happened to their mother. The rest cried for one year. After the year, I decided they needed to be distracted so I sent them to the fields to care for other people's cows. With the money that they earned, I was able to marry a second wife and give my children the chance of another mother.*

[20] World Health Organization. *Health Resources by District and Village in Afghanistan.* Herat Sub-Office, Afghanistan. (Unpublished) 2002.

Individual interviews with health practitioners and family members provided considerable insight into the problems identified in the maternal mortality survey. Dr. Mina, an obstetrician in Enjil Center Clinic, summed up the barriers to good health care for pregnant women as follows:

> *There is not enough prenatal and postnatal care for women. They are malnourished, cannot even get Tetanus vaccination and do not have family planning. Even if we suggest family planning, they must discuss this with their husbands and must have money to buy the medicines, which they do not.*
>
> *Hospitals are culturally unacceptable; a woman has to ask permission to be evaluated by a doctor. If we could get village health workers and TBAs trained in the villages, I think women would do better. But the village health worker and TBAs need to also train the male family members, not just the women, about women's health.*

Tamar, a midwife in Zendajan Center Clinic, who is 55 km from Herat City (a three hour drive on a dirt road in a four-wheel drive vehicle), sums up the obstacles that rural women face:

> *I deliver babies here but most are delivered in the villages, by untrained TBAs. If there is a very sick woman or a complicated pregnancy, we refer them to Herat but I do not know how many can go since it so far from here. We have health education at the clinic including nutrition since most of the women I see are malnourished. But there are other problems. There is no sanitation in the villages, we do not have enough vaccines for women and it is really not possible to refer women to Herat because of the distance. The biggest problem is that women do not know when they should come for help and neither do the husbands, so women die at home or on a donkey on the way to Herat.*

Dr. Saida, Head of the Herat Maternity Hospital and a female obstetrician trained at Kabul Medical Faculty, describes the problems she faces as a doctor in a regional hospital that is supposed to care for women from five different provinces.

> *We have been promised so many things and rarely do any of the promises come through. I must go across the campus to the main hospital if I want instruments sterilized. I ask my staff to roll up their sleeves to give blood to patients when the mother needs it since we have no other way of getting blood. My staff is now anemic and I cannot transfuse for a few weeks. I was trained in a time when things were so much better, now I practice "field medicine." My surgery this morning was a hysterectomy but the anesthesiologist could only use a bag to help the patient breathe.*

URGENT AND LONG-TERM RECOMMENDATIONS

Three "quick start" initiatives that can be implemented immediately are listed here, followed by seven recommendations for long-term improvement of women's health. These three recommendations are not a substitute for a comprehensive public health infrastructure, or for the food, water, and housing that healthy mothers need.

Urgent Priorities

- First, the donor community should quickly provide the basic equipment needed for complicated births to local clinics and regional health centers. Almost none of them have rudimentary supplies such as intravenous medications to control seizures, bleeding or infection; clean water; or vacuum aspirators. Providing the basic package of such materials and equipment to every facility, and training local health workers to address hemorrhage or obstructed delivery at each location, could save tens of thousands of lives every year. On an urgent basis, recruitment and deployment of trained health professionals to every Essential Obstetric Care (EOC) Facility is necessary.
- Second, the donor community and the Afghan government must recognize that even when services are available and reachable, user fees may preclude life-

saving care for many women. The donor community and the Afghan government should work together to develop schemes for ensuring that life saving treatment in emergencies, including obstetric emergencies and prenatal care be available at no cost.

- Third, an initiative to train traditional birth attendants (TBAs) in rural areas should be considered by the donor community. As documented in this study, TBAs are overwhelmingly (97%) the only ones to accompany an Afghan mother in labor. However, they lack basic skills such as how to massage the uterus to expel the placenta or prevent hemmorhage—a frequent cause of death that could be prevented. Although studies in other countries have shown that training of TBAs alone does not reduce maternal mortality rates, given the situation in much of Afghanistan, training TBAs may be a useful short-term measure. TBAs and community members should be taught about common warning signs. The training should be accompanied by assessments of any results, including effects on morbidity, and should not be seen as a replacement for upgrading and increasing the number of EOCs and the number of qualified health professionals.

Long-term Recommendations for Reducing Maternal Mortality in Afghanistan

The three initiatives above address areas where intensive investment immediately could have a dramatic impact on maternal mortality. Much more needs to be done. Physicians for Human Rights recommends that the Afghan government should make the reduction of maternal mortality a national priority and urges the development of a comprehensive plan to address it. The following recommendations for safe birthing and motherhood will take time to administer and require a long-term and sustained commitment by the Afghan government, international donors, and humanitarian aid groups.

The extraordinarily high numbers of deaths of women during pregnancy and childbirth identified in this report are largely preventable. They are a direct consequence of the very young marriage age for women and girls, poor health and nutrition, too-frequent childbearing, and virtually no access to gynecological and obstetrical services. Afghan authorities, in consultation with Afghan women's groups, civil society, health professionals and local leaders, and assisted by the international community, can and must address these barriers to maternal survival that contribute to the unacceptable death rate of Afghan women.

1. **Maternal health must not be considered a second stage priority and must be integrated into a public health plan.** Because of poor governance, near-constant war, and gross poverty, international humanitarian groups have largely provided health care in Afghanistan through a patchwork of projects. Many are excellent and should be maintained and enhanced, but the country requires an integrated public health plan that will comprehensively address Afghanistan's needs. Furthermore, saving the lives of the thousands of women who die during pregnancy or childbirth in Afghanistan every year literally saves the life of the family as well. Infants and young children who lose their mothers in impoverished families languish and often die themselves.

2. **Afghan women's rights must be protected and promoted.** A national plan must protect and promote a wide range of women's rights (civil, political, economic, social and cultural) over a sustained period of time. This includes ratifying the Convention on the Elimination of Discrimination against Women (CEDAW or "Women's Convention") and including provisions of safe motherhood in Afghan law and health policies. The plan should be based on country-wide discussions with local religious and community leaders, Afghan women's organizations, Afghan health care providers, international humanitarian aid providers, and the Afghan government's Women's Ministry to develop a public education campaign aimed at protecting the right to enter freely into marriage, set and enforce a minimum age of marriage, and choose the timing and spacing of children. In addition, the Afghan government should establish a minimum age of consent for marriage in the constitution that is currently being amended

[Article 23, ICCPR acceded by Afghanistan in January 1983]. Similarly, humanitarian assistance providers should employ a rights-based framework in their efforts to prevent maternal deaths.

Family planning services must be enhanced. In the Physicians for Human Rights study, 23% of women respondents indicated that they wanted contraception, but only 12% reported access to it. Expanding information and education about and access to birth control for women and men should be a priority of donors, humanitarian groups, the Afghan Ministry of Public Health, and Afghan civil society.

3. **Women's health services must be extended and improved to meet WHO standards.** One of the key underlying factors contributing to maternal mortality in Afghanistan is the near-total absence of accessible hospital services for complicated births. PHR urges that clinics and hospitals throughout the country be brought up to the World Health Organization's minimum criteria as essential obstetric care facilities, and include the supplies, equipment, and trained personnel required to handle complicated births. Such Essential Obstetric Care (EOC) facilities do not need to be sophisticated hospitals. EOC facilities can and should be accessible to the rural population. Establishing and sustaining them, along with trained health workers, in every province in collaboration with local community leaders, should be a national and international priority. The goal of donors, government and NGOs working together should be to provide the minimal number of appropriate facilities per population, as recommended by the World Health Organization. Minimal supplies, equipment and training to address hemorrhage and other complications are not prohibitively expensive. They include intravenous medications to control bleeding, seizure, and infection, and simple sterile equipment such as forceps and a vacuum extractor to aid birth and after-birth.

4. **Security gaps must be addressed and security provided throughout the country.** Continued internal and international conflict and lack of security throughout Afghanistan is a serious impediment to the development of health infrastructure. Physicians for Human Rights recommends that the United States and its coalition partners assist the Afghan government in providing security throughout Afghanistan, with an emphasis on securing those areas where ongoing conflict is hampering the ability of the national government and humanitarian organizations to extend health services to those most in need. PHR urges that multinational forces be deployed to areas where ethnic minorities are vulnerable to physical attacks, and where banditry and harassment by local warlords has impeded the work of local and international humanitarian groups. Northern Afghanistan is a particularly troubled area that requires international protection. The western region of Afghanistan, where Physicians for Human Rights conducted this study, is another such area. Relief agencies have difficulty working in this area due to military control by several armed militia groups.

5. **Training of women health care workers at all levels must be a priority.** Physicians for Human Rights urges the Afghan government and donor community, in consultation with Afghan women's organizations, to develop a plan for training and deploying large numbers of nurse midwives and trained traditional birth attendants to under-served areas. In addition, training TBAs to recognize signs of birth complications and schooling them appropriately to refer women to clinics or hospitals is essential. Finally, the donor community, in cooperation with Afghan women's groups and medical associations, should expand the number of female medical students receiving training or retraining in women's health and obstetrics and gynecology, and subsidize their service in poor, rural areas of Afghanistan.

6. **Provision of basic needs including water, food and sanitation must be expedited and targeted to least served areas and those with high maternal mortality.** Lack of adequate nutrition, shelter and clean water are important contributing factors to Afghanistan's high maternal mortality ratio. In the PHR study, women identified all three as lacking. Physicians for Human Rights urges that humani-

tarian organizations, including non-governmental organizations and United Nations agencies integrate their programs and identify ways to upgrade nutrition and access to clean water in Afghanistan's least-served areas, including communities in Western Afghanistan, Faryab, Ghor, Baghdis, and Farah. In consultation with Afghan women, local community leadership, and traditional birth attendants, relief providers should direct supplemental food and clean water resources to areas of particularly high maternal mortality and ensure that women have access to these.

7. **Assistance for women's mental health problems must be provided.** A very large percentage of Afghan women suffer from major depression or other mental health problems related to trauma and/or the suffering of multiple losses in their lives. Though not the subject of this report, PHR has in previous investigations collected extensive data about widespread depression, suicidal ideation, and other serious indications of poor mental health among Afghan women. Physicians for Human Rights urges that health care providers be trained to identify the signs and symptoms of depression and other mental health problems so that those in need can be referred to trained mental health providers for assistance. Moreover, mental health programs should be integrated into humanitarian assistance, including maternal health programs.

II. BACKGROUND

OVERVIEW

Afghanistan is one of the poorest countries in the world and in 1997 was reported to have one of the highest infant (152/1,000) and child (257/1,000) mortality rates of all countries.[21] Life expectancy of women was reported to be 44 years in 1997.[22] Only 17% of rural residents and 38% of urban residents had access to safe drinking water.[23] It has been estimated that, annually, diarrhea disease causes 42% of all deaths in Afghanistan[24] and that 85,000 are children under age five.[25] Malnutrition has been reported to affect up to 52% of children under age five.[26] In addition, more than 70% of the health care system in Afghanistan is reportedly dependent on external assistance.[27]

MATERNAL MORTALITY IN AFGHANISTAN

In 1997, the maternal mortality ratio (number of maternal deaths per 100,000 live births per year) in Afghanistan was reported to be one of the worst in the world, 820/100,000, but no update has been available since that time. Furthermore, this ratio is based on a statistical modeling method[28] used by the World Health Organization (WHO) to estimate maternal mortality in a country that lacks vital registration and other record-based means of estimating of maternal mortality. All estimates of maternal mortality in Afghanistan in the last twelve years have been based on regression model analysis, and not on actual data collected in the field.

The 1995 estimated ratio suggests that in Afghanistan, approximately 16,000 women died annually of childbirth related complications and that a woman died of largely preventable causes every 30 minutes. Under the Taliban regime, which ruled most of Afghanistan between 1996 and 2001, Afghan women experienced persistent deprivations and restrictions of basic freedoms. The effects of the recent war and ongoing skirmishes further diminished women's health status and the already poor health care system.

MATERNAL MORTALITY AND HUMAN RIGHTS

Increasingly, health professionals have recognized the protection and promotion of human rights as essential conditions for health.[29] Violations of human rights including civil and political rights and economic, social and cultural rights may have profound effects on human health. Furthermore, human rights are interdependent.[30] That is, the realization of one right

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[21] United Nations Children's Fund. *State of the World's Children report, 1997*. New York, NY: United Nations Children's Fund, 1997.

[22] *Report of the Secretary-General on the situation of women and girls in Afghanistan: The implementation of human rights with regard to women.* Geneva, Switzerland: United Nations Commissioner for Human Rights. United Nations document E/CN.4/Sub .2/2000/18.

[23] See World Health Organization. *Drought in Central Asia, 2000: Background data on affected countries, 2000;* United Nations Development Program. *Human Development Report, 1997*. New York, NY: Oxford University Press, 1997; *Information Statistics: Afghanistan.* United Nations Children's Fund website: www.unicef.org/statis.

[24] United Nations Children's Fund website: www.unicef.org/statis; UNICEF/CIET multiple Indicator Cluster Survey. 1997:2-26.

[25] United Nations Department of Humanitarian Affairs. *Report of the DHA mission to Afghanistan.* Geneva, Switzerland: UN Department of Humanitarian Affairs, June 15, 1997:1-24.

[26] See World Health Organization. *Drought in Central Asia, 2000: Background data on affected countries, 2000*; United Nations Development Program. *Human Development Report, 1997*. New York, NY: Oxford University Press; 1997.

[27] World Health Organization. *Hope.* WHO. December, 1996.

[28] World Health Organization. *The sisterhood method for estimating maternal mortality.* Available at: www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002.

[29] Mann J, Gostin L, Gruskin S, Brennan T, Lazzarini Z, Fineberg HV. "Health and Human Rights." *Health and Human Rights.* 1(1):6-23, 1994; Iacopino V. "Human Rights: Health Concern for the Twenty-first Century.' In: Majumdar SK, Rosenfield LM, Nash DB, Audet AM (editors). *Medicine and Health Care into the Twenty-first Century.* Pennsylvania Academy of Science, PA 376-92, 1995; Benatar SR. "Global Disparities in Health and Human Rights: A Critical Commentary." *Am J Pub Health.* 88: 295-300, 1998; Yamin AE. "Transformative combinations: women's health and human rights." *JAMWA*. 1997. 52(4):169-173.

[30] United Nations General Assembly. United Nations General Assembly Resolution A/RAS/32/130. Geneva, Switzerland: December 16, 1977; Donnelly J. "Interdependence and Indivisibility of Human Rights." *Universal Human Rights in Theory and Practice*. Ithaca, New York: Cornell University Press, 1989:28-45.

depends on the realization of other rights. The problem of maternal mortality illustrates well the relationship between health and human rights. Women's health requires social and economic rights such as access to health services, adequate food, shelter, and clean water, and individual freedoms such as freely entering into marriage, access to birth control methods and possibly control over the number and spacing of children to limit the possibility of dying during pregnancy. Furthermore, women require representation in government, equality before the law, access to scientific knowledge, freedom of speech and association, among other civil and political rights, to secure essential economic and social rights. Similarly, lack of access to basic health services, food, shelter, clean water and sanitation, and equal opportunities for work and education may jeopardize women's capacity to survive and participate in society.

Although maternal mortality may reflect a range of violations of women's rights, this study focuses on those rights deemed to have the greatest impact on maternal mortality in the region. These include: 1) access to and quality of maternal health services, 2) rights to food, shelter, clean water, sanitation and education, and 3) individual freedoms including freely entering into marriage, access to birth control methods and possibly control over the number and spacing of children.[31]

Access to and Quality of Maternal Health Service

Lack of access to heath care may result from a lack of facilities, or where facilities exist, unusable roads, insecurity, and lack of transportation (including ambulances). In addition, the lack of necessary equipment and training to deal with complicated deliveries are frequent problems, as is the absence of trained female health care providers.

In 1997, UNICEF, WHO and UNFPA published guidelines that stated for every population of 500,000 there should be at least four basic essential obstetric care (EOC) facilities and one comprehensive EOC facility.[32] Minimal acceptable levels of care also require that 15% of all births in the population take place in the hospital and 100% of women with obstetric complications are treated in EOC facilities.[33] A basic essential obstetric care (EOC) facility is one that can provide parenteral antibiotics, oxytocic drugs, anticonvulsants for pre-eclampsia, manual removal of placenta, removal of retained products via manual vacuum aspiration, and available assisted vaginal delivery.[34] A comprehensive EOC facility must be able to administer all of the basic services and perform surgery (i.e., caesarian section) and blood transfusions.[35]

Healthcare facilities (hospitals and basic health centers) in most of Afghanistan, especially in rural areas outside of the capital, Kabul, are largely non-functional or do not meet WHO criteria for EOCs. Only 30-40% of the population have access to some health service, with most of these being residents of urban areas.[36] More than half of all hospitals in Afghanistan are located in Kabul and therefore serve approximately only one quarter of the entire population.[37] According to the WHO, approximately 2,700 of 3,900 physicians and 600 of 990 midwives work in Kabul, leaving the remainder of the country with few trained health care professionals.[38] In fact, it was recently estimated that a trained health care provider attended fewer than 8% of deliveries countrywide.[39] Many of the health care facilities listed by the WHO are, in fact, nonfunctional due to lack of supplies or equipment, lack of structural integrity (windows, doors, electricity, or water) and the absence of trained health care professionals. Facilities surveyed by PHR in Herat Province were noted to be in disrepair. Few if any of the basic health centers had windows, medications, basic equipment such as stetho-

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[31] Selection of these factors is based on established causes of maternal mortality in the literature and PHR's assessment of relevant regional conditions. See also: Yamin AE, Maine DP. "Maternal Mortality as a Human Rights Issue: Measuring Compliance with International Treaty Obligations." *Human Rights Quarterly* 21:3:563-607, 1999.

[32] United Nations Children's Fund. *Guidelines for Monitoring the Availability and Use of Obstetric Services*. 1997. www.unicef.org. Accessed June 8, 2002.

[33] Id. Supra 32.

[34] Id. Supra 32.

[35] Id. Supra 32.

[36] United Nations Development Program. *Needs Assessment Report, V. Social Protection, Health and Eduction: B. Health*. undp.org. Accessed February 14, 2002.

[37] World Health Organization-Afghanistan, December 2001, Country health Profile (unpublished), sent to Dr. Amowitz from WHO/Afghanistan in Islamabad, Pakistan January 2002.

[38] Id. Supra 36.

[39] United Nations Development Program. *Needs Assessment Report, V. Social Protection, Health and Education: B. Health*. undp.org. Accessed February 14, 2002.

scopes, electricity or running water. Waiting rooms were empty due to the lack of essential drugs to treat even the most common medical problems and health care professionals lamented that they were helpless to treat patients without the essentials. The combined effects of such conditions of the health care facilities have compounded the problem of maternal mortality in Afghanistan.

Rights to Food, Shelter, Clean Water, Sanitation and Education

Basic human rights to adequate food, shelter, clean water, sanitation and education all may have an effect on maternal mortality. Chronic malnutrition in childhood, a fact of life for children in Afghanistan,[40] frequently results in anemia and stunted growth including the development of a smaller than normal pelvic outlet.[41] Small, anemic mothers with undeveloped pelvic bones are at greater risk of obstructed births with devastating consequences for both mother and baby and may not withstand pregnancy or the usual blood loss during delivery.[42]

Lack of adequate shelter and the absence of clean water or sanitation is likely to contribute to infections and diseases, which can complicate or be complicated by pregnancy and delivery.[43] Lack of education and information also may contribute to maternal mortality. Education is one of the best predictors of health status.[44] Information about birth spacing, contraception, health care and immunizations, and safe pregnancy is essential to the health of mother and baby.[45] Women in Afghanistan over the last two decades have been poorly educated with the average years of formal education reported as one or less years of education, currently leaving a gap in the number of women who can obtain higher education.[46] In addition, a lack of trained female health providers is also likely to contribute to maternal mortality in countries such as Afghanistan in which it is generally culturally unacceptable for women to be examined by male health providers.

Individual Freedoms

Women in Afghanistan, as in many parts of the world, have few rights relating to their sexuality and role in the family. Early/forced marriage, an inability to negotiate terms of sex, including the use of contraception and birth spacing, are all likely to contribute to maternal mortality by leading to a high number of pregnancies starting at an early age.[47] Such pregnancies may place the mother and baby at increased risk for serious complications, especially obstructed births, since this complication is increased when the mother is not fully developed. Restrictions on her movement by government or family are likely to result in death due to inability to access essential maternal health care services.[48]

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[40] An estimated 52% of children are malnourished and more than 50% of children have stunted growth. See World Health Organization. *Drought in Central Asia, 2000: Background data on affected countries*. 2000; United Nations Development Program. *Human Development Report*. 1997. New York, NY: Oxford University Press, 1997.

[41] World Health Organization. *Advancing Safe Motherhood Through Human Rights*. www.who.int/reproductive-health/publications/. Accessed January 4, 2002.

[42] Id. Supra 40.

[43] Id. Supra 40.

[44] Grossman, 1975. "The correlation between health and schooling." In: *Household Production and Consumption*. ed. Nestor E. Terleckyj. NBER Studies in Income and Wealth, no. 40. New York: National Bureau of Economic Research; Columbia University, Auster, Richard, Irving Levenson, Deborah Sarachek, 1969. "The production of health: an explanatory study." *Journal of Human Resources*. 4(Fall):412-436; Reldman, J. Makuc, D., Kleinman, J., Cornoni-Huntly, J., 1989. "National trends in educational differentials in mortality." *American Journal of Epidemiology*. 129:919-933.

[45] World Health Organization. *Advancing Safe Motherhood Through Human Rights*. www.who.int/reproductive-health/publications/. Accessed January 4, 2002.

[46] See Amowitz LL, Burkhalter H, Ely-Yamin A, Iacopino V. *Women's Health and Human Rights in Afghanistan: A Population-Based Study*. Boston, MA: Physicians for Human Rights: May, 2001; Amowitz LL, Iacopino V. "Women's Health and Human Rights Needs." *The Lancet Perspectives*. 356 (s65), December 2000.

[47] Yamin AE, Maine DP. "Maternal Mortality as a Human Rights Issue: Measuring Compliance with International Treaty Obligations." *Human Rights Quarterly* 21:3:563-607, 1999.

[48] Id.

III. APPLICATION OF RELEVANT INTERNATIONAL LAW

The right to health, including safe motherhood, is acknowledged in many national constitutions, as well as regional and international human rights treaties to which Afghanistan is a party.[49] Together, the International Covenant on Economic Social and Cultural Rights (ICESCR), which emphasizes such substantive rights as education and health care, and the International Covenant on Civil and Political Rights (ICCPR), which emphasizes women's rights to bodily integrity, information, political participation, association and movement, provide the foundation for many of the rights necessary for women to enjoy health and access to health care.[50]

In recognition of economic limitations on certain States, the ICESCR requires each State Party to "take steps individually and through international assistance and cooperation…to the maximum of its available resources"[51] to achieve progressively the full realization of the rights contained in the treaty. It is a clear violation of the terms of the ICESCR, however, to take any action, through legislation or otherwise, that revokes or removes rights previously enjoyed in that state. State Parties to the ICESCR must also "ensure the equal right of men and women to the enjoyment"[52] of the rights in the convention. Thus, any State policy that restricts the rights of women in Afghanistan in the areas of education[53] or employment[54] would constitute unequivocal violations of Afghanistan's obligations under the ICESCR.

Several provisions in the ICESCR form part of the basis for the right to safe motherhood. Article 11 sets out the right to "adequate food, clothing and housing"[55] and "the fundamental right of everyone to be free from hunger."[56] Malnutrition is a common contributing factor to maternal mortality in Afghanistan. Article 12 of the ICESCR sets out "the right of everyone to the highest attainable standard of physical and mental health."[57] The committee responsible for monitoring adherence to the ICESCR (ESC Committee) gave further authoritative guidance regarding the meaning of this right in General Comment 14 promulgated in 2000.[58] The ESC Committee has stated that the provision of maternal health care "including access to family planning, pre- and post-natal care, emergency obstetric services and access to information as well as to resources necessary to act on that information,"[59] constitutes part of a State's essential or minimum core obligations.[60] The General Comment explicitly includes physical and economic accessibility as components of the right to health.[61]

Like the ICESCR, the ICCPR requires that State Parties must "ensure the equal right of men and women to the enjoyment"[62] of the rights in the convention. The Covenant recognizes "the right of men and women of marriageable age to marry and found

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[49] World Health Organization. "Reduction of Maternal Mortality." WHO/UNFPA/UNICEF World Bank Statement. WHO Geneva 1999; and General Comment 14 of the Committee on Economic, Social, and Cultural Rights on the right to the highest attainable standard of health. E/C.12/2000/4, CESCR General Comment 14, July 4, 2000.

[50] *International Covenant on Civil and Political Rights,* United Nations G.A. Res. 2200a (XXI), U.N. GAOR, 21st Sess., Supp. no 16., UN Doc A/6316 (1967), reprinted in Center for the Study of Human Rights, *Women and Human Rights: The Basic Documents*. New York, NY: Columbia University, 1996. Afghanistan acceded 24 January 1983[hereinafter "ICCPR"]. *International Covenant on Economic, Social and Cultural Rights,* 21 G.A. Res. 2200 (XXI), UN GAOR, Supp. (No. 16) 49, UN Doc A (6316) 1966. Acceded 24 January 1983 [hereinafter, "ICESCR"].

[51] ICESCR Art 2(1).

[52] ICESCR Art 3.

[53] ICESCR Art 13.

[54] ICESCR Art 7.

[55] ICESCR Art 11(1).

[56] ICESCR Art11(2).

[57] ICESCRArt 12(1).

[58] United Nations Committee on Economic, Social, and Cultural rights, General Comment 14. The right to the highest attainable standard of health: 11/08/2000. E/C12/2000/4. [hereafter "General Comment 14].

[59] General Comment 14 (14).

[60] General Comment 14, at Paras 14 and 44.

[61] General Comment14 12(2).

[62] ICCPR Art 3.

a family."[63] Although the term "marriageable age" is not defined, international documents relating to age of marriage[64] suggest that child[65] marriage and betrothal before puberty are not acceptable. Further, the Covenant states that "no marriage shall be entered into without the free and full consent of the intending spouses."[66] The ability or capacity of young girls to give full and free consent is doubtful. Additionally, women may feel coerced by lack of options or pressured by family to marry.

The Convention on the Rights of the Child (CRC) offers further protection to girls, defined as under 18 years of age.[67] The CRC recognizes the "right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness."[68] The "full implementation of this right"[69] explicitly includes taking "appropriate measures …to ensure appropriate pre- and post-natal health care for expectant mothers,"[70] and "to develop… family planning education and services."[71] Recognizing that some countries are better positioned to meet these commitments, the CRC makes realization of this article the responsibility of all state parties stating: "States Parties undertake to promote and encourage international cooperation with a view to achieving progressively the full realization of the right…particular account shall be taken of the needs of developing nations."[72] The CRC also sets out the right to education[73] and the state's obligation to protect children from exploitation.[74]

Afghanistan is a party to the ICCPR, the ICESCR, and the CRC and is therefore responsible for ensuring adherence to the commitments it has made including those that form the basis for safe motherhood.

Afghanistan has ratified the Convention on the Political Rights of Women, which provides for universal suffrage for women, their eligibility for election to all publicly elected bodies and their right to hold public office.[75] While Afghanistan is a signatory and not a party to the far more extensive 1979 Convention on the Elimination of All Forms of Discrimination against Women ("Women's Convention" or "CEDAW"), its signature indicates an agreement not to contravene its provisions, which include "taking all appropriate measures" to eliminate discrimination against women and to "modify social and cultural patterns of conduct, which are based on the idea of the inferiority or the superiority of either of the sexes or on stereotyped roles for men and women."[76]

The Women's Convention requires States Parties to eliminate discrimination in both public and private spheres; in education, health care, employment, economic and legal programs and rules, and all matters involving marriage and the family. Specifically, Article 10(h) of the Women's Convention addresses the right to equality in education: "Access to specific education information to help to ensure the health and well-being of families, including information and advice on family planning." Article 12(a) of the Women's Convention obligates States Parties to "take all appropriate measures to eliminate discrimination against women in the field of health care in order to ensure, on a basis of equality of men and women, access to health care services, including those related to family planning."[77] Article 12(b) of the Women's Convention[78] states that:

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[63] ICCPR Art 23 (2).

[64] *Declaration on the Elimination of Discrimination against Women* (1967) G.A. Res 2263, UN GAOR 22d Sess UN Doc A/6716 (1967); *Convention on Consent to Marriage , minimum age for marriage and registration of marriages* (1962) 521 UNTS 231.

[65] The definition of a child according to the UN Convention on the Rights of the Child is anyone under the age of 18.

[66] ICCPR Art 23(3).

[67] CRC Art 1.

[68] CRC Art 24(1).

[69] CRC Art 24(2).

[70] CRC Art 24 (2(d).

[71] CRC Art 24(2) (f).

[72] CRC Art 24(4).

[73] CRC Arts 28 and 29.

[74] CRC Art 34 and 36.

[75] *Convention on the Political Rights of Women,* 193 U.N.T.S 135, (entered into force 7 July 1954), reprinted in Center for the Study of Human Rights, *Women and Human Rights: The Basic Documents*, New York, NY: Columbia University (1996) Signed 14 August 1980. Article 1,2,3.

[76] Article 16(a), *Convention on the Elimination of All Forms of Discrimination Against Women,* adopted 18 Dec 1979, GA Res 34/180, UN GAOR Supp (No 46), UN Doc/ A/34/36 (1978), reprinted in ILM 33 (1980)(entered into force 3 Sept. 1981)[hereinafter, "Women's Convention"].

[77] Article 12(2) continues: "Notwithstanding the provisions of paragraph I of this article, States parties shall ensure to women appropriate services in connection with pregnancy, confinement and the post-natal period, granting free services where necessary, as well as adequate nutrition during pregnancy and lactation." Id, Article 12(2).

[78] Article 12(2), *Convention on the Elimination of All Forms of Discrimination Against Wo*men (Women's Convention), adopted 18 Dec 1979, GA Res 34/180, UN GAOR Supp (No 46), UN Doc/A/34/36 (1978), reprinted in ILM 33 (1980) (entered into force 3 Sept 1981).

States Parties shall ensure to women appropriate services in connection with pregnancy, confinement and the post-natal period, granting free services where necessary, as well as adequate nutrition during pregnancy and lactation.

Article 16 addresses marriage and the family and provides that States Parties shall ensure men and women have equal rights. Part (e) of Article 16(1) requires States Parties to ensure "[t]he same rights to decide freely and responsibly on the number and spacing of their children and to have access to the information, education and means to enable them to exercise these rights."[79] That article also states that "the betrothal and the marriage of a child shall have no legal effect and all necessary action, including legislation, shall be taken to specify a minimum age for marriage."[80] Article 2 requires States Parties to implement the substantive provisions of the Women's Convention through domestic law.[81]

The reduction of maternal mortality also is explicitly mentioned in both the 1999 CEDAW General Recommendation on "Women and Health" and the 2000 ESC Committee General Comment on "the Right to the Highest Attainable Standard of Health."[82] The committee which monitors adherence to CEDAW calls for emergency obstetric care (EOC) to be provided and made accessible to women – geographically, economically and culturally – in fulfilling a State's obligations. In its General Recommendation "Women and Health," the monitoring body of the Women's Convention notes that "it is the duty of States parties to ensure women's right to safe motherhood and emergency obstetric services and they should allocate to these services the maximum extent of available resources."[83]

The declarations that emerged from the International Convention on Population and Development held in Cairo in 1994 (Cairo Programme) and the Fourth World Conference on Women held in Beijing (Beijing Platform) further elaborated the binding norms in the ICESCR and the Women's Convention, with respect to maternal mortality, mentioned above.[84] Language in the five-year follow-up documents to the Cairo and Beijing Conferences reiterated the critical need to address the extraordinarily high numbers of maternal deaths worldwide.

In addition to these binding treaties, multiple declarations relating to women's health are relevant for their moral authority and interpretive value. Among these are documents arising from recent global conferences including the declaration and program of action from the World Conference on Human Rights ("Vienna Declaration"),[85] the Programme of Action for the International Conference on Population and Development ("Cairo Programme"),[86] and the Platform of Action of the Fourth World Conference on Women ("Beijing Platform").[87] The government of Afghanistan was represented at all of these international conferences. Taken together, these declarative documents speak to a strong and growing international consensus regarding certain core principles of women's dignity, opportunities and equality with men.

The Vienna Declaration was the first of these documentary guidelines and was issued in 1993. Part I of the Vienna Declaration states:

The human rights of women and of the girl-child are an inalienable, integral and indivisible part of universal human rights. The full and equal participation of women in political, civil, economic, social and cultural life, at the national, regional and international levels, and the eradication of all forms of discrimination on the grounds of sex are priority objectives of the international community.[88]

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[79] Id. Article 16.

[80] CEDAW Art 16(2).

[81] Id. Article 2.

[82] General Comment , Paras. 14 and 21 (2000); and CEDAW General recommendation No 24, supra note 21, at Para. 26.

[83] CEDAW General Recommendation No 24, supra note 21, at Para. 27.

[84] *Programme of Action of the International Conference on Population and Development: Report of the International Conference on Population and Development*, UN GAOR, 29th Sess, UN Doc A/Conf. 171/13 (1994) 8.21; *Action for Equality, Development and Peace: Beijing Declaration and Platform for Action*, UN GAOR, Fourth World Conf. On Women, UN Doc A/Conf.177/20 (1995).

[85] *Vienna Declaration and Programme of Action,* World Conference on Human Rights, Vienna. UN Doc A/Conf. 157/23 (12 July 1993).

[86] *Programme of Action of the United Nations International Conference on Population and Development*. UN Doc A/Conf. 171/13. (18 October 1994) [hereinafter, "Cairo Programme"].

[87] *Beijing Declaration and Platform for Action*, Fourth World Conference on Women. UN Doc A/Conf. 177/20 (17 October 1995) [hereinafter, "Beijing Declaration"].

Other relevant sections of the Vienna Declaration establish that the equal status of women and the human rights of women should be integrated in the mainstream activity[89] and urge the full and equal enjoyment by women of all human rights;[90] the elimination of violence against women;[91] and the eradication of all forms of discrimination against women.[92]

The Cairo Programme, which emerged from the International Conference on Population and Development held in Cairo, Egypt in 1994, contains an entire chapter on gender equity and the empowerment of women. Chapter IV of that document states:

> *The empowerment and autonomy of women and the improvement of their political, social, economic and health status is a highly important end in itself. In addition, improving the status of women also enhances their decision-making capacity at all levels in all spheres of life, especially in the area of sexuality and reproduction.*[93]

In turn, the Cairo Programme calls for, among other things, eliminating inequalities between men and women that affect women's health. For example, it declares the need for State action with respect to: equal political participation, education, skill development and employment; eliminating all practices that discriminate against women; assisting women to establish and realize their rights, including those that relate to reproductive and sexual health; improving women's ability to earn income; eliminating discriminatory practices by employers against women; and making it possible, through laws, regulations and other appropriate measures, for women to combine the roles of childbearing, breast-feeding and child-rearing with participation in the workforce.

The Beijing Platform, which came out of the Fourth World Conference on Women in 1995, recognized "the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health."

Other relevant references in the Beijing Declaration refer to equal rights for men and women;[94] measures governments should take to promote women's rights;[95] the inalienability of women's human rights;[96] the equal enjoyment by women of economic, social and cultural rights;[97] the need to eliminate violence against women, including that based on cultural prejudices;[98] the need to eliminate discrimination based on race, language, ethnicity, culture, religion, disability, or socio-economic class;[99] and the value of human rights education.[100]

Section 76, which deals with gender-biased curricula and teaching materials, specifically mentions reproductive health when it states: "The lack of sexual and reproductive health education has a profound impact on women and men." Strategic objectives in the Beijing Platform include the eradication of illiteracy among women; the improvement of women's access to vocational training, science and technology, and continuing education and the development of non-discriminatory education and training.

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[88] Part II, Section 3 deals with the equal status of and human rights of women and (40) and (41) reference health in the following way:

The World Conference on Human Rights recognized the importance of the enjoyment by women of the highest standard of physical and mental health throughout their life span and reaffirms, on the basis of equality between women and men, a woman's right to accessible and adequate health care and the widest range of family planning services, as well as equal access to education at all levels.

[89] Id. Article 37.

[90] *Vienna Declaration,* Article 36.

[91] Id. Article 38.

[92] Id. Article 39.

[93] *Cairo Programme,* Article 4.1.

[94] *Beijing Declaration,* Chapter IV, 214.

[95] Id. 215.

[96] Id. 216.

[97] Id. 220.

[98] Id. 224.

[99] Id. 225.

[100] Id. 227.

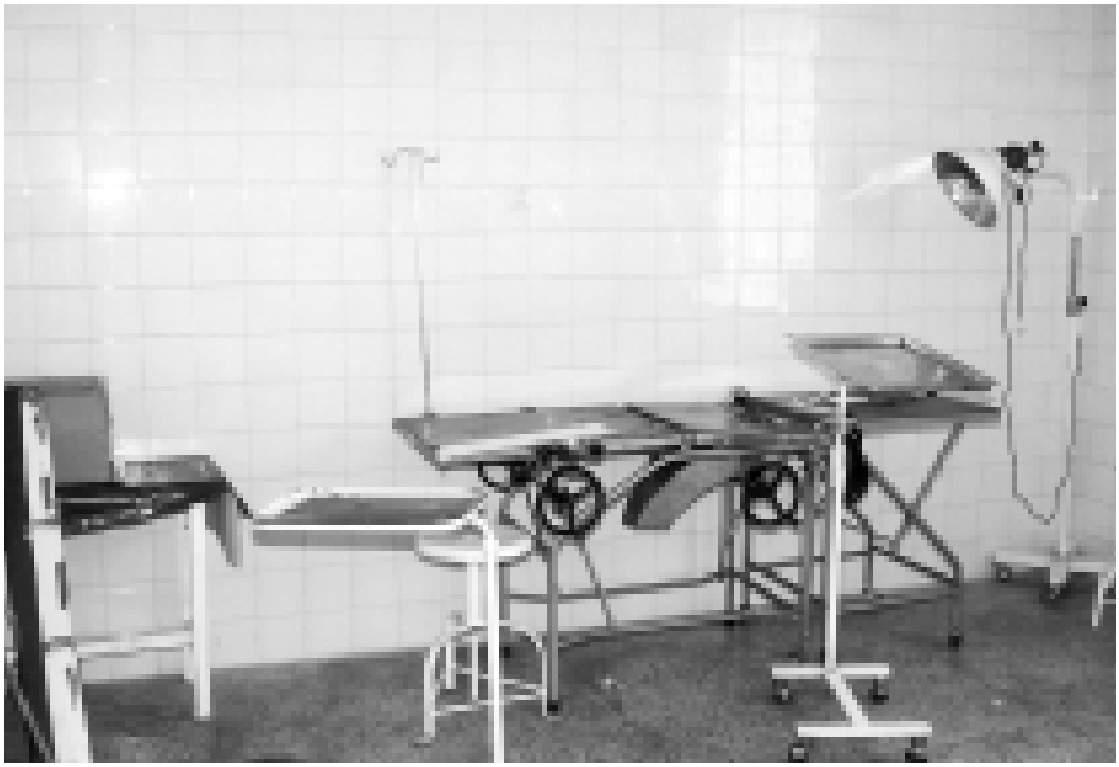
Left: Herat, Afghanistan has the highest maternal mortality rate in the world outside of Africa. The PHR survey in Herat Province, Afghanistan, found the maternal mortality ratio point estimate was 593 deaths/100,000 live births (95% CI, 557-630), the first data-driven study to be done in more than ten years.

Bottom: The PHR survey interviews were conducted by 48 Afghan women who were trained and supervised by PHR and four trained Afghan research team leaders. All interviews were conducted over a ten day period in March 2002, utilizing household interviews and the Indirect Sisterhood Method.

All photos by Lynn Amowitz, MD, MSPH, Msc; Physicians for Human Rights

Right: As documented in the PHR study, traditional birth attendants (TBAs), like this woman, are overwhelmingly the only ones to accompany an Afghan mother in labor. An initiative to train TBAs in rural areas should be considered by the donor community. Training of TBAs alone does not reduce maternal mortality rates but, given the situation in Afghanistan, this may be an important short term measure.

Below: Basic equipment needed for complicated births should be provided to local clinics and regional health centers. Almost none of them have rudimentary supplies such as intravenous medications to control seizures, bleeding or infection; clean water; forceps, or vacuum aspirators. Health workers should be trained to address hemorrhage, infection, and complicated deliveries at each location.



Basic health centers, as shown, do not need to be sophisticated hospitals but should be equipped with essential supplies, medicines, and trained personnel. These must be accessible to the rural population.

Herat Maternal Hospital. Maternal health must not be considered a second stage priority and must be integrated into a public health plan.

Right: In PHR's study, 23% of women respondents indicated that they wanted contraception. But only 12% reported access to it. Expanding information and education about and access to birth control for women and men should be a priority of donors, humanitarian groups, and the Afghan Ministry of Public Health. The right to freely enter into marriage, to set and enforce minimum age of marriage, and choose the timing and spacing of children is essential.

Below: A basic essential obstretric care (EOC) facility, shown, should be able to provide parenteral antibiotics, oxytocic drugs, anticonvulsants for pre-eclampsia, and other medications to treat even the most common medical problems.

IV. METHODS

SUBJECTS

Subjects of the PHR survey consisted of one female from each household who was between the ages of 15–49.

SAMPLING

At the time of the study, 1,094,377 people (approximately 500,000 women) were living in the thirteen districts of Herat Province, Afghanistan.[101] Herat Province was chosen for this survey because its population has remained relatively stable during the past ten years — a requirement of the method used. To obtain a representative sample of women, PHR selected randomly from seven of thirteen districts villages that had populations with greater than 200 households and were within a four-hour drive from Herat City. A total of 34 of 573 villages from these seven districts were included in the study (The districts from which villages were sampled represented 72% (793,214/1,094,377) of the population in Herat Province.)[102] Villages located in the six other districts were excluded on the basis of inaccessibility, the length of time required to drive to these areas, and the safety and cultural concerns of having women researchers staying in villages that are unknown to them. Two villages in Adraskan were excluded because they were nomadic villages.

PHR determined the sample size based on methodology developed for the Indirect Sisterhood Method.[103] The researchers assumed a maternal mortality ratio of 820/100,000 as indicated by UNICEF/WHO in 1997 and assumed this ratio to be only ±50% accurate (410/100,000 to 1230/100,000) and used an estimate of 300/100,000, which is the lower limit of the confidence intervals for this 1997 estimate.[104] The number of respondents needed (according to the Indirect Sisterhood Method) to establish a maternal mortality ratio of ~300 maternal deaths / 100,000 live births per year correct within 20% was ~4,000 household surveys.[105] To account for cluster sampling in Herat City, PHR planned to include 5,000 households in the study. A total of 5,014 households were selected from 34 established (non-nomadic) villages in the seven districts (Table 1).

All study participants were selected using systematic random sampling (n=4261; 87%) or a combination of systematic random sampling and cluster sampling (n=625; 13%).[106] In each village, the researchers asked the local village elder to walk the PHR team around the entire village, then conducted a systematic random sample of the entire village. All villages were systematically sampled. A sampling interval (n) was calculated by dividing the number of households in the cluster or village by the number of interviews to be conducted in the cluster or village. A starting household was determined by random number generation and each n^{th} household was interviewed until the entire cluster or village had been surveyed. Urban areas in Herat City required cluster sampling due to size and difficulty in mapping. Seventy-five percent of the sample was collected in rural areas and 25% in urban areas to reflect the urban/rural representation of the province.

PHR also conducted a comprehensive survey of all health facilities in the seven districts of Herat Province

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[101] World Health Organization. *Health Resources by District and Village in Afghanistan.* Herat Sub-Office, Afghanistan. (Unpublished) 2002.

[102] Id.

[103] World Health Organization. *The sisterhood method for estimating maternal mortality.* Available at: www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002; Graham W, Brass W, Snow RW. "Indirect estimation of maternal mortality: the sisterhood method." *Stud Fam Plan.* 20(3): 125-135, 1989.

[104] World Health Organization. *The sisterhood method for estimating maternal mortality.* Available at: www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002.

[105] Id.; Graham W, Brass W, Snow RW. "Indirect estimation of maternal mortality: the sisterhood method." *Stud Fam Plan.* 20(3): 125-135, 1989.

[106] Patton MQ. *Qualitative Evaluation and Research Methods*. Newbury Park, CA: Sage Publications; 1990:169-283.

that were sampled. There were a total of 27 facilities assessed, including one regional hospital and one district hospital. In each facility, one staff member who knew the most about maternal health care services and the health care facility was the subject of the interview.

SURVEY QUESTIONNAIRE

The PHR maternal mortality survey used the Indirect Sisterhood Methodology[107] because of the lack of national vital statistics, a high fertility rate, and low migration levels in Herat Province.[108] The Indirect Sisterhood Method consisted of four questions: (1) How many sisters (born to the same mother) have you had who were ever-married (including those who are now dead)?; (2) How many of these ever-married sisters are alive now?; (3) How many of these ever-married sisters are dead?; (4) How many of these dead sisters died while pregnant, or during childbirth, or during the six weeks after the end of the pregnancy? The survey also contained 38 questions of respondent demographics, demographics of marriage, family and reproductive health, pregnancy-related health care access, and beliefs about marriage, family, and reproductive health. Health care access and decisions of timing and spacing of children were assessed using Likert-type scales (e.g., all of time, some of time, never). Opinions were assessed by a response of "agree" or "disagree" with statements concerning marriage, family and women's roles in society.

The questionnaire was written in English, translated into *Dari*, the *lingua franca* of Afghanistan, and back translated into English. Members of the PHR and the Afghan researcher team checked these translations for accuracy. Four regional, human rights, and medical experts reviewed the questionnaire for content validity. Researchers administered the survey in *Dari* in which they all were fluent. The survey was pilot tested among 20 women in Herat City and suggestions regarding clarity and cultural appropriateness were incorporated.

The health facility survey was written in English and administered only by the PHR field supervisor with the assistance of a translator. This survey had 30 questions to assess facility characteristics, supply of medicines and equipment, and facility and staff treatment capabilities for essential and comprehensive obstetric-related problems.

INTERVIEWERS

The survey interviews were conducted by 48 Afghan women who were trained and supervised by the PHR field supervisor and four trained Afghan research team leaders. Researcher training consisted of three days of classroom teaching and role-play followed by several days of field observation and continuous supervision.

All interviews were conducted over a ten-day period in March 2002. Interviews with participants lasted approximately 20-30 minutes and were conducted in a private setting with no one present except the interviewer and the interviewee. All questionnaires were reviewed for completeness and for correctness of recording after the interview by the researchers, the Afghan research team leaders and the PHR field supervisor at the end of each day.

TESTIMONIES

In order to gain insight into individual experiences of health care providers and family members, PHR also conducted more detailed qualitative interviews (case testimonies). Willing respondents were given a chance to give a detailed history of the issues they felt were important with regard to maternal mortality to a researcher and translator. Each of these qualitative interviews was recorded in a log and, where possible, the exact words of the respondents were used to give expression to their individual experiences.

HUMAN SUBJECTS PROTECTIONS

This research was reviewed and approved by an independent group of individuals with expertise in clinical medicine, public health, bioethics, and international human rights research. United Nations (UN) officials and international and national non-governmental organizations (NGOs) were informed of the study and permission was obtained from local community leaders in each area surveyed. There were no limitations

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[107] Indirect Sisterhood Method is a measurement technique that involves obtaining information by interviewing female respondents about the survival of all of their adult married sisters.

[108] World Health Organization. *The sisterhood method for estimating maternal mortality.* Available at: www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002.

on movement or to surveying. The research was conducted in accord with the Declaration of Helsinki, as revised in 2000.[109] All data were kept anonymous. Verbal informed consent was obtained from all participants and parental consent was obtained for all participants under the age of eighteen unless they were emancipated minors (married and living out of a parental household). Participants did not receive any material compensation.

STATISTICAL ANALYSIS

The data were analyzed using STATA statistical software.[110] To control for clustering and design effect, the sample was weighted by the number of samples per location. All errors are nominal errors (not random) due to the inability to randomly sample every district. For 2x2 cross tabulations containing cells with expected frequencies of less than five, statistical significance was determined using Fisher's exact test; Yates' corrected chi square was used for all others. For cross tabulations with greater than two rows, statistical significance was determined using Pearson chi square. Analysis of variance (ANOVA) was used for statistical comparison of means and the Kruskal-Wallis test was used for comparison of medians. For all statistical determinations, significance levels were established at p 0.05. Confidence intervals calculated for the Sisterhood Method estimation of the maternal mortality ratio were based on methodology developed by Hanley et al., 1996.[111]

DEFINITIONS

A household was defined as "those people sleeping and eating under the same roof." Maternal mortality included deaths that occurred while pregnant, during childbirth, or during the six weeks after the end of the pregnancy.[112] Reproductive age women were defined as women between the ages of 15-49. A basic essential obstetric care (EOC) facility is one that can provide all of the following: parenteral antibiotics, oxytocic drugs, anticonvulsants for pre-eclampsia, manual removal of placenta, removal of retained products via manual vacuum aspiration, and available assisted vaginal delivery.[113] A comprehensive EOC facility must be able to administer all of the basic services and perform surgery (i.e., caesarian section) and blood transfusions.[114]

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[109] World Medical Association. *Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects [5th rev]*. Edinburgh, Scotland: World Medical Association; 2000.

[110] STATA 5.0 (Intercooled) for Windows. STATA Corporation, College Station TX, 1997.

[111] Hanley JA, Hagen CA, Shiferaw T. "Confidence intervals and sample size calculations for the sisterhood method of estimating maternal mortality." *Stud Fam Plan.* 27(4):220-227, 1996.

[112] Fortney JA. "Implications of the ICD-10 definitions related to death in pregnancy, childbirth or the puerperium". *World Health Statistics Quarterly.* 43(4):246-48, 1990.

[113] United Nations Children's Fund. *Guidelines for Monitoring the Availability and Use of Obstetric Services* 1997. www.unicef.org. Accessed June 8, 2002.

[114] Id. Supra 113.

V. RESULTS

CHARACTERISTICS OF RESPONDENTS

Of the 5,014 households sampled, 4,886 females between the ages of fifteen and 49 years of age participated in the survey (97.4% response rate). There were 105 women who were not eligible due to being younger than 15 years (n=6) or older than 49 years (n=99); eighteen were not available after two attempts at the time of sampling, and five refused to participate because of lack of time (1/5) or refused for unknown reasons (4/5).

Table 1: Demographic Characteristics among Respondents

Respondent Characteristics	Respondents* N=4886
Age (years), mean ± SE (range)	31±0.23 (15-49)
Marital status, n = 4810	
Married	4233 (88)
Widowed	488 (10)
Never married	58 (1)
Divorced/separated	31 (0.6)
District	
Adraskan	1069 (22)
Pashtun Zarghon	686 (14)
Zendajan	650 (13)
Enjil	648 (13)
Karokh	628 (13)
Herat	625 (13)
Guzarah	580 (12)
Area	
Rural	3681 (75)
Urban	1205 (25)
Years lived in area, n=4632, mean ± SE (range)	17±1.1 (.25-50)
Years of formal education, n = 4810, mean ± SE (range)	0.35±0.11 (0-16)
Three biggest problems (ranked)	
No. 1: Food, shelter, clean water, n=4824	3577 (74)
No. 2: Access to medical care, clean water, financial means for basic needs, n=4794	2332 (49)
No. 3: Financial means for basic needs, unemployed, access to medical care, n=4689	2941 (63)

**Values are number (percent) unless stated otherwise*

Demographics of the respondents are presented in Table 1. The mean age (±SE) was 31 (±0.23) years (range 15-49). Half of the women surveyed were between 24 and 40 years of age. Women had 0.35 (±0.11) years of formal education (range 0-16 years) and 88% (4233/4810) were married. Women had lived in the areas surveyed on average for 17 (±1.1) years (range 0.25-50). Fifty percent of respondents had lived in the areas between seven and 25 years. Women were asked to rank the three most significant problems they face in order of importance. Lack of food (41%), adequate shelter (18%), and clean water (14%), were most often cited as the first most significant problem (n=4824). The second most significant problems (n=4794) reported included access to medical care (19%), lack of clean water (16%), and lack of financial means for basic needs (14%) followed by food (12%), shelter (12%), and sanitation (10%). The third most significant problems (n=4689) reported included lack of financial means for basic needs (24%), unemployment (22%), access to medical care (17%), and food (9%).

INDIRECT MATERNAL MORTALITY ESTIMATE

The 4,886 household respondents reported on 14,085 ever-married sisters (Table 2). Overall, there was a total of 276 pregnancy or childbirth-related deaths among the sisters. Of all deaths reported among the participants' sisters, 15% (276/1877) were attributed to maternal causes. The maternal mortality ratio point estimate was 593 deaths/100,000 live births [95% CI, 557 to 630].

PHR's individual interviews with study participants and health care providers help to elucidate the conditions that led to maternal deaths in the region. Dr. Mina, an obstetrician from Enjil Center Clinic, a 20-minute drive from Herat City, stated the following about maternal mortality:

Table 2: Indirect Maternal Mortality Estimates, Herat Province, Afghanistan*

Age Group	No. of Respondents	No. of Ever-Married Sisters	No. of Maternal Deaths	Adjustment Factor†	No. of Units of Exposure	Lifetime Risk of Maternal Death	Proportion of Dead Sisters Dying of Maternal Causes
	(a)	(b)	(c)	(d)	(e=bxd)	(f=c/e)	
15-19	415	1185	23	.107	127	.181	10%
20-24	843	2523	33	.206	520	.063	7%
25-29	822	2537	47	.343	870	.054	13%
30-34	919	2707	52	.503	1362	.038	17%
35-39	633	1836	33	.664	1219	.027	18%
40-44	750	2079	54	.802	1667	.032	26%
45-49	504	1218	34	.900	1096	.031	24%
Total	4886	14,085	276	NA	6861	.040	**16%**

MMR = 593 deaths/100,000 live births (95% confidence interval, 557-630)

*Based on sisterhood survivorship data, annually for the past 10-12 years. NA indicates not applicable
† The adjustment factor is a standardized factor based on age, for details see Graham et al.
Maternal mortality ratio (MMR) = [1-(1- Lifetime Risk)$^{1/TFR}$] x [100,000] = [1-(1-.0402274)$^{1/6.9}$] x [100,000]
The total fertility rate (TFR) for 10-14 years before the survey was estimated as 6.9[115]

I have been working as a doctor for the last 7 years. After 18 years of education, you would think that I could do a better job. I do not even own a stethoscope and cannot afford one. The problems for women are so large. I have delivered more babies than I can count and buried more women than I want to remember. Women have no idea about their health and no one teaches them. They come for help far too late and by then there is nothing that can be done. They are lucky at that time if all they lose is the baby.

An untrained traditional birth attendant described her experiences of losing mothers during deliveries as follows:

I cannot remember or count how many babies I have delivered. But I remember every woman I buried in the last 25 years. I try to do the best I can but even if I do not do the best job, it is better to have me by your side than to give birth alone.

In contrast, a trained traditional birth attendant described the success she has had since being trained to care for mothers.

It has been several Ramazans (Ramadans) since I buried a mother or baby. I heard of a woman dying in a village not far from here because the TBA was a new one and did not have experience.

MARRIAGE, FAMILY, AND REPRODUCTIVE HEALTH CHARACTERISTICS

The mean age (±SE) of marriage among respondents was 15 (0.3) years (range 5-39); however, the mean most appropriate age (±SE) of marriage was reported as 18 (0.2) years (range 5-30, p 0.001 for average age of marriage vs desired age of marriage; see Table 3). Eighty-five percent (4008/4721) of women stated they wanted to marry at the time of their marriage and 20% (957/4729) reported being pressured by their family to marry (see Table 3).

Women reported 5.0±0.08 pregnancies (range 0-20) and 4.6±0.2 live births (range (0-18). When asked the most appropriate age to have children, women reported 19±0.3 years (range 10-31) and 5.6±0.3 children (range 0-24) as the most appropriate number of children. Only 11% (519/4637) of women reported

[115] UNICEF. *Statistical data by country- Afghanistan*. Updated February 4, 2002. www.unicef.org/statis/Country_1. Accessed February 8, 2002.

Table 3: Marriage, Family and Reproductive Health Characteristics Among Respondents

Belief	Respondents*
Age at marriage, n=4687, mean ± SE (range)	15±0.3 (5-39)
Most appropriate age to be married, n=4602 Mean ± SE (range)	18±0.2 (5-30)
Wanted to marry at the time of marriage, n=4721	4008 (85)
Pressured by family to marry, n=4729	957 (20)
Most appropriate age to have children, n=4824 Mean ± SE (range)	19±0.3 (10-31)
Most appropriate number of children a woman should have, n=4835, Mean ± SE (range)	5.6±0.3 (0-24)
Number of pregnancies, n=4850, mean ± SE (range)	5.0±.08 (0-20)
Number of live births, n=4837, mean ± SE (range)	4.6±0.2 (0-18)
Received prenatal care, n=4637	519 (11)
Reasons for not receiving prenatal care, n=3946	
Financial	2939 (74)
No health care facility available	520 (13)
Restrictions on movement	279 (7)
Not necessary	131 (3)
Not permitted by spouse or male relative	54 (1)
Work obligations	23 (0.6)
Birth attended by, n=4624	
Trained health professional †	40 (0.9)
Traditional birth attendant	4475 (97)
Unattended, delivered alone	109 (2)
Permission to see a trained health professional must be obtained from a husband or male relative, n=4703	
All of the time	4117 (87)
Some of the time	360 (8)
Never	226 (5)
Type of birth control used, n=4881	
None	3884 (87)
Oral contraceptives	465 (10)
Depoprovera	108 (2)
Barrier contraception	18 (0.4)
Natural/homeopathic methods	3 (0.06)
Bilateral tubal ligation	3 (0.06)
Type of birth control desired, n=4294	
None	3273 (76)
Oral contraceptives	738 (17)
Depoprovera	242 (6)
Barrier contraception	25 (0.6)
Bilateral tubal ligation	6 (0.14)
Natural/homeopathic methods	2 (0.05)
Decides number and spacing of children, n=4306	
Me only	417 (10)
Mostly me	164 (4)
Equally	3189 (74)
Mostly husband	202 (5)
Husband only	334 (8)

* Values are number (percent)

† Doctor, nurse, midwife or trained traditional birth attendant

receiving prenatal care. The reasons reported for lack of prenatal care (n=3946) included financial (2939, 74%), no health care facility available (520, 13%), restrictions on movement (279, 7%), not necessary (131, 3%), not permitted by spouse or male relative (54, 1%), or work obligations (23, 0.6%).

BARRIERS TO ACCESS OF HEALTH CARE

Financial restraints on prenatal care were an issue even in districts that had maternal child health clinics. Information provided by a 37-year-old Mullah living in Guzarah District, Urdubak village, exemplifies the problem. His village is less than a 1-hour walk from a District hospital that has the capability of caring for complicated deliveries.

> *My wife was 21 years old and I was 28 years. She was pregnant with our fourth child. I am a Mullah so I did not have the money to take her to the clinic or to a doctor or midwife.*
>
> *My other children were just babies when she died. For two years they cried each night. I did not know how to comfort them; they needed a mother and I was not good at being both mother and father. After four years, and when the children's sadness had gotten a little better, I married for a second time. I now have five other children with my second wife.*

Eighty-seven percent of respondents (n=4703) reported having to obtain permission to see a trained health professional from a husband or male relative all of the time, and 8% some of the time. Five percent (226/4703) of women stated that they never had to ask for permission to see a trained health professional.

The need for women to obtain permission to see trained health professionals was described by a traditional birth attendant in Guzara district as follows:

> *Sometimes I spend more time convincing the family that the woman must go to the hospital or the doctor than taking care of the woman. Tradition is strong here but not as strong as in some of the other villages. I check to see that pregnant women are eating well and the husbands are treating them nicely. This is the hardest part, to convince the husbands that this is the best way to care for their wives. I think they need training as well.*

Dr. Chadija, a 36 year-old female obstetrician in Herat Maternity Hospital further described the need to ask permission to see a health care professional and the tradition behind this.

> *Traditionally, women do not like to come to the hospital. They want to deliver at home. Also, families do not want women to come to the hospital and they have to have permission from the family to come here. So, women die in the villages. If they can get here, we can usually help and not so many women die in this hospital.*

Dr. Sayed Mashooq, a male internal medicine specialist from the only clinic in Adraskan district, a two-hour drive (80 km) from Herat City on a paved road explained:

> *I have been here two years since I graduated from the Herat Medical Faculty. This clinic serves the entire district, which includes 280 villages. I am the only doctor here. I do not see women for any type of obstetric care. They will not come to me and the husbands will not allow it since I am male. I think the women go to NGO clinics in other districts or into Herat City, but I am not sure. The TBAs deliver babies in the villages, not me.*

Dr. Mina, an obstetrician in Enjil Center Clinic, summed up the barriers to good health care for pregnant women:

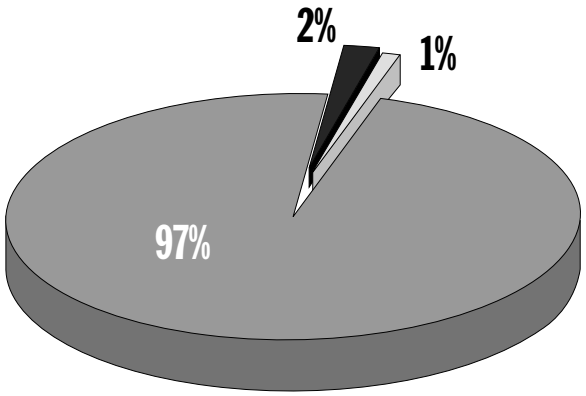
> *There is not enough prenatal and postnatal care for women. They are malnourished, cannot even get Tetanus vaccination and do not have family planning. Even if we suggest family planning, they must discuss this with their husbands and must have money to buy the medicines, which they do not.*
>
> *Hospitals are culturally unacceptable; a woman has to ask permission to be evaluated by*

a doctor. If we could get village health workers and TBAs trained in the villages, I think women would do better. But the VHW and TBAs need to also train the male family members, not just the women, about women's health.

Tamar, a midwife in Zendajan Center Clinic, 55 km from Herat or a three-hour drive on a dirt road in a four-wheel drive vehicle, also summed up the issues that rural women face:

I deliver babies here but most are delivered in the villages, by untrained TBAs. If there is a very sick woman or a complicated pregnancy, we refer them to Herat but I do not know how many can go since it so far from here. We have health education at the clinic including nutrition since most of the women I see are malnourished. But there are other problems. There is no sanitation in the villages, we do not have enough vaccines for women and it is really not possible to refer women to Herat because of the distance. The biggest problem is that women do not know when they should come for help and neither do the husbands, so women die at home or on a donkey on the way to Herat.

Figure 1: Proportion of Women with Trained and Untrained Attendants* Present at Birth



* *Doctor, midwife or trained TBA*

Need for Training of Birth Attendants

Only 40/4624 (0.9%) women reported births that were attended by a trained health care worker (doctor, nurse, midwife or formally trained traditional birth attendant). Ninety-seven percent (4475/4624) reported having an untrained traditional birth attendant present at the birth (see Figure 1).

A 37 year-old Mullah[116] in Guzarah district described the following about his wife's delivery:

During the delivery she died. She was so weak and pale and looked tired. The traditional birth attendant was not trained and could not help her. After she had the baby, the cord stayed inside. It would not come out and she was bleeding and bleeding until she finally had no blood left. My baby was so small and needed his mother but she was gone. I was so sad, my brother's wife had to take care of the children. After I buried my wife, I took the baby to a woman who could feed the baby from her breast. She did not do a good job at this; maybe because he was not her child and he died and was buried next to his mother after only 7 months. It was God's will that she died so I cannot ask why, I just have to survive and go on.

A 60 year-old widower described his anguish at losing his wife and his regret for not being able to obtain appropriate care for her. Living in Zendajan District, Qalisafar Khal village, he is three-hour drive in a four-wheel drive vehicle, or a one to two-day walk or ride on a donkey from the nearest health facility.

When I was a younger man (25 years old), my wife was pregnant with twins. She was ready to have them at nine in the evening so the TBA came to help her. The first baby was born just after the TBA came but there was a problem. For the next 24 hours my wife screamed in pain and

[116] Village religious leader.

finally the second baby came out more than one day after the first was born. After the baby came out, she started bleeding and could not stop. The TBA did not know what to do so she died in a pool of blood without holding or feeding her babies. I am trying to remember if I was by her side, but the years have removed many memories. There was no doctor to help. Even if there was one, I had no money to pay a doctor or a clinic. If I had money, I was going to take her [my wife] to a clinic in the city.

We had five other children to care for so I was both mother and father for more than three years. I had to work in the days and be the mother at night. My old mother tried to help but she was too old to care for five small children. The baby twins needed to be cared for so I brought them to a village woman who had milk in her breasts. One died after three months and the other at 6 months. I think she did not take good care of them.

Only our two-year old did not understand what happened to their mother. The rest cried for one year. After the year, I decided they needed to be distracted so I sent them to the fields to care for other people's cows. With the money that they earned, I was able to marry a second wife and give my children the chance of another mother.

An untrained traditional birth attendant also described her feeling of helplessness during a delivery and the need for improving the situation of maternal mortality in Galatut village in Adraskan district. Galatut village was once a seasonal home to the nomadic Kuchi tribe. They have had to establish a year-round village due to recent drought conditions.

My mother was the Dauya in this village for many, many years. I have now been the Dauya for 25 years. She taught me everything about delivering babies and how to get babies to take milk from the breast.

We do not have soap or money to buy soap so we are not clean. Many of the women I bury die with fever maybe because there is no way to keep them clean. Others die in their own blood or because the cord is left in after the baby comes out. I could do so much better for these women if I had some training and I would welcome it, but who will train us, we are nomads, no one gives us anything and we cannot stay if there isn't any grass for the sheep and camels to eat.

See this woman, I delivered her baby 18 months ago, look how sick she is, she cannot walk and she is very hungry, thin and weak. All the women in this village are tired and cannot do heavy work. If we had to move as we have for all the world's time, we could not. None of the women could tolerate walking, we are losing our traditions.

In contrast, a trained traditional birth attendant from Urdubak village in Guzarah district described her success in responding to maternal health needs.

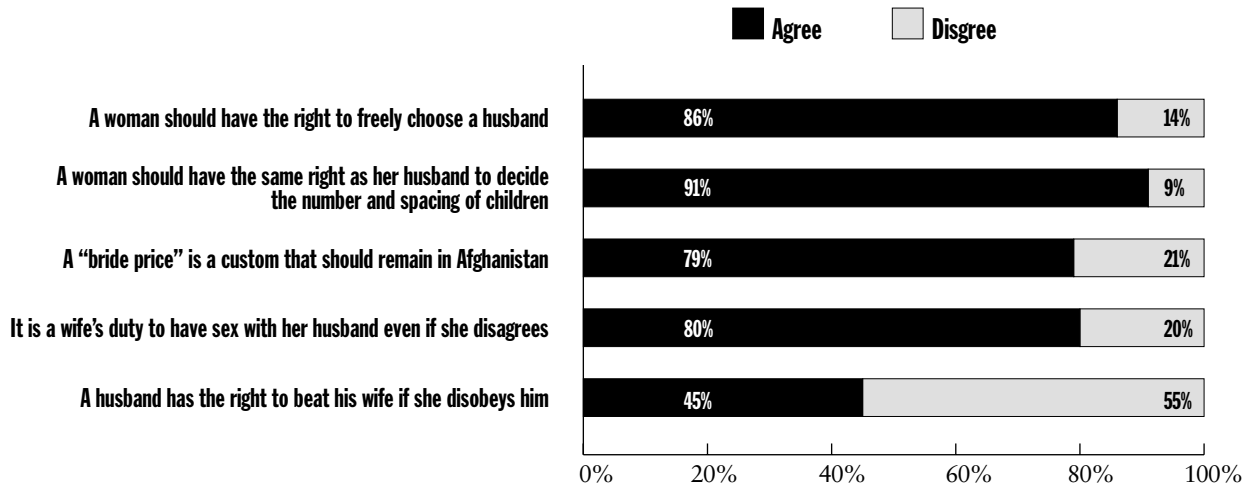
For the last 20 years I have been the Dauya, as was my mother and grandmother. It is an honor to be one and all of the women come to me with their problems and needs. Many women are pregnant but others just need help with knowing their bodies.

For 15 years, I did not know what I was doing and was only following tradition, which was unhealthy. I was lucky to receive training at the Guzara TBA training. Now I keep records, I give vaccinations and I know how to keep women from dying. I learned to massage the womb if a mother is bleeding and I also know when the woman should be cared for by a midwife or doctor. I give health training to women about how to care for themselves and the new babies. I try to give vaccinations to those who cannot get to the clinic.

Need for Access to Birth Control

In the PHR survey, the use of birth control methods was reported by 12% (597/4881) of women and included oral contraceptives (465, 10%), Depoprovera (108, 2%), barrier contraception (18, 0.4%), natural or homeopathic methods (3, 0.06%) and bilateral tubal ligation (3, 0.06%). Twenty-three percent (1013/4294) of women stated they wanted birth control including oral contraceptives (738, 17%), Depo-

Figure 2: Attitudes and Beliefs about Marriage, Family, and Women's Roles in Society



Provera (242, 6%), barrier contraception (25, 0.6%), bilateral tubal ligation (6, 0.14%) and natural or homeopathic methods (2, 0.05%).

An untrained and uneducated traditional birth attendant in a nomadic village described the situation and importance of birth control as follows:

> *The women in this village have too many children. We sometimes cut the tunnels of the sheep so they cannot keep having babies, certainly we could have this done to us so when we do not want more children. All of us weave and sell carpets which our sons or husbands sell in the market. I think they get more money for the carpets than they tell us. We know this but they think we are not smart enough to notice. We could use this money to buy pills so we do not have so many babies. Pills would be less money than having twelve children.*

Seventy-four percent (3189/4306) of women stated that the number and spacing of children was decided equally among husband and wife, 10% (417/4306) by the woman only, 8% (334/4306) by the husband only, 5% (202/4306) mostly by the husband and 4% (164/4306) mostly by the woman.

ATTITUDES OF WOMEN'S HUMAN RIGHTS AND WOMEN'S ROLES IN SOCIETY

Eighty-six percent (4065/4748) of women indicated that women should have the right freely to choose a husband and enter into marriage (Figure 2). Ninety-one percent (4196/4601) of women also indicated that a woman should have the same right as her husband to decide the number and spacing of children. Seventy-nine percent (3786/4769) of women indicated that the "bride price"[117] custom is one that should remain in Afghanistan. Eighty percent (3778/4769) of women expressed the view that it is a wife's duty/obligation to have sex with her husband even if she does not want to and 45% (2168/4781) responded that a man has the right to beat his wife if she disobeys.

ASSESSMENT OF HEALTH FACILITIES AND ESSENTIAL OBSTETRIC CARE

Table 5 shows the results of the PHR health facility survey in seven districts. At the time of the survey only 63% of the facilities listed by WHO[118] as functional

[117] Custom of grooms family paying the brides family in either cash or goods.

[118] World Health Organization. *Health Resources by District and Village in Afghanistan.* Herat Sub-Office, Afghanistan. (Unpublished) 2002.

were found to be operating. There were two comprehensive Essential Obstetric Care (EOC) facilities and four basic EOC facilities. All of these facilities, however, were within a 10-30 minute drive from the center of Herat City. They were not accessible from any of the rural districts except by more than a half a day's walk. Of the 35 physicians recorded in the seven districts, nineteen were female, however, fifteen of these were working at the Provincial hospital in Herat City. In a traditional society where it is unacceptable for women to see men for obstetric issues, this leaves very few female providers in rural areas. Medical records, available in most centers, generally consisted of a diagnosis and drug prescription with no details or physical exam. Prenatal care was offered at less than half of the facilities. The maternity hospital in Herat City, considered a comprehensive EOC, could handle complicated deliveries, but did not have the supplies necessary to handle complications of pregnancy such as eclampsia or pre-eclampsia and therefore did not meet WHO guidelines for comprehensive EOCs. Surgery was possible in Herat City and Guzara district hospital, which are both in the urban center and are ten minutes' drive apart. Only the five Guzara EOC's had an adequate supply of essential drugs. These facilities were supplied by an international NGO and did not rely on the Health Ministry to supply medications and equipment. All refrigeration systems were gas operated and most facilities listing electricity relied on generators as provincial/district power supply was only available for two hours each day.

Dr. Saida, Head of the Herat Maternity Hospital and a female obstetrician trained at Kabul Medical Faculty, described the problems she faces as a doctor in a regional hospital that is supposed to care for women from five different provinces.

> *We have fifteen doctors on staff, and eighteen midwives, all women. We see mostly the women from the city and some from the rural areas that have problems. We have also been seeing many of the IDP [internally displaced persons] women who are having problems with delivery in the camps around Herat. You can see our hospital needs help, supplies, equipment, electricity and all the things that normal hospitals need. We have been promised so many things and rarely do any of the promises come through. I must go across the campus to the main hospital if I want instruments sterilized. I ask my staff to roll up their sleeves to give blood to patients when the mother needs it since we have no other way of getting blood. My staff is now anemic and I cannot transfuse for a few weeks. I was trained in a time when things were so much better, now I practice "field medicine." My surgery this morning was a hysterectomy but the anesthesiologist could only use a bag to help the patient breathe. Patients do not know when to come for help and they have no basic health education. Even if they get here, only the poorest of the poorest can have the drugs in our pharmacy. The rest, I send a family member to the bazaar to buy the medicines we need to treat them including intravenous fluids, antibiotics, gloves and needles. This is a regional hospital meaning that we are supposed to care for four other provinces as well. I cannot remember the last time anyone from another province has been here.*

Dr. Chadija, 36 year-old female obstetrician on staff in the Herat Maternity Hospital stated the following:

> *I have been working here for thirteen years and have eighteen years of patient experience. I have delivered more babies than I can remember or count. Women in Afghanistan do not know when to come to a doctor when there are signs that clearly say they are going to be in trouble. Anyhow, even if they did, there is no transportation to get here except by walking or on a donkey. In most cases, the women are already too sick to walk and certainly could not withstand a donkey ride for hours in the hot sun or freezing cold. It is terrible that once they get here, we have to send the relative to the bazaar to buy the drugs they need so we can treat them. More time goes by waiting for the relative to find the medicine*

[119] Maternal Child Health Center

Table 5: Essential Obstetric Care (EOC) Capabilities of All Health Care Facilities in 7 Surveyed Districts in Herat Province, Afghanistan

Basic Services	Herat*	Guzara*	Enjil*	Pashtun Zarghon*	Zendajan*	Karukh*	Adraskan*
Population (2001) †	227,027	123,541	222,433	86,065	45,112	51,998	37,038
Facilities listed†/facilities functional	12/6	5/5	4/1	2/1	2/2	1/1	1/1
No. Basic EOC/No. Comprehensive EOC	0/0	4/1	0/0	0/0	0/0	0/0	0/0
No. of health professionals							
Doctors	15	13	2	1	2	1	1
Nurses	0	50	0	0	6	3	0
Midwives	18	5	1	0	1	0	0
Traditional birth attendants	0	158	25	0	40	30	0
Medical records available	Yes	Yes	Yes	No	Yes	No	No
Offers prenatal care	No	Yes	Yes	No	Yes	No	No
Can administer:							
Parenteral Antibiotics	Yes	Yes‡	No	No	No	No	No
Parenteral Oxytocic	No	Yes‡	No	No	Yes	No	No
Parenteral Anticonvulsants	No	Yes‡	No	No	Yes	No	No
Removal of retained products	Yes	Yes‡	No	No	Yes	No	No
Assisted vaginal delivery	Yes	Yes‡	Yes	No	Yes	No	No
Perform surgery	Yes	Yes‡	No	No	No	No	No
Perform blood transfusion	Yes	Yes‡	No	No	No	No	No
% of Month with adequate supply:							
Oral antibiotics	25	100	100	20	80	.08	0
Parenteral antibiotics	25	100	0	0	0	0	0
Iron tablets	25	100	100	0	100	0	25
Vitamin A	0	100	100	0	0	0	0
Tetanus	0	100	100	0	0	0	0
Oxytotic agents	0	100	0	0	0	0	0
Intravenous fluid	50	100	100	0	50	0	0
Oral rehydration salts	0	100	100	50	100	100	100
Electricity §	.08	100	100	0	25	0	0
Refrigeration	0	100	100	0	100	100	0
Basic medical equipment ††	100	100	100	0	100	100	0
Sterile gloves	100	100	100	0	100	0	0
Clean syringes	25	100	100	0	100	0	0
Sterilization of equipment							
Heated (boiling only)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chemical	No	Yes	No	No	No	No	Yes

* Data in all columns refer to all functioning health facilities in the relevant district. Data in Herat City column refer to Herat Maternity Hospital only. Prenatal care was offered at all maternal child health clinics in Herat City, which were run by various non-governmental organizations. Of the five remaining functional health facilities in Herat City, none had delivery capabilities or any of the minimal requirements for a basic EOC. Therefore, in Herat City, there were no facilities meeting either basic or comprehensive EOC guidelines.

† WHO Health Resources; Sub-office Herat Province, (unpublished)[14]

‡ Services are only available in the Center Clinic, which is classified as a district hospital.

§ The comprehensive EOC in Herat City did not have a generator and therefore relied on district power which was available less than 1% of the month whereas, Zendajan district had power that was more consistent than Herat City. The other EOCs in the table listing 100% power supply relied on generators. The remaining had neither district power nor generators.

†† Includes stethoscope, thermometer, and blood pressure cuff

and bring it back to us. Our pharmacy is unable to mix serums and syrups, supplies are too low and are given to the poor only. We do the best we can, but we also need training and updating. If you gave me new equipment, I am not sure I would know how to use it.

You can see that our hospital is not well equipped but when hospitals are improved, then things will advance. NGOs should help make the hospitals better since the government does not have the budget. It should be the government's responsibility, but they do not have the capacity to do this. The biggest problem for women is they do not know when to come in so they wait too long...sometimes until they die. Doctors and midwives, TBAs in the villages would be the best way to keep women from dying.

Dr. Omar Samim, a 40 year-old male Director of the Ministry of Health (Herat Province) in Ansari Regional Hospital and a specialist in Internal Medicine, provided the following information:

This is a regional hospital with many different departments. Women doctors and nurses work in these different areas and have for some time. There are about 200 women working as maternity doctors and nurses and pharmacists. We have an institute where many women are being trained for pharmacy and nursing. The Medical faculty also includes women. There are 400 total students and 100 of them are women.

Maternal mortality is so high in Afghanistan because there are no MCH[119] centers. Only two districts in Herat City have MCH centers. And worse, other provinces are without any health care facilities for women. We do not have adequate clinical services to effectively prevent maternal mortality. We need MCH clinic centers for each district, more women doctors, midwives (80 midwives in the city are unemployed) and medicines. Maternal mortality issues have to be addressed by NGOs. No one else has enough funding to make a difference. We do not have enough money to pay our staff. I do not see women as patients so you should talk to our women doctors. It is clear that women must teach women about their health and this should be done in the villages where the women are living.

We have so many problems. Ansari hospital is one hospital in the entire province and for many other province (Baghdis, Farah, Herat, Ghor). We are supposed to care for three million people with 400 beds (only 70 beds for children). We cannot possibly serve this many people with the way the hospital is now and no one other than a patient from Herat or close districts can use this hospital... who can get here from another province?

Our big problem is that there is no centralized control of medicines. Medicines come from different countries and I am sure that the medicines made for Afghanistan in other countries are less effective and made with less control. Even so, people cannot afford medicines and we cannot afford to supply them in the hospital. I have put in a request to the NGOs and government to control this.

In contrast, Guzara District Hospital is financed, staffed and supplied by Danish Committee for Afghanistan (DAC). This hospital was the only one that met minimum standards as a comprehensive EOC. The Hospital Director, an Afghan specialist in internal medicine described the program he runs as follows:

We have thirteen doctors (three female and nine male). Since 1988, we have trained an extensive network of TBAs (158) and 80 TBA trainers that work with the TBAs on a regular basis. The TBAs and village health workers are required to have refresher courses on a regular basis. We have five midwives and a separate female ward for maternity cases as well as MCH evaluations. TBAs are given 2000 Afghanis for referring appropriate cases of women with obstetric complications. We do not have a problem with medications and have recently computerized our records to keep up with the statistics of our program. We have a very low maternal mortality rate because of our programs.

In the rural areas and remote villages, the conditions are worse, as indicated by a midwife in Zendajan Center Clinic. This clinic is 55 km from Herat City or a three-hour drive on a dirt road in a four-wheel drive vehicle.

Our clinic can only cover 72 of the 105 villages in Zendajan district. WHO trained nine TBAs and 84 village health workers for the far villages but we do not know who they are or how they are doing. As far as I know, they have not been refreshed in their knowledge. Our clinic was supported by (Medécins sans Frontières)MSF but that contract has finished. We used to get 95% of our medicines from MSF and 5% from Herat Hospital. Now we are left with 5% and most months we have nothing. Anyone who comes here must go to the bazaar to buy medicines.

Dr. Sayed Mashooq from Adraskan Center Clinic, a Basic Health Center, 80km from Herat City or a two-hour drive on a paved road, related the following:

I have been here two years since I graduated from the Herat Medical Faculty. This clinic serves the entire district, which includes 280 villages. I am the only doctor here. There is no female doctor or midwife. As you can see, I am limited by what I have. This clinic gets medicines one week each month. During that week I see many patients and then after that no one comes. I do not even have a stethoscope so I am a pharmacist at best. I get enough iron (~1000 tablets each month) to give each pregnant woman in the villages one tablet for the month. Since all the women are anemic, this is very inadequate.

The government pays my salary. I get 1.2 million Afghanis ($42/month) which is not enough salary. I cannot even buy medicines in the bazaar for my family. I drink tea and talk to the guards for three weeks until the next shipment of medicines comes.

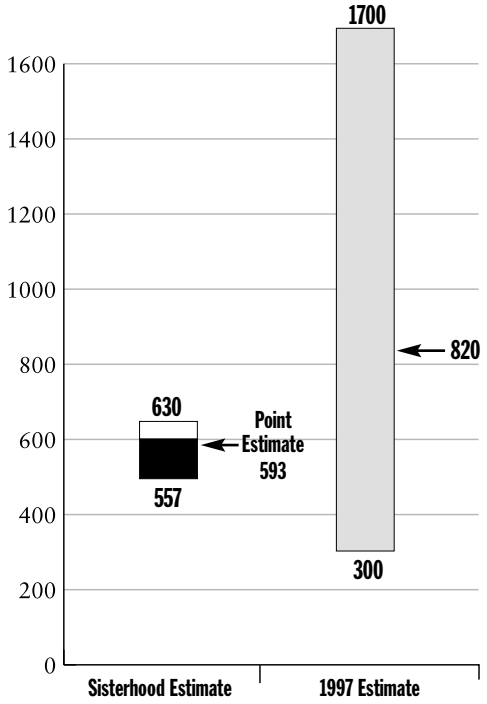
The only doctor in Karoch Center Clinic, a Basic Health Center that took two hours to reach in a four-wheel drive truck, was also interviewed. He described the inadequacy of resources and supplies as follows:

I am the only doctor in this clinic. There are 30 TBAs in the villages but none of them refer here since I cannot see women with obstetric problems. I have three male nurses that work with me so most of the patients are male. Actually, I do not see many patients. We get medicines every three months from Herat hospital but this is only enough to treat patients for ten days so I see patients during those ten days but no time after that. For the last six months, an NGO has been planning to staff and supply the clinic but this has not happened yet.

VI. INTERPRETATION OF FINDINGS

The findings of this study indicate that in seven of 13 districts in Herat Province province, maternal mortality over the last ten to twelve years is between 557 and 630 maternal deaths per 100,000 live births (point estimate = 593/100,000), despite having a provincial and district hospital capable of handling complicated deliveries. There were 276 maternal deaths among the 14, 085 sisters; 97% of which occurred in primarily rural areas. This point estimate which is more accurate and precise than the 1997 modeled estimate, falls within the confidence intervals of the 1997 modeled point estimate of 820 (95% CI, 300 to 1700); therefore there is no statistically significant difference between the 1997 modeled maternal mortality ratio and PHR's data driven ratio (Figure 3).[120]

Figure 3: Maternal Mortality Ratios: 95% Confidence Intervals and Point Estimates



Of 176 countries listed by the World Health Organization (WHO), Afghanistan has the highest maternal mortality ratio in the world outside Africa.[121] Eighteen countries in Africa have a maternal mortality ratio that exceeds the upper limit of our confidence interval for Herat Province.[122] This does not exclude the possibility that some regions within a particular non-African country may not exceed that of Herat Province. Data are not readily available for such comparisons. The maternal mortality ratio for Herat Province also exceeds that of all six countries bordering Afghanistan: Pakistan (200/100,000), Iran (60/100,000), Turkmenistan (65/100,000), China (60/100,000) and Tajikistan (120/100,000). In contrast, the United States has an estimated ratio of 12/100,000.

Increasingly, health professionals have recognized that conditions for individual and community health often depend on the protection and promotion of human rights.[123] The findings of this study identify a number of human rights factors that contribute to pre-

[120] Hanley JA, Hagen CA, Shiferaw T. "Confidence intervals and sample size calculations for the sisterhood method of estimating maternal mortality." *Stud Fam Plan 27.* (4):220-227, 1996; World Health Organization. *The sisterhood method for estimating maternal mortality.* Available at: www.who.int/reproductive-health/publications/ RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002.

[121] NOTE: This does not exclude the possibility that some regions within a particular non-African country may not exceed that of Herat. However, data is not readily available for such comparisons.

[122] World Health Organization. *The sisterhood method for estimating maternal mortality.* Available at: www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002.

[123] Mann J, Gostin L, Gruskin S, Brennan T, Lazzarini Z, Fineberg HV. "Health and Human Rights." *Health and Human Rights.* 1(1):6-23, 1994; Iacopino V. "Human Rights: Health Concern for the Twenty-first Century." In: Majumdar SK, Rosenfield LM, Nash DB, Audet AM (editors). *Medicine and Health Care into the Twenty-first Century.* Pennsylvania Academy of Science, PA 376-92, 1995; Benatar SR. "Global Disparities in Health and Human Rights: A Critical Commentary." *Am J Pub Health.* 88: 295-300, 1998; Yamin AE. "Transformative combinations: women's health and human rights." *JAMWA.* 1997. 52(4):169-173.

ventable maternal deaths in Herat Province. These include access to and quality of health services, adequate food, shelter, and clean water, and denial of individual freedoms such as freely entering into marriage, access to birth control methods and possibly control over the number and spacing of one's children.[124]

ACCESS TO AND QUALITY OF HEALTH SERVICES

According to WHO guidelines,[125] there should be more than four basic EOC and one comprehensive EOC facilities in the 7 of 13 districts surveyed in Herat Province. In the case of Herat hospital, considered a comprehensive EOC facility for four provinces (Herat, Baghdis, Farah, Faryab), this facility can only perform blood transfusions that are direct transfusions from staff to patient. Major surgery is performed without sterile procedure, and instrument sterilization consists of only boiling. Furthermore, this major maternity hospital has inadequate, outdated equipment and inadequate supplies of essential medicines and materials for surgical procedures. Consequently, the facility does not meet WHO guidelines for comprehensive or basic EOCs and, therefore, its ability to care for mothers and newborns is severely compromised. Of the seven districts surveyed in Herat Province, only one districts had EOCs that met guideline standards and it was in an urban area. Minimal acceptable levels of care also require that 15% of all births in the population take place in a comprehensive EOC and that 100% of women with obstetric complications are treated in EOC facilities.[126] This level of care exceeds the current capacity of Herat's maternity hospital. Respondents in PHS'r survey reported that 97% of births were attended by untrained TBAs and primarily occurred at home.

In this study, less than 1% of participants reported having a trained health care professional and 97% indicated the presence of an untrained traditional birth attendant at their deliveries. Although few studies support the training of traditional birth attendants (TBAs) alone as a way of decreasing maternal mortality,[127] this may represent an important means of preventing maternal deaths in Afghanistan in the short term. TBA training programs appear to warrant urgent consideration. This is due to the lack of health care facilities in Herat Province, prevailing cultural norms that generally preclude women from being examined by male physicians, and the time it will take to establish and staff facilities with qualified midwives, female physicians and nurses.

RIGHTS TO FOOD, SHELTER, CLEAN WATER, SANITATION AND EDUCATION

The rights to food and shelter are enshrined in international legal instruments including the Convention on the Rights of the Child[128] and the International Covenant on Economic Social and Cultural rights[129] to which Afghanistan is a party. In this study, 74% of women identified food, lack of shelter or clean water as their primary problem. All of these factors contribute to maternal mortality. The right to education is also set out in these instruments.[130] This study and previous studies reflect the lack of education of women in Afghanistan.[131] In this study the average number of years of formal education was 0.35 years. This lack of education is in contravention of women's rights and denies women alternatives to early marriage and childbearing. The

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[124] Although the majority of women stated that they had equal or primary control over number and spacing of children, more than half reported that their husbands had the right to beat them and that it was a wife's duty to have sex with her husband even if she did not want to. These stated beliefs appear to be in conflict with their assertions regarding their stated role in controlling the number and spacing of their children

[125] United Nations Children's Fund. *Guidelines for Monitoring the Availability and Use of Obstetric Services*. 1997. www.unicef.org. Accessed June 8, 2002.

[126] Id

[127] DeBrouwere V, Tonglet R, Van Lerberghe W. "Strategies for reducing maternal mortality in developing countries: what we can learn from the history of the industrialized West." *Trop Med & Int Health*. 3(10):771-782, 1998, Robinson J, Wharrad H. "The relationship between attendance at birth and maternal mortality ratios: an exploration of United Nations' data sets including the ratios of physicians and nurses to population, GNP per capita and female literacy." *J Adv Nurs*. 34(4): 445-455, 2001,Walraven G, Weeks A. "The role of (traditional) birth attendants with midwifery skills in the reduction of maternal mortality." *Trop Med & Int Health*. 4(8): 527-529, 1999,Ronsmans C, Vanneste AM, Chakraborty J, van Ginneken J. "Decline in maternal mortality in Matlab, Bangladesh: a cautionary tale." *Lancet*. 350(9094): 1810-1814, 1997,Lalonde AB. "Safe motherhood: Can we make a difference?" *CMAJ: Canadian Medical Association Journal*. 158(7): 889-891, 1998 and World Health Organization. "Reduction of maternal mortality." A Joint WHO/UNFPA/UNICEF/World Bank Statement. Geneva, World Health Organization, 1999.

[128] CRC Art 24.

[129] ICESCR Art 11.

[130] ICESCR Art 13, CRC Art 28.

[131] Amowitz LL, Burkhalter H, Ely-Yamin A, Iacopino V. *Women's Health and Human Rights in Afghanistan: A Population-Based Study*. Boston, MA: Physicians for Human Rights: May, 2001.

apparent lack of education for women, especially over the last seven years, will also delay the training of adequate numbers of female midwives, nurses, and doctors. These unmet needs are likely to have a profound effect on preventable maternal deaths in the region until effective remedial interventions are in place.

INDIVIDUAL FREEDOMS

In addition to the denial of rights cited above, women in Afghanistan suffer other breaches of their rights especially in the areas of marriage and reproduction. The ICESCR explicitly states that "marriage must be entered into with the free consent of the intending spouses."[132] The right to enter into marriage freely is also provided in Article 23 of the ICCPR to which Afghanistan is a party. Women in this study reported an average desired age of marriage higher than actual age of marriage (p 0.001) and although 85% indicated they did not feel forced to marry by family, there were 42 women who reported getting married when younger than fifteen years. The majority of women stated that they agreed that women should freely choose to enter into marriage. This is similar to previous studies of Afghan women's opinions about women's human rights.[133] In Herat Province, early/forced marriage and inability to negotiate terms of sex, including the use and availability of contraception and possibly birth spacing, may contribute to maternal mortality by leading to a high number of pregnancies starting at an early age.

Restriction of movement was reported as a reason for no prenatal care by 7% of the respondents. Although 95% of women stated they needed permission of a male relative to see a health care provider, only 1% of women reported that husbands or male relatives had forbidden access to prenatal care.

The vast majority of women (88%) stated that they had equal or primary control over number and spacing of children. This may represent an important factor in mitigating maternal deaths in Afghanistan. More than half of women, however, reported that their husbands had the right to beat them and that it was a wife's duty to have sex with her husband even if she did not want to. These stated beliefs appear to be in conflict with their assertions regarding their stated role in controlling the number and spacing of their children.

LIMITATIONS

The Indirect Sisterhood Method may underestimate maternal mortality for the following reasons: 1) the pregnancy status of sisters who died may not have been known by some of the respondents; 2) abortion-related deaths may not have been revealed by sisters to protect the reputation of the family, and 3) women may have died of obstetric complications after 42 days post-partum.[134] This method provides a retrospective estimate of the maternal mortality ratio over a period of ten to twelve years and cannot be used to analyze trends in maternal mortality. PHR's sample size does not permit subgroup analysis. The exclusion of the most rural districts within Herat Province where access to and quality of services are likely to be worse than in the districts surveyed, suggests that PHR's point estimate for maternal mortality if applied to all of Herat Province is most likely underestimated. Although it is possible that respondents' precision regarding accuracy of reported event dates might be limited, religious milestones (e.g. *sabbath* and *ramazan*) were employed to minimize this. While the attitudes and experiences of respondents may well represent women living in Herat Province, they do not relate directly to the causes of maternal mortality among the sisters reported in this study. Although interviewers were careful to explain there would be no material or other gain by participating in the survey, women may have exaggerated deaths if they felt it was in their material/financial interest to do so.

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[132] ICESCR Art 10(1).

[133] Amowitz LL, Burkhalter H, Ely-Yamin A, Iacopino V. *Women's Health and Human Rights in Afghanistan: A Population-Based Study*. Boston, MA: Physicians for Human Rights: May, 2001.

4. Amowitz LL, Iacopino V. "Women's Health and Human Rights Needs." *The Lancet Perspectives.* 356 (s65), December 2000.

5. Rasekh Z, Bauer H, Manos M, Iacopino V. "Women's Health and Human Rights in Afghanistan." *JAMA.* 280(5):499-455, 1998.

[134] World Health Organization. *The sisterhood method for estimating maternal mortality.* Available at: www.who.int/reproductive-health/publications/RHR_01_9_maternal_mortality_estimates/figures_and_annexes.en.pdf. Accessed January 4, 2002; Graham W, Brass W, Snow RW. "Indirect estimation of maternal mortality: the sisterhood method." *Stud Fam Plan.* 20(3): 125-135, 1989.

VII. CONCLUSIONS

Despite these limitations, the findings in this study indicate that women in most of Herat Province have an extraordinarily high risk of dying during pregnancy and childbirth. It shows that prenatal care, maternal health care facilities and trained health care personnel are virtually non-existent in the region. It also provides evidence that human rights factors contribute to preventable maternal deaths in the region. These factors include access to and quality of health services, adequate food, shelter, and clean water, and denial of personal freedoms such as freely entering into marriage, access to birth control methods and possibly control over the number and spacing of children. This study suggests that high rates of maternal mortality may be an indicator of violations of women's human rights and that prevention of maternal deaths requires the protection and promotion of a wide range of women's rights over a sustained period of time.

AFGHANISTAN MATERNAL MORTALITY STUDY 2002

1. CASE ID _____
2. Date of interview -_____ - 2002
3. Interviewer code _____
4. Translator code _____
5. Location code _____
6. Participation Outcome: **[Circle ONE]**

Eligible/Survey Complete	= 1				
Not Eligible	= 2				
Not Available (2 visits)	= 3				
Refuse	= 4a=Lack Time	4b=Fear Reprisal	4c=Opposed to Study	4d=Other: _____	
Unable to Complete	= 5a=Interrupted	5b=Emotional	5c=Safety	5d=Other: _____	

I am working with a non-governmental organization in the United States that is concerned about the health needs of women in Afghanistan. We are not here to provide humanitarian assistance. We selected your home randomly among others. We would like to speak to the woman who is aged 15–49 who knows the most about the situation of the family. We would like to ask you a number of questions about you and your family.

We realize that many people have suffered greatly in recent years and may have much to tell. But this survey requires only BRIEF responses to a limited number of questions, and from ONLY ONE female family member. At the end of the interview, we may ask more detailed questions.

The findings of this survey will be used to advocate for improvements in any problems identified from the survey. This is an anonymous survey. You do not need to give us your name at all. If you do not understand a question, please ask for clarification. If a question makes you uncomfortable, we will go on to the next question. You are free to stop at any time during the interview. May I ask you some questions?

7. What is your age? (# years) _____

8. How many years of formal education do you have? (# years) _____

10. What is the name of this city, town or village? _____

11. How many years have you lived here? (# years) _____

12. How would you describe this area? **[Circle ONE]**

Urban or large city _____1
Suburban or small city _____2
Rural or farm _____3
Other _____4

13. What is your current marital status? **[Circle ONE]**

Never married _____1
Married _____2
Divorced or separated _____3
Widowed _____4

14. In your view, what is the most appropriate age for women to marry? _____(years)

15. At what age did you first marry? _____(years)

16. At the time that you were married, did you want to marry? _____Yes _____No

17. At the time you were married, were you pressured by your family to marry? _____Yes _____No

18. In your opinion, should women have the right to freely choose a husband and enter into marriage? _____Yes _____No

19. What are your THREE biggest problems, starting with the worst problem? **[RANK problems 1-3]**

Food _____1
Shelter _____2
Drinking water_____3
Physical safety _____4
Sanitation _____5
Access to medical care_____6
Clothing and blankets_____7
Lack financial means for basic needs __8
Unemployed _____9
Other **[SPECIFY]** _____10

Problem #1 _____
Problem #2 _____
Problem #3 _____

20. To access health care services (prenatal care) or see a doctor, nurse, midwife or traditional birth attendant, I must ask permission of my husband

All of the time _____1
Some of the time _____2
Never _____3

21 _____ How many sisters (born to the same mother) have you ever had who were ever-married (including those who are now dead)?

22. _____ How many of these married sisters are alive now?

23. _____ How many of these married sisters are dead?

24. _____ How many of these dead sisters died while they were pregnant, during childbirth, or during the six weeks after the end of the pregnancy?

25. _____ In your view, what is the most appropriate age to have children?

26. _____ In your view, what is the most number of children that a woman should have?

27. _____ How many times have you been pregnant?

28. _____ How many live births have you had?

29. _____ Did you receive prenatal health services for any of your pregnancies?

30. For each birth, list who attended the birth (please specify trained or untrained doctor, nurse, TBA, midwife etc.)

_____

31. If no access to prenatal health care services for any/all births, list reasons why. [**DO NOT READ LIST**: *examples include no services, financial, refused by husband or family, not necessary, restrictions on movement, transportation*]

_____

32. What type of method of birth control do you use? List (If NONE, write "None") _____

33. What type of birth control method would you like to use? List (if NONE, write "None") _____

Agree or Disagree [**Circle One Only**]

34. Women should have the same right as her husband to decide the number and spacing of their children _____Agree _____Disagree

35. A husband has the right to beat his wife if she disobeys him _____Agree _____Disagree

36. It is a wife's duty to have sex with her husband even when she doesn't want to _____Agree _____Disagree

37. A bride price is a custom that should remain in Afghanistan _____Agree _____Disagree

ASK FOR WOMEN WITH CHILDREN:

38. Who in your family decides the number and timing of children?

Me only _____1
Mostly me _____2
Equally _____3
Mostly husband_____4
Husband only _____5
Other (specify) _____6