
Special Report



Women's Living Conditions and Maternal Mortality in Latin America¹

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The extent of maternal mortality is a reflection of the average risk of death a woman takes every time she becomes pregnant. The World Health Organization (WHO) has estimated that maternal mortality averages about 150 times higher in developing countries (450 deaths per 100 000 live births) than it does in developed ones (1). This means that in virtually all developing countries, including those of Latin America, maternal mortality is a neglected tragedy.

Three reasons have been suggested for many governments' past lack of concern about the problem (2). First, the extent of maternal mortality in many countries has been unclear for lack of information about causes of death. In 1987, only 75 of WHO's Member States were able to provide maternal mortality information. Of 117 developing countries, 73 were unable to provide such data (3).

Second, maternal mortality has been underestimated. This underestimation has typically ranged from roughly 37% in de-

veloped countries (4) to over 70% in developing ones (5).

Third, women in countries with high maternal mortality often have low social status and face discrimination. Under these circumstances it is common to find that even though women make tremendous contributions to the family's existence and survival, overt barriers confront them in the fields of education, nutrition, and health (2).

Whether for these reasons alone or for others, the fact is that assistance has been withheld from what should have been an important world concern for many years. The purpose of this presentation is to review the living conditions of women in Latin America, examine the relationship between those conditions and maternal mortality, and suggest a number of applicable interventions.

CONCEPTUAL FRAMEWORK

From a medical perspective, maternal death can be defined as the outcome of direct or indirect obstetric complications (6). This definition, while useful for some purposes, is ill-suited to the purpose of understanding the wide array of circumstances contributing to this outcome.

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Therefore, it seems appropriate to add that maternal death is commonly the indirect result of negative factors affecting women outside the delivery room.

Within this context, Figure 1 provides a conceptual framework of circumstances leading to maternal death. In most countries with high maternal mortality, many women are forced into the rigidly set gender roles of mother, homemaker, caregiver, and laborer. These roles have a lot to do with placing many women in poor social circumstances; and these circumstances, along with a scarcity of needed health care resources, tend to put such women at unnecessarily high risk of maternal illness and maternal death.

Regarding maternal health care resources, many women do not perceive the maternal health risks they face—either for lack of education or because of cultural beliefs they hold about reproduction—and so do not seek appropriate health care. Other women are aware of the risks but have no access to proper maternal health services for reasons of distance, transportation problems, cost, or the low quality of care provided at available centers (7). In addition, even for women who have ready access to health care services, it is common to find that certain types of culturally sensitive maternal health problems, especially ones relating directly to reproduction, are ineligible for medical care at any level, a circumstance that increases the risks confronted by women with such problems as well as the numbers of women with complications arising from such acts as illegally induced abortion.

Of course, all the aforementioned risks can generate complications during pregnancy, during delivery, or after delivery, and can result in direct or indirect obstetric death. But there is more to it than that. It is also true that women who survive the childbearing cycle but are weakened by it are prone to become impaired

mothers and to begin the cycle again under less favorable conditions. For all these reasons, it seems worth noting a few leading social factors commonly regarded as placing women at a disadvantage and sometimes endangering their health.

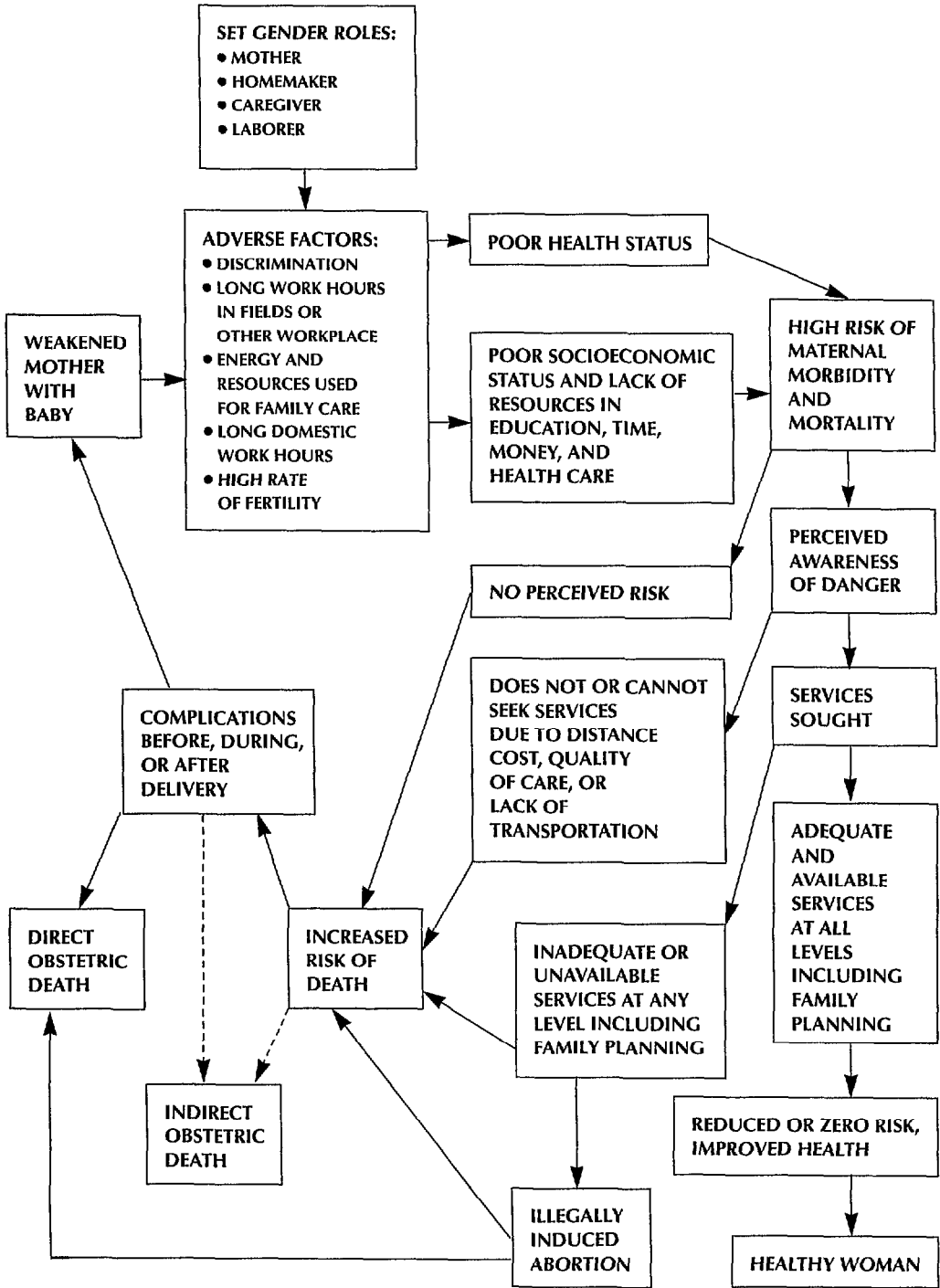
Social Pressure to Bear Children

In many parts of the developing world, women view childbearing as a major means of gaining social status. One study, done in a rural part of Oaxaca, Mexico (8), found that a high percentage of women in the area were under enormous social and political pressure to have large families. In this case the principal argument employed was unusual, it being said that maintaining the community's population base was a top priority matter due to a scarcity of men in the community. However, whatever the argument, such pressure upon women to have numerous children is far from exclusive to this part of Mexico or even Latin America, and indeed makes its presence felt in many other developing countries around the world.

Discrimination against Women

In 1988 a study by the Population Crisis Committee (10) found that over half of all girls and women in the world lived in health-threatening conditions with limited choices for childbearing and restricted educational and economic participation in society. Part of the reason was discrimination against women. According to Royston et al. (11), "sex discrimination as a contributory factor to maternal mortality has been largely ignored and has been hidden within the general issue of poverty and underdevelopment which is assumed to put everyone—men and women, adults and children—at an equal disadvantage in health terms." There is strong evidence, however, of inequities

Figure 1. A schematic diagram of general conditions leading to maternal death.



faced by women relative to men in terms of social conditions, employment, education, health services coverage, and the quality of health services rendered; and it seems clear that these inequities contribute to maternal mortality (5).

Working Women and Their Working Conditions

Women are playing an increasing role in the workplace. Currently, it appears that about a quarter of the paid work force in Latin America consists of women. Unfortunately, it is all too common for working hours to be piled atop the hours devoted to domestic duties. (According to the International Labor Office, in 1985 the world's working women devoted only a few hours less to domestic duties than full-time housewives, who generally spent at least 57 hours a week on these tasks—12). This tendency to “piggy-back” outside and domestic duties can impressively impact a woman's health status (13).

At the same time, however, a paid job tends to give a woman higher status within her family because she is providing income. Thus, while working makes new and sometimes disproportionate demands on women, it also helps them to cope with new demands by increasing their status and resources (14). Overall, work-related maternal health problems are apt to arise not from the mere existence of outside work but from combination of this work with a heavy load of domestic duties or from conditions in a particular workplace that adversely affect maternal health.

The Cycle of Ill Health

It is possible, and indeed quite common, for adverse social, economic, and cultural conditions to impose ill health upon successive generations of women. As Winikoff (15) has noted, poor mater-

nal health raises the risk that an affected mother will give birth to an unhealthy baby. If the child survives, there is a strong possibility of his or her poor health continuing, especially since its mother probably has little energy to invest in its physical and mental welfare.

Then, if the child is a girl, she may in turn confront discrimination in health, nutrition, and education and will stand a considerable chance of becoming an unhealthy and impoverished woman. And when she gets pregnant, her meager resources and poor health will give her little chance to break the cycle.

Health Care Accessibility and Quality

The aforementioned lack of access to appropriate health care caused by difficulties involving distance, transportation problems, cost, and poor quality of available care has a strong impact on maternal health (16–18). The effects of circumstances causing available care to be poor are especially striking. Inadequate health care facilities, lack of essential resources, unskilled personnel, absence of an effective referral system, and insensitivity of health care providers (19) are some of the main difficulties women face when they look for institutional care.

Because such problems and important cultural practices turning women away from modern medicine are widespread in the countryside, many rural Latin American women choose to go without health care or to seek the assistance of a traditional healer or midwife. In Mexico, a nationwide fertility survey published in 1989 estimated that 44.5% of the deliveries in towns and villages with less than 2 500 inhabitants were assisted by traditional midwives, while in towns with 2 500 to 19 999 inhabitants 23.7% of the deliveries were so assisted (20). Although the midwives in question were trusted com-

munity members held in high respect, they were often not trained to prevent or correct complications of high-risk pregnancies.

In urban areas, where distance and transportation problems tend to pose lesser obstacles, the affordability and quality of care are critical. In this regard, data from another Mexican survey⁴ found that 80% of 433 maternal deaths in Mexico City occurred in the hospitals of four health sector institutions. Subsequent analysis of these hospital deaths suggested that 85% (294 in all) were preventable, and that their causes were mainly hospital and professional errors reflecting a poor quality of care.

Lack of health services providing adequate family planning, combined with a lack of personnel adequately trained and equipped to deal with obstetric emergencies, increases prevailing perils. The result, all too often, is that complications which could have been prevented fairly easily in the beginning through family planning or other measures conclude as emergencies that end the lives of many women (21). Within this context, one of the clearest indicators of a need for family planning services is the number of obstetric emergencies arising from dangerous induced abortions. Such abortions, responsible for a large share of maternal deaths around the world, are common in Latin America (22).

INTERVENTIONS

The fact that so many factors play a role in excess maternal deaths suggests that the most effective approach might be one that is comprehensive. One such comprehensive approach, employing a district primary health care model for maternal health development, has been pro-

posed by Dixon-Mueller (23). The aim of this approach is to build more maternal health and family planning services into existing or planned primary health care systems at two main points of intervention: the community itself and first-level referral facilities. To that end the model directs its attention to all levels of care and to preventive activities designed to avoid unnecessary perils.

While such an approach appears to offer good prospects for improving health services delivery, one must also remember that maternal health does not depend exclusively on the health sector, and that improvement of other social and economic conditions—including such matters as income, education, housing, sanitation, and nutrition—need to be considered (24, 25). It also seems appropriate to cite specific interventions that can be made in the community and at the first level of care, as well as interventions designed to reduce self-induced abortions and to promote research on maternal mortality. Some of these are described below.

Community-level Interventions

Due to their accessibility and acceptability, the mainstays of many community-based maternal health programs are traditional birth attendants (TBAs). Training for these health workers should focus on improving safety and hygiene in the TBA's practice; noninterference⁵ during labor; and care of mothers before, during, and after pregnancy. TBAs should be encouraged to continue providing psychosocial support, and should be instructed in the identification of mothers

⁴Reyes S, Bobadilla J. *Muertes maternas prevenibles en el distrito federal*. Personal communication, 1990.

⁵Avoidance of oxytocics and traditional remedies. TBAs are often trained to use oxytocics in order to stop hemorrhages. Training programs usually stress that TBAs should use them only to deal with this kind of emergency and not just to accelerate normal labor. The same concept applies to use of herbs and other traditional remedies.

at risk and in recognition of appropriate referral criteria (26).

Many of the problems relating to TBAs arise from lack of sustained support. According to WHO (27), this commonly manifests itself as a void in the organized system assigned to supervise trained TBAs, provide them with continuing training, and supply them with basic items such as cord kits and medications needed in their work.

Also, since TBAs are typically charged with screening high-risk pregnancies and confronting emergencies within the context of their regular work, it is imperative that they have a readily accessible clinic or hospital to which they can refer women classed as high-risk and those with obstetric emergencies. One way that many countries have sought to prevent deaths in high-risk cases where referral facilities are distant is by experimenting with maternity waiting homes (16). These are usually newly built or newly adapted facilities that provide modest accommodations considerably closer to the referral facility than the high-risk woman's home.

Another step sometimes taken is to mobilize a community effort to provide transportation for women of the community in the event of obstetric emergency (16). Community mobilization can also be used in other ways—to assist TBAs and other health workers in their activities, for example; or, as has been done in some African communities, to establish "people's stores" that operate on revolving funds started with clinic money (16).

In some cases, of course, early screening and identification of high-risk women cannot prevent death from complications such as hemorrhage and obstructed labor, because a sizable proportion of serious complications occur among women with no recognizable risk factors (28). For such cases, an effective and rapid referral system is required.

For this reason among others, provision of safe maternal health services in communities, waiting homes, and referral centers commonly demands modification of established health care traditions. For example, traditions that reserve certain medical procedures for higher-level "experts" are useless in the more remote areas of most developing countries. Indeed, as Lamb has pointed out, "Of all the interventions, the single most important [for reducing maternal mortality] is the on-the-spot availability of a physician or midwife." Therefore, personnel that can be prepared to provide care safely in such areas should be trained to do so (29).

The First-level Referral Facility

The first-level facilities to which maternal health care patients are referred should be used to cope with obstetric complications requiring clinical procedures. They should also provide clinical and surgical family planning services (23) and should serve as training centers for health care personnel. In addition, one of their tasks should be to establish and maintain a mortality registry and to train all personnel to keep simple, standardized records—thereby paving the way for formation of maternal mortality committees able to assess the performance of maternal health care personnel at all levels (21).

Not all of the interventions relating to first-level referrals need be the responsibility of the health sector. Some sectors may have more of a particular resource than does the health sector, and intersectoral action may be used to improve the current situation (13). For example, intersectoral actions are quite often appropriate where improved provision of referral services entails improvement in the areas of transportation, communication, or education.

Induced Abortions

Abortion is illegal in most Latin American countries (22), and so development of any intervention dealing with abortion is at best a complex task. Even the most fundamental information, such as the actual numbers and characteristics of women undergoing abortions in this region, is relatively unknown. Therefore, studies need to be undertaken to define the nature of the situation before broad interventions are implemented.

The most obvious intervention directed at reducing maternal mortality from this cause is establishment of effective contraception. Even when effective contraceptive methods are available, however, induced abortion will still exist, reflecting contraceptive failure and poor social conditions. It is therefore appropriate to consider the whole range of interventions capable of further reducing maternal mortality from abortion by making abortion safer; treating the complications of poorly performed abortions more effectively; and reducing the number of unwanted pregnancies in Latin America (29).

Research

One of the principal obstacles to appropriate maternal health care interventions in Latin America is lack of valid data about factors influencing maternal mortality. This obstacle could be largely overcome by a massive research campaign focusing on registration of maternal deaths, identification of proxy variables,⁶ elucidation of problems and "paths" that end in maternal death (i.e., the ways factors interact to produce maternal death), and de-

⁶Variables such as referrals to emergency rooms, transfusions, and puerperal sepsis that do not measure maternal mortality directly but that are related to it.

velopment of effective ways to design and evaluate comprehensive interventions.

A wide variety of methods can be used to do research on maternal mortality. For example, in seeking accurate estimates of maternal mortality one can use both direct methods—such as analysis of death registers and census data—or indirect techniques such as the "sisterhood" method⁷ (31). This availability of more than one method for dealing with the same or similar problems is worth noting, for it can be of considerable benefit in confronting different methodologic obstacles. To take the case of estimating maternal mortality, for example, such obstacles can range all the way from difficulties in coding and processing data to quality shortcomings at official registers to gross lack of information.

It should also be noted that research on maternal mortality should include multidisciplinary study of cultural and medical factors influencing maternal deaths. In addition, such research needs to examine certain specific matters, among which are the impact that a maternal death has on the mother's family and society and the influence on maternal mortality of the cultural differences encountered in urban as compared to rural settings.

CONCLUSIONS

Many of those suggesting interventions such as the ones described above tend to make broad assumptions about

⁷The "sisterhood method" was developed at the London School of Tropical Medicine and Hygiene in 1987 as an indirect technique for deriving population-based estimates of maternal mortality. The method is based upon the proportion of adult sisters dying during pregnancy, childbirth, or the puerperium as reported by adults during a survey. Adjustment factors, derived from model fertility and mortality distributions, are used to convert these proportions into a variety of indicators of maternal mortality (30).

the existence of good management, trained personnel, equipment, supplies, funding, and cooperative and supportive government and nongovernment programs. In this vein, special note should be made of the fact that no maternal health program should be expected to function effectively while dealing exclusively with the community served or with health care facilities or with intersectoral cooperation; for it is only through involvement with all three of these "levels" that truly effective performance can be attained.

In addition, each maternal health care program must be fitted to the population of women served. The program should shape itself to reflect prevailing fertility rates and childbearing patterns; population density; the physical, social, and cultural environment; appropriate and financially attainable interventions; existing health services; cost-effectiveness evaluations; and a realistic view of cost and management limitations (24).

Overall, implementation of feasible maternal health care interventions with public and government support has the potential to greatly reduce mortality among Latin America's pregnant women. What needs to be realized by the Latin American people and their governments is that good answers are available; and that while fatalistic attitudes will not save pregnant women's lives, this can be done through active maternal health care programs carefully designed to cope with and reduce prevailing perils.

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