[SLIDE 1 TITLE SLIDE]

Thank you for the privilege of addressing this distinguished gathering of medical women. My topic today is Maternal Mortality and the myth of “safe” abortion.

[SLIDE 2 Mothers are important.]

Mothers are important in any society. When mothers die, the whole family suffers, and the community suffers. So saving the life of mothers and improving the health of mothers is a very important part of improving the life and health of the entire community.

[SLIDE 3 HOW can Maternal Health be improved?]

So, how can a society improve the health of mothers? We need to first understand what sickens and kills mothers raising children in their community, and also we need to make the process of childbearing safer.

[SLIDE 4 The Global Burden of Disease 2004 WHO]

This is a slide from the World Health Organization publication called the Global Burden of Disease 2004. This bar graph shows the 12 diseases which most frequently kill adult men and women. The women are light blue in the slide. You can see inside the red circle the percent of total deaths attributable to maternal conditions.

[SLIDE 5 The Global Burden of Disease 2004 WHO]

This slide shows the distribution of causes of death per 100,000 adults by geographic region. The red circle shows deaths from maternal and nutritional conditions together. The green circle shows deaths from HIV/AIDS for comparison.

[SLIDE 6 How many mothers die each year?]

The landmark study by Hogan et Al in 2010 analyzed twenty years of World Health Organization data and determined that the number of women dying from pregnancy related conditions was decreasing rapidly around the world. The true number of maternal deaths worldwide was a little over half of the number which was claimed by the United Nations Fund for Population Affairs “UNFPA”. And, if HIV deaths were excluded, the true number of maternal deaths would have been half of the UNFPA claimed number.

[SLIDE 7 How many mothers die each year?]

Another interesting finding is that over half of the maternal deaths each year occur in 6 countries: India, Nigeria, Pakistan, Afghanistan, Ethiopia and the Democratic Republic of the Congo.

[SLIDE 8 What kills mothers?

The World Health Organization published a review of what kills mothers during childbearing around the world. The major cause of maternal death in developing countries is hemorrhage and hypertension.

[SLIDE 9 pie charts]

The WHO analysis includes these pie charts, showing the distribution of causes of maternal deaths by region. The upper left pie chart is Africa. The upper right pie chart is Asia. The lower left pie chart is Latin America and the Caribbean, and the lower right pie chart is developed countries.

In the red box are the deaths caused by hemorrhage, hypertensive disorders and sepsis and infections for Africa, Asia, Latin America and Developed countries. The dark circle is deaths causes by combining spontaneous and induced abortion deaths.

[SLIDE 10 Making Motherhood safe]

So, if we want to make motherhood safe, our enemies are:

\*Pre eclampsia,

\* postpartum hemorrhage, infection,

\* HIV and

\* Transportation obstacles which make it difficult for mothers in labor to access care.

We can improve maternal health and defeat these enemies by:

\*improving prenatal care,

\*making sure women have safe delivery facilities which are staffed by skilled birth attendants and have enough equipment and medicines available to treat hemorrhage and pre eclampsia and infection.

\*Making sure that mothers have transportation to access care when they are in labor,

\*And, teaching women to read. Female literacy is one of the most important factors enabling women to be able to access and understand the health care that is available.

[SLIDE 11 Safe motherhood?]

In 1987, governments around the world began the “Global Safe Motherhood Initiative.” This resulted in the formation of an agency at the UN called the “IAG” which stands for the Inter-Agency Group for Safe Motherhood. In 2000, the UN General Assembly announced the formation of the Millennium Development Goals, or MDG’s .

[SLIDE 12 Safe motherhood? Millennium Development Goals]

Improving maternal health was one of those goals.

[SLIDE 13 Safe motherhood?]

But, in 2002, the people and organizations who give large amounts of money pressured the Safe Motherhood Initiative to join with UNICEF and UNFPA. This was a very unhappy union.

The major source of disagreement was that feminists supported UNFPA, but refused to support the idea of “Safe Motherhood”. The disagreements included discussions of the concept of “safe” and “unsafe” abortion, and arguments about who gets the money and what projects will be funded.

Everyone could agree that it is a tragedy when mothers die.

But everyone disagreed on exactly how to solve that problem.

[SLIDE 14 Women Deliver London 2007]

At the first Women Deliver conference in London in 2007, the feminist UNFPA part of the partnership won their struggle against the “Safe Motherhood” part of the partnership. And at that point, the partnership advanced the idea that worldwide legalization of abortion must be part of the first steps for all nations of the world.

[SLIDE 15 Women Deliver Obstacles to be eliminated]

At this conference, policy leaders identified 4 major obstacles to worldwide legalization of abortion. They agreed that these obstacles would be targeted for elimination.

The first obstacle is: “The presence of Protestant missionaries in the health care system in Africa and Asia, and the presence of the Roman Catholic Church in the health care system in Latin America.”

[SLIDE 16 Women Deliver Obstacles to be eliminated]

The second obstacle is: “The idea of health care workers “Right of Conscience” which allows health professionals to refuse to do abortions.”

[SLIDE 17 Women Deliver Obstacles to be eliminated]

The third obstacle to worldwide legalization of abortion is the use of ultrasound which turns the mind of the woman to the humanity of her unborn child.

[SLIDE 18 Women Deliver Obstacles to be eliminated]

The last obstacle to worldwide legalization of abortion is that the people of many nations do not want abortion in their nation.

[SLIDE 19 Making motherhood safe vs. preventing motherhood]

So, in 2007 the focus of the agencies turned from making motherhood safe to preventing motherhood. The enemy became pregnancy itself. And the solution to fight that enemy became “Comprehensive reproductive rights” and worldwide legalization of abortion.

[SLIDE 20 Controversy about the role of legalizing induced abortion and the effect on maternal mortality]

But, does legalizing abortion actually decrease maternal mortality? And does making abortion illegal truly increase maternal mortality?

One of the most controversial subjects in international health has been the effect of abortion laws on maternal health, particularly where a country has prohibited abortion in order to safeguard women’s health, motherhood and the unborn human life.

During the last three decades, numerous international agencies, public health actors, politicians and several research groups claim that countries which restrict or prohibit elective abortion promote “unsafe” abortions. These advocates of abortion claim that prohibiting abortion results in a higher rate of maternal morbidity and mortality from “unsafe” abortion. This theoretical threat of increasing maternal mortality is used to pressure nations into overturning laws and legalizing abortion.

However, there is no direct scientific evidence of any potentially deleterious cause-effect relationship between abortion restrictive laws and maternal health.

[SLIDE 21 Defining “Safe” and “Unsafe” Abortion]

The word “safe” implies certainty of outcome. When something is called “safe” we usually mean that it has little or no risk.”

But abortions kill the unborn child, and may carry greater short and long term risks for the mother than giving birth.

Yet, WHO mixes legal and medical definitions to imply “legal” = “safe” and promote abortion legalization worldwide

[SLIDE 22 Defining Safe and Unsafe Abortion]

“For estimation purposes, safe abortions were defined as abortions which meet LEGAL, not MEDICAL l requirements in countries in which abortion is legally permitted under a broad range of criteria.”

So the word “SAFE” is defined by LEGAL not MEDICAL criteria.

[SLIDE 23 Defining Safe and Unsafe Abortion]

“Unsafe abortion is abortions performed by by unskilled, not meeting minimum medical standards.” But, this word “unsafe” also includes another category defined not by medical criteria but by legal criteria. “These include abortions in countries with restrictive abortion laws…”

[SLIDE 24 Defining Safe and Unsafe Abortion]

Using these definitions, any abortion performed in a country where abortion is illegal, is counted as an “unsafe” abortion, even if done by Marie Stopes or IPAS or your hospital.

[SLIDE 25 Defining Safe and Unsafe Abortion]

The World Health Organization makes clear that the word “SAFE” is a legal definition. In the WHO publication “Unsafe Abortion” it states:

“When performed within the legal framework, the safety of the procedure will depend on the requirements of the law, and the resources and medical skills available.”

[SLIDE 26 Defining Safe and Unsafe Abortion]

WHO continues “In some countries, lack of resources and possibly skills may mean that even abortions that meet the legal and medical requirements of the country would not necessarily be considered sufficiently safe in high-resource settings.”

[SLIDE 27 Defining Safe and Unsafe Abortion]

So, a procedure labeled as a “safe” abortion in the developing world would not be a medically acceptable abortion in the resource rich nations

[SLIDE 28 Policy implications of the terms “Safe” and “unsafe” abortion]

The words “safe” and “unsafe” are used to pressure countries into legalizing abortion, in this way.

[SLIDE 29 Policy implications of the terms “Safe” and “unsafe” abortion]

If a country legalizes abortion then the number of “unsafe” abortions magically decreases. Why? When abortion is illegal, the abortions done in that nation are counted as “unsafe”. When abortion becomes legal, the same abortions are now counted as “safe”. The abortions do not necessarily change. What changes is the legal words “safe” and “unsafe”. Remember the WHO definition of a “safe” abortion is an abortion that “meets LEGAL requirements”.

[SLIDE 30 Policy implications of the terms “Safe” and “unsafe” abortion]

Deaths from “unsafe” abortion will also disappear, because now the women who die from abortion will be dying from “safe” abortion. But the women will still die.

[SLIDE 31 Policy implications of the terms “Safe” and “unsafe” abortion]

And, more women will die from abortion when abortion is legal than when it is illegal. This is because the total number of abortions dramatically increase in every nation where abortion has been legalized.

[SLIDE 32 Policy implications of the terms “Safe” and “unsafe” abortion]

However, the women who die from “safe” abortion do not get counted in official statistics, because “safe” abortion deaths are rarely tracked in official statistics. That is because many assume that deaths from “safe” abortion do not happen. But this is not true.

[Slide 33 What are the risks of “safe” abortion?]

Abortion has all the risks of a surgical procedure: hemorrhage, infection, surgical complications such as perforation of the uterus, incomplete abortion where tissue is left inside the uterus, ongoing pregnancy, and death.

But abortion also has long term consequences such as

Preterm birth in subsequent pregnancies, which will be discussed by Dr. Mary Davenport.

Increase in adverse psychological outcomes which will be discussed by Dr. Martha Shuping

Increased risk of premenopausal triple negative Breast Cancer if a woman aborts her first pregnancy and then delays childbearing.

These long term consequences of abortion have been known for over a decade, but rarely factored in to policy decisions legalizing abortion.

[SLIDE 34 Immediate risks of 1st trimester abortions]

Even when abortion is done early in the first trimester, there are risks to the mother. One of the best recent studies published in 2009 studied 42,619 abortions in Finland which took place from 2000 to 2006. The women were followed for only 42 days. The findings were significant.

When surgical abortions were compared to medical abortions with mifepristone and misoprostol, one out of every 5 women who had a medical abortion had a complication, as compared to one out of twenty women who had a surgical abortion.

[SLIDE 35 Immediate risks of 1st trimester abortions]

The risk of hemorrhage was 15.6% for medical abortions, and 2.1% for surgical abortions

The risk of incomplete abortion was 6.7% for medical abortions and 1.6% for surgical abortions

The risk of emergency surgery to handle complications was 5.9% for medical abortions and 1.8% for surgical abortions.

[SLIDE 36 Immediate risks of 1st trimester abortions]

There were 2 deaths in the medical abortion cohort of 22,368 women.

There were 4 deaths in the surgical cohort of 20, 251 women.

And these numbers come from abortions done in the first trimester, when the complication and death rate is the lowest. As the gestational age of the pregnancy increases, the risk of death and complications increases exponentially.

[SLIDE 37 Abortion Mortality]

In the abortion textbook “A Clinicians Guide to Medical and Surgical Abortion”, Chapter 15 discusses abortion mortality.

[SLIDE 38 Abortion Mortality]

Table 15.1 displays the number of deaths per 100,000 legally induced abortions. The red box shows the case fatality rate for abortions from 13-15 weeks, 16-20 weeks and greater than 21 weeks. You can see from the numbers that the case fatality rate increases exponentially from 2 deaths to 11.9 deaths per 100,000 abortions performed by evacuation. And for abortions by induction the deaths increased from 3.8 to 10.3 per 100,000.

[SLIDE 39 Abortion Mortality]

In 2004, abortion mortality data from the United States Center for Disease Control was published in this paper. The authors state: ““The risk of death increased exponentially by 38% for each additional week of gestation.”

[SLIDE 40 Abortion Mortality]

The authors also state: ““Compared with women whose abortions were performed at or before 8 weeks of gestation, women whose abortions were performed in the second trimester were significantly more likely to die of abortion-related causes.”

[SLIDE 41 Abortion Mortality]

Compared with abortion at <13 weeks, the relative risk of abortion-related mortality was

RR=14.7 at 13-15 weeks

RR=29.5 at 16-20 weeks

RR= 76.6 >20 weeks

[SLIDE 42 Abortion Mortality]

This is the graph of abortion mortality vs gestational age in weeks. The light blue line is the abortion mortality when abortion was first legalized in the United States. The remaining curves are abortion mortality since that time. The straight red line is the live birth mortality in the United States at the time of publication. You can see that after 21 weeks, the risk of death from abortion is greater than the risk of death from live-birth.

[SLIDE 43 What are the risks of “safe” abortion]

We have discussed some of the immediate risks of “safe” abortion: hemorrhage, infection, surgical complications, incomplete pregnancy and death. Dr’s Davenport and Shuping will discuss the long term risks of preterm birth and adverse psychological consequences. There is one other long term risk that I want to cover very briefly: the association between aborting a first pregnancy and premenopausal triple negative breast cancer.

[SLIDE 44 Abortion and Breast Cancer]

“Pregnancy, and especially first pregnancy, appears to represent a critical window in determining future breast cancer risk. The occurrence of a first completed pregnancy and age at first pregnancy are among the strongest known predictors of breast cancer risk.”

[SLIDE 45 Abortion and Breast Cancer]

“A significant elevation of risk was associated with a history of induced abortion but not spontaneous abortion.”

[SLIDE 46 Abortion and Breast Cancer]

A study by Janet Daling of the National Cancer Institute studied 845 cases of premenopausal breast cancer matched with 961 controls.

[SLIDE 47 Abortion and Breast Cancer]

Results: Highest risks were observed when the abortion was done at ages younger than 18 years- particularly if it took place after 8 weeks gestation-or at 30 years of age or older.”

[SLIDE 48 Abortion and Breast Cancer]

“among women who had been pregnant at least once, the risk of breast cancer in those who had experienced an induced abortion was 50% higher than among other women by age 45.”

[SLIDE 49 Abortion and Breast Cancer]

“Teenagers under age 18 and women over 29 years of age who procure an abortion increase their breast cancer risk by more than 100% by age 45.”

[SLIDE 50 Abortion and Breast Cancer]

“Teenagers with a family history of breast cancer who procure an abortion face a risk of breast cancer that is incalculably high”.

All 12 women in the study with this history were diagnosed with breast cancer by the age of 45

[SLIDE 51 Abortion and Breast Cancer]

A 2012 study from the French National BRCA carrier cohort demonstrated a statistically significant association between pregnancy terminations and an increased risk of breast cancer. When compared with women who had no abortions, women who had at three abortions had a 239% increased risk of breast cancer.

[SLIDE 52 Abortion and Breast Cancer]

As in other studies, this study also found that the association between abortion and breast cancer happened when the abortions occurred before the first term pregnancy.

[SLIDE 53 Abortion and Breast Cancer]

Another study from the United States National Cancer Institute researchers published in 2010 investigated the risk factors for triple negative breast cancer in women under age 45. The authors stated:

““Specifically, older age, family history of breast cancer, earlier menarche age, induced abortion, and oral contraceptive use were associated with an increased risk for breast cancer”.

[SLIDE 54 Abortion and Breast Cancer]

This study found that ““Induced abortion increases the risk of breast cancer by 40%”.

[SLIDE 55 What is a “safe” abortion?]

We have seen that abortions are being called “safe” because they are legal. But legal abortions carry real risks, and can cause greater harm to women than giving birth.

But a question remains: Will making abortion illegal increase maternal mortality in a nation? What is the evidence?

[SLIDE 56 The Chilean “natural experiment”]

The nation of Chile in South America offered a unique opportunity to test the relationship between the legal status of abortion and maternal mortality In a natural experiment. The nation of Chile kept excellent maternal mortality records from 1900 until the present day.

During that time, the government made several key interventions in public health, education and legislation.

In 1920, mandatory elementary school for boys and girls was begun.

In 1931, abortion was made legal

In 1938 prenatal care and nutrition programs were begun

In 1940, antibiotics were introduced.

In 1950’s synthetic oxytocin was available to control postpartum hemorrhage.

In 1963 family planning was added to the prenatal care and nutrition programs

In 1965, elementary and middle school was mandatory for boys and girls.

In 1989, ABORTION WAS MADE ILLEGAL.

In 2003, Schooling through high school was mandatory for boys and girls.

In the next slide, we will look at the maternal mortality rate for the time period in the dotted red box.

[SLIDE 57 Maternal Mortality trend in Chile (1957=2007)]

Despite abortion being legal since 1931, maternal mortality in Chile did not begin to decrease until the 1960’s. Since the 1960’s, maternal mortality has steadily decreased up to the present day, even though abortion was made illegal in Chile in 1989.

The next slide will look in greater detail at the maternal mortality surrounding the time that abortion was made illegal.

[SLIDE 58 Maternal and abortion mortality trend in Chile (1979 – 2009)]

The top graph in blue is the Maternal Mortality rate. The bottom graph in red is the Abortion mortality rate.

The grey bar is the year that abortion was made illegal.

After abortion was made illegal, maternal mortality did not increase, but instead continued to decrease.

Also, abortion mortality did not increase, but continued to decrease.

This clearly demonstrates that in Chile, making abortion illegal resulted in FEWER women dying from abortion, not more women dying from abortion.

[SLIDE 59 Synergistic effects of education]

Analysis of the Chilean data clearly showed that the main factor determining the progress in maternal health in Chile is the educational level of women.

For every year of education of women, there was a decrease in maternal mortality of 29.7 per 100,000 live births.

For each delivery attended by a skilled birth attendant, there was a 5% decrease, and even further decrease if you considered the effect of women’s education.

Clean water and sanitation continued to help save women’s lives, and even more so when education of women was added to the consideration.

But, there is a “fertility paradox” which results from education. As women increase in education, childbearing is delayed. When women wait until after age 30 to begin having children, their mortality increases.

[SLIDE 60 Current profile of maternal mortality in Mexico and Chile]

This is the current profile of maternal mortality in Chile, which is also very similar to the profile of Mexico, a nation which also forbids elective abortion. Note that the abortion mortality in both nations is very low: 2.3% in Chile and 3% in Mexico.

[SLIDE 61 Trend of maternal mortality in Mexico and Chile (1957-2010)]

Note also that both Mexico and Chile have had a continuous steady decrease in maternal mortality despite the fact that abortion is forbidden in both countries.

[SLIDE 62 Trends in Pregnancy-Related Mortality in the United States 1987-2008]

Now consider the maternal mortality data from the United States. Abortion was made legal in 1973 in the United States, and since the mid 1980’s maternal mortality has steadily INCREASED.

In conclusion we can see that childbearing is made safer by educating women, providing skilled birth attendants at delivery and clean well equipped facilities, and modern medications. Countries such as Chile who have banned elective abortion have some of the lowest maternal mortality in the world.

In contrast the United States allows abortion up until birth, and has seen a steadily increasing maternal mortality.

This evidence argues strongly that legalizing abortion is not necessary to decrease maternal mortality.

In conclusion,