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Limitations of Maternal Care to Improve Maternal Health

The topic of this presentation is the limitations of the effectiveness of health care interventions to improve maternal health. I would like to discuss here not the inability of care to help individuals with health problems: we all recognize that this is central to the provision of health care. What I would like to address is the limitations of health care systems, specifically health care in pregnancy, to affect maternal health status.

The key word here is the "limitations." It is not that health care is ineffective in improving health, but rather that there are limitations in its ability to do so due to several factors related both to the nature of health care and to the nature of society.

Clearly, there are certain areas of the world where maternal health is disproportionately poor. (See figure 1) This suggests something that we all intuitively know: that health status is not only an individual characteristic but a characteristic more widely of communities, nations, and even global regions. The reason for this, of course, is that poor health is often caused by conditions not directly characterized as health problems. A few of the most important of these are on the following slide.

Obviously if basic social conditions generate poor health, they will not be solved by medical interventions or health care to women. (Figure 2) What happens in such cases is that people can be rescued from the results of poor environments but then, without further intervention, are returned to the same pool, exposed, again, to the same influences that predispose to poor health.

Certainly, we are all aware that poverty and illiteracy are related generally to poorer health status. For women, in particular, there are other social conditions that generate poor health. One is overwork. Most women in developing countries have economic responsibilities and also total household responsibility. This results in sometimes very long and demanding days, with attendant fatigue and lack of sleep. This work may start at a very early age.

The final point I have added is one that has been far less discussed than

the other three, but one that I see as conditioning many health problems faced by women. That is, the general inequality in sexual relationships. This means that women basically cannot choose when and with whom to engage in sexual relations. They are expected to be married early, to have sex with partners over whose sexual activity they have no control, and to impose no conditions on their own sexual activity, such as the use of contraception or barriers to the transmission of sexually transmitted diseases. Some women are forced by poverty, lack of opportunity, education, and cultural conditions to become commercial sex workers with an even greater exposure to sexually transmitted diseases including AIDS.

The next slide illustrates the results of this in the high prevalence sexually transmitted disease in the developing world. (Figure 3) The subsequent slide illustrates the results in terms of infertility. (Table 1)

(Figure 4) The second limitation of maternal health care is due to the fact that maternal ill health originates before pregnancy and endures beyond it. This is a central issue with regard to the design of health interventions themselves. Many health interventions are designed for application during pregnancy for administrative convenience and the apparent simplicity of that point of contact with women. That is, pregnancy may be one of the times that most women seek medical care, and therefore, it is around this contact that many interventions are designed.

Unfortunately, however, the window of contact with women during pregnancy many times is very small. Women often come to prenatal care in mid-pregnancy, and in many cases even later. This gives very little time to intervene in the pregnancy, no less to correct underlying health conditions. One example that is frequently pointed to is the issue of tetanus immunizations for women, which in the usual sequence would require contact over several months and at least three visits to the clinic.

Beyond this, there is the issue of whether pregnancy itself is the most appropriate time to intervene in some chronic problems of maternal health. The

following slide illustrates the genesis and chronicity of ill health in women and how this ill health is transmitted over generations. (Figure 5) Specifically, there are areas of discrimination against female children that work powerfully to condition a lifetime of less than optimal health. As children, women are discriminated against in terms of education, in terms of immunization, nutrition, and curative health care as well as hours of work. (Figure 6) It is not necessarily the care that the health systems discriminate but that girls are less likely to be brought for some of the services.

All of this, plus the physiological demands of menstruation and childbirth, means that anemia is one of the most common health problems in developing countries today. (Figure 7) In some ways, it provides a very good model for discussion of the problems of intervening solely during pregnancy for health problems that are, in fact, chronic and cumulative.

In the first place, there is the problem of time. Anemia is not a condition that can be corrected quickly. Iron supplementation is often required for many months before low levels of hemoglobin become normal. An additional problem during pregnancy is, of course, that the side effects associated with iron supplementation are exacerbated by the pregnancy itself. Nausea and constipation, for example, are already problems suffered by pregnant women, and if these are compounded by side effects of an iron pill, the pill may not be taken.

In fact, since iron is well stored in the body, it is not even necessary to wait for pregnancy to correct iron deficiency. One could imagine other programs that would reach women either premaritally or in the community when non-pregnant to help improve iron stores. In the postpartum period, similarly, women could be supplied with iron supplementation at a time when they would not suffer the side effects associated with pregnancy. Yet, the postpartum period has not been used traditionally as a point of contact for ongoing health interventions for women. It has always been assumed that resources are so limited that women will be seen only during pregnancy and that other contact is

either unfeasible or unwanted. Yet, health interventions that target only a narrow slice of time (i.e., pregnancy) without reference to life conditions before and after can suffer inadequacy in design and implementation and their achievements may be less than desired. Maternal care, i.e. care during pregnancy, may be particularly limiting in this respect.

(Figure 9) As we all know in theory, though are often reluctant to admit in our own program areas, knowledge is often limited or even in error. This can result in a choice of inappropriate, erroneous interventions. Some interventions may have no hope of success -- such as screening and diagnosis without referral or treatment. Of course, interventions that cannot cure a problem or do not prevent it will result in health care that does not improve maternal health. Maternal care, for some reason, is an area particularly rife with untested interventions.

The ill effects of overuse of technology have recently been a subject of much discussion. It appears that there are some health care practices that are more likely to cause problems than to solve them. A major review of maternity care recently suggested that at least 67 common procedures that have been assumed to improve health are now, on the basis of evidence, judged to be more likely to be harmful than helpful to maternal health overall. Among these are routine repeat cesarean sections after previous cesarean sections, routine use of episiotomy, routine enemas during labor, routine shaving of the perineum during labor, and provision of additional fluids to breastfed babies.

In addition, the implementation of any health technology must always be viewed with caution as it inevitably produces a certain number of iatrogenic effects - and these apply both to the people who need the intervention and received it as well as to those who were either misdiagnosed or over treated and would have had good outcomes without the intervention to begin with. In other words, we cause some morbidity to those who would have escaped it had we not intervened.

The fourth important reason that health care has proven limiting has

been inappropriate design of interventions. (Figure 10) In other words, they may be economically, politically, or culturally maladapted to the environment and, therefore, not used or resisted. In order to be useful to an individual or a community, an intervention must be accessible, acceptable, and affordable both on a community level and on an individual level.

If contraceptives, for example, or iron pills are available only in a clinic most women do not use, the health care is inaccessible and functionally not there for them. (Figure 11) Similar situations apply to legal abortion services that are located only in very centralized areas and effectively are not able to improve maternal health because they are not accessible to most people. An intervention must be acceptable or it will not be used -- and perhaps may taint other interventions of a similar nature. An example here might be an aggressive sterilization campaign, such as that experienced in India, in which the population as a whole rejected the stringency and aggressiveness of the application of the intervention. This rejection then had further effects in making all family planning services more difficult to promote.

The intervention, of course, must be affordable or even its suggestion is an exercise in futility. Unaffordable interventions include the provision of high levels of technology in remote rural areas -- for example, secondary or tertiary maternity care in small villages. Even on the individual level, an intervention must be affordable to be used. This means that either services must be provided in a subsidized way or the population must have an adequate level of health insurance. Otherwise, there will be many who will not be served, and these will likely be the persons most in need.

Finally, maternal care has limitations if care is poorly rendered. (Figure 12) In some respects, maternity care may be more subject to this than other types of care since much of the content of routine prenatal care is repetitive, the services may be overwhelmed, and the yield of positive findings for any particular element of care may be small. Certainly, if health care workers are haphazard in taking blood pressures and hemoglobins, some women who

could have been helped will not be helped. This type of problem is not as rare as one might assume. In a study to assess the quality of prenatal care in the Middle East, it was found surprisingly often that health care workers did not take the blood pressures that they reported had been taken. Similarly, if procedures are undertaken with lack of attention to asepsis, for example, many women may have poor outcomes. Many women undergoing needed C-sections die anyway of sepsis -- partly due to poor standards of hygiene. The issues of service quality are important ones that must be kept in mind when assessing the impact of any intervention. They relate to training and supervision, as well as to assessment of performance. All of these are important components in assuring the quality of care of reproductive health services.

I would like to close by highlighting how much we do not yet know about what makes for more effective care. Specifically, I think it is worthwhile to point out that some of the most effective aspects of care may not yet have been specified. I believe this is true both on an individual and community level. It points out how much more we really need to know about how to make care more effective.

On an individual level, a recent evaluation of the impact of prenatal care suggested that there is no specific aspect of prenatal care that could account for its beneficial effects in studies to date. What the authors point to in this case is the impact of the caring process - of the morale boosting and psychological support that is associated with more favorable outcomes for the women who receive such care.

What this suggests, then, is that we should concentrate not so much on specific interventions or screening mechanisms or tools but in getting every person connected to a source of effective care that can act also as a support system during pregnancy. It may not be so much the specific elements of care as care itself that produces good results. This could be true at moments of life outside of pregnancy as well.

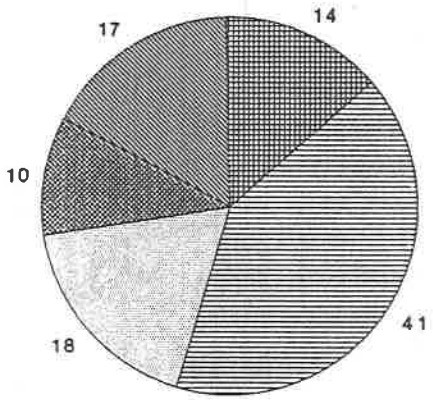
On a community level, similar effects seem to operate. A recent review of the maternity system in Grenada, West Indies suggests that this island has achieved a fairly good record of maternal and neonatal health without any provision of tertiary care. The significant element here seems to be very easy access of all women to midwife-staffed, primary maternity care services within close distance, combined with a working referral system to secondary levels of care and early management of problems.

Similarly, a recent scheme in Bangladesh to reduce maternal mortality provided better access to primary level midwifery care during labor and delivery. Although this care was used only by a minority of women, the scheme was associated with a large impact on the overall levels of maternal deaths in the community. The authors of this study were perplexed by the apparent effectiveness of a system that was used so selectively and according to no particular criterion of medical need, but rather based on women's own self referral to care.

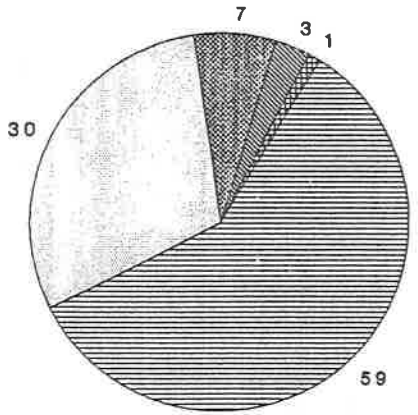
I bring up these examples merely to point out that there are some aspects of the effectiveness of maternity care that we do not yet know nearly enough about. One of these aspects has to do with the efficaciousness of care itself or the perceived availability of care as a buffer against poor physical outcome. Despite the limitations of maternal care for maternal health (and there are many), it seems that there are many things we can learn about how to improve effectiveness of care. Many clues point in the same direction. *That is that wide extension of care giving systems and access to some level of effective care may be more important than assessment and implementation of specific interventions for deprived populations who are in great need.* Learning something more about this issue may help us to reduce maternal mortality and morbidity with sensitivity to the needs of the mothers themselves.

PROPORTION OF BIRTHS AND MATERNAL DEATHS BY REGION

Live Births



Maternal Deaths



South Asia
Africa
Latin America
East Asia
Developed Countries

Safe Motherhood Newsletter, No. 1, WHO

WINIKOFF/POPULATION COUNCIL

FIGURE 1

1. POOR HEALTH CAUSED BY NON-HEALTH PROBLEMS:

POVERTY

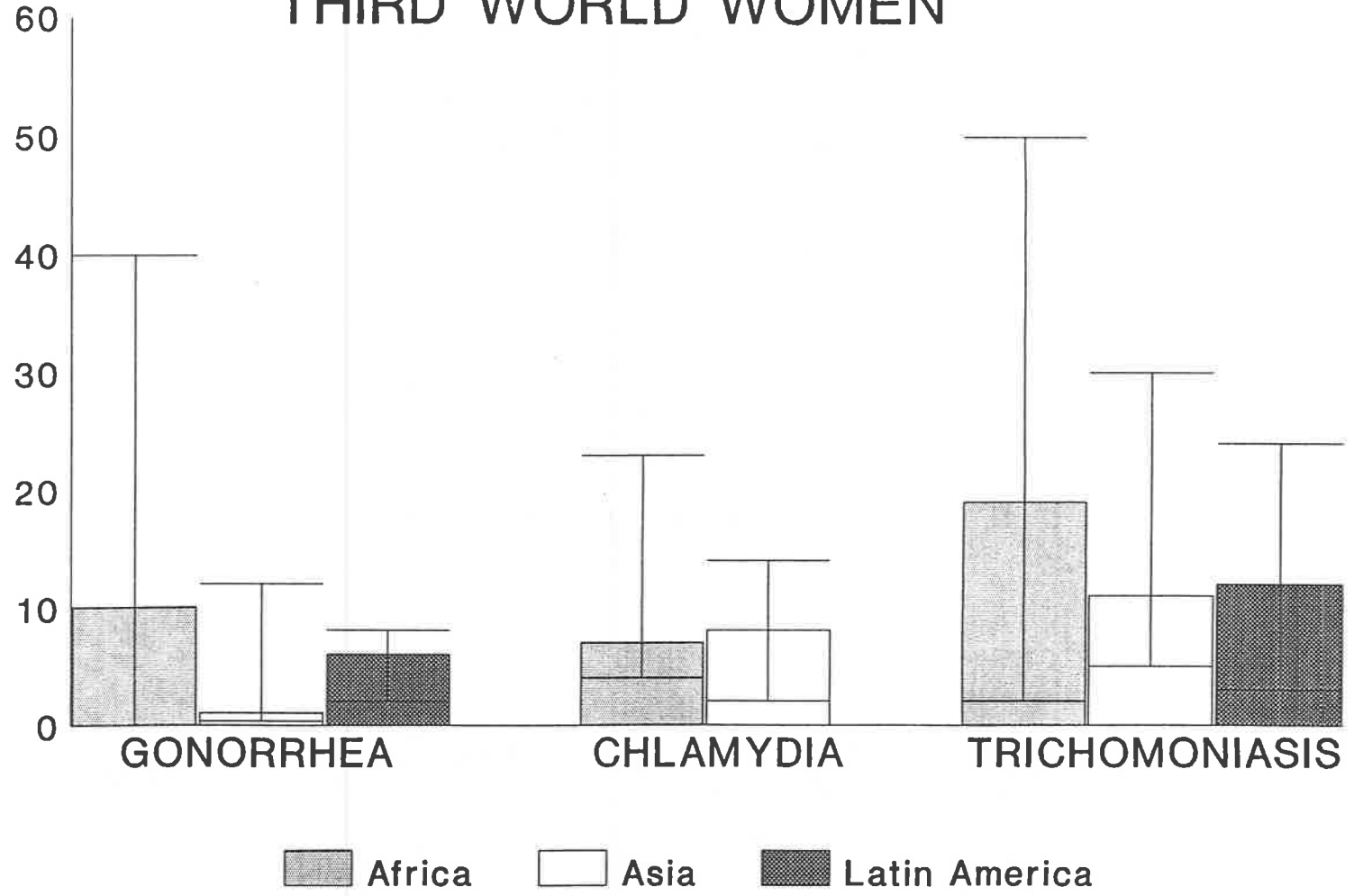
ILLITERACY

OVERWORK

INEQUALITY IN SEXUAL RELATIONSHIPS

FIGURE 2

LOWER REPRODUCTIVE TRACT INFECTIONS: NON-PROSTITUTE, NON-STD CLINIC THIRD WORLD WOMEN



IWHC/Dickson, Mueller, Wasserheit

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FIGURE 3

Percent of primary and secondary infertility in World Health Organization survey populations

Country	Percent infertile (women of reproductive age)			
	Urban		Rural	
	Primary	Secondary	Primary	Secondary
Benin	3	11	3	9
Cameroon	—	—	12	33
Tanzania	5	20	4	19
India	2	6	4	7
Thailand	3	14	2	12

Source: Adapted from L. Mtimavalye and M. Belsey, "Infertility and sexually transmitted disease: Major problems in maternal and child health and family planning," paper prepared for the International Conference on Better Health for Women and Children through Family Planning, Nairobi, October 1987.

TABLE 1

2. Poor Health Originates Before Pregnancy and Endures Beyond it

FIGURE 4

The perpetuation of poor health among women and girls

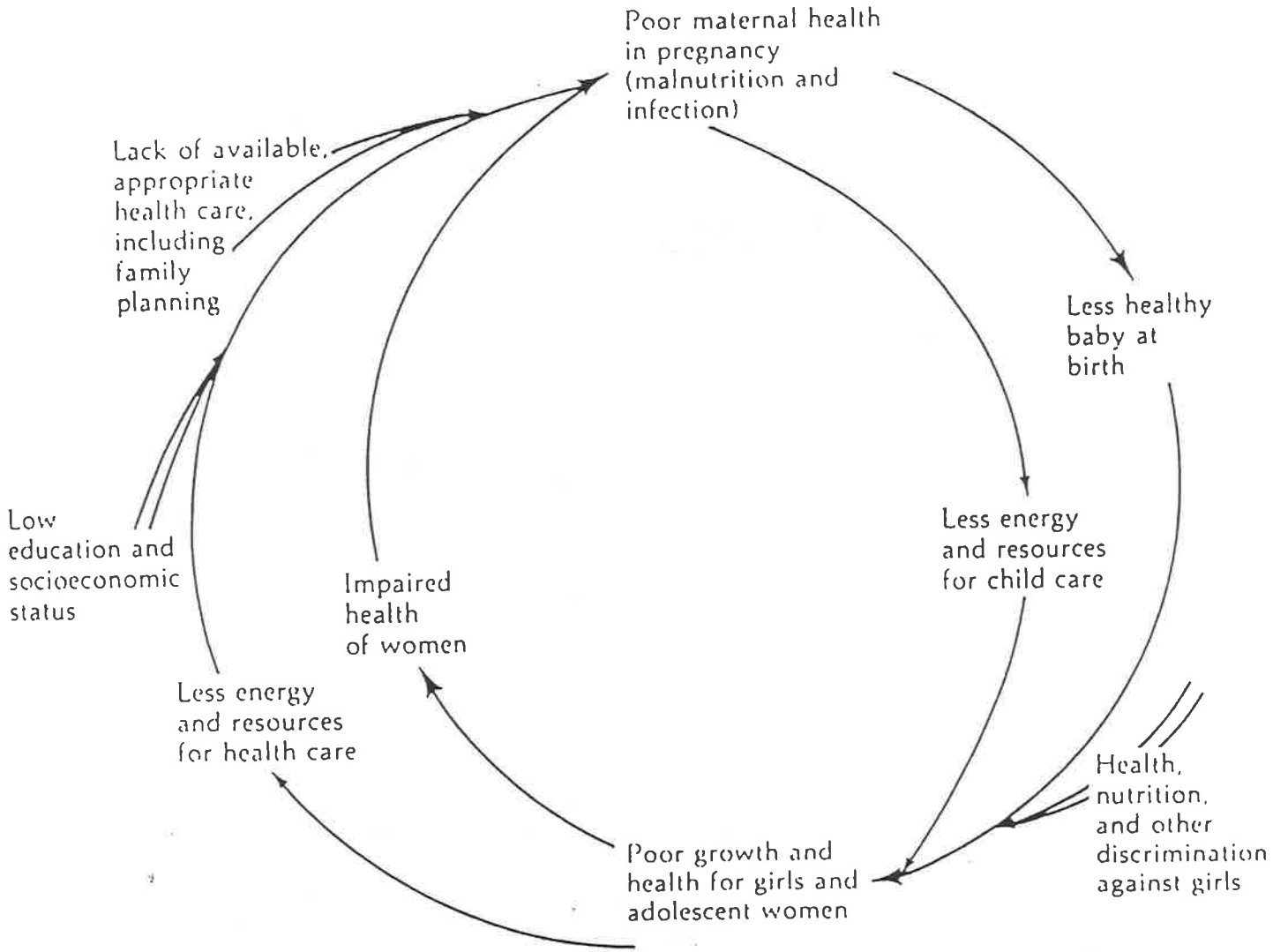


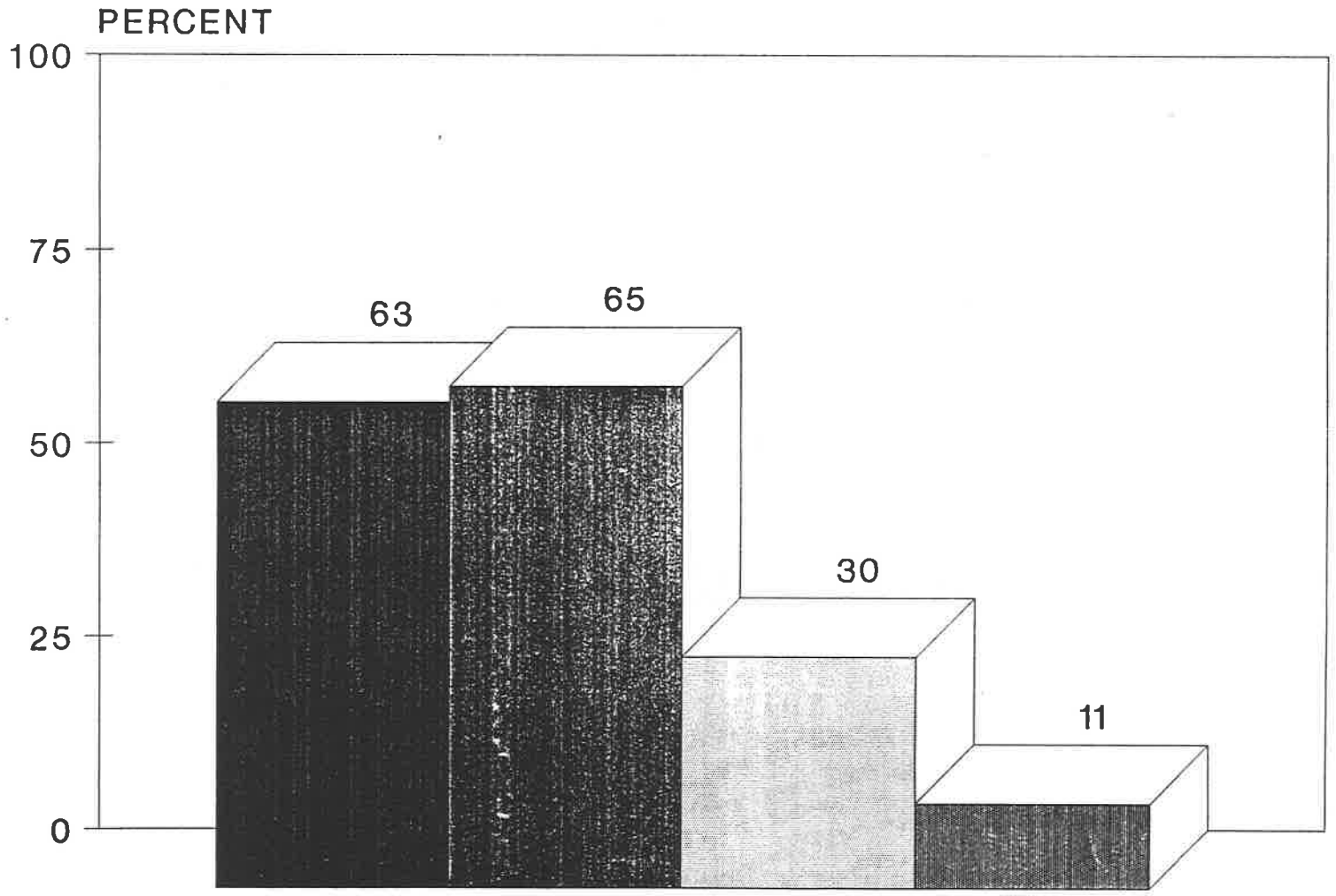
FIGURE 5

AREAS OF DISCRIMINATION AGAINST FEMALE CHILDREN

- Education
- Immunization
- Nutrition
- Curative Health Care
- Hours of Work

FIGURE 6

ANEMIA IN PREGNANCY



Population Council, 1988

FIGURE 7

INTERVENTIONS MUST BE:

Accessible

Acceptable

Affordable

FIGURE 10

5. Poorly Performed Interventions

Will Not Succeed

FIGURE 11