

UNWANTED PREGNANCY *and*
POST-ABORTION COMPLICATIONS
in PAKISTAN:

Findings from a National Study

October 2004

 Population Council



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¹ These reports are available as separate publications:

- Abortions and Post Abortion complications in Pakistan: A report based on health professionals and health care facilities by Dr Gul Rashida, Dr Zakir H. Shah, Dr Fariyal Fikree, Azeema Faizunnisa, Lauren.Mueenuddin.
- Dealing with Unwanted pregnancies: Insights from interviews with women by John Casterline and Shafique Arif
- *Choices of Contraception versus abortion: Insights from women, husbands and health care providers* by Dr. Naveed-I-Rahat, Ms.Zeba Tasneem, Mr. Mumraiz Khan, Ms. Ayesha Pervaiz, Ms. Iram Kamran, Ms. Nadia Moqem

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EXECUTIVE SUMMARY

The twofold objectives of this project are, first, to investigate the phenomenon of induced abortion and, second, to determine what factors lead to unwanted pregnancies. A better understanding of unwanted pregnancy and induced abortion will, it is hoped, lead to more effective policies and programs to reduce the incidence of both unwanted pregnancies and unsafe abortions.

To this end, four separate research studies were conducted in 2002 and 2003: a survey of health professionals, a survey of health facilities, a survey of women who suffered from post-abortion complications, and in-depth qualitative interviews with women (and their husbands) who had experienced an induced abortion. Data was collected in all four provinces, and in both urban and rural communities.

A rigorous methodology was employed to generate national estimates of the incidence of induced abortion. An estimated 890,000 induced abortions occur annually in Pakistan. The ratio of induced abortions to live births is 0.20, one abortion for every five live births, equivalent to one out of six pregnancies terminated by induced abortion. The estimated national abortion rate is 29 per 1000 women, implying that Pakistani women on average have about one induced abortion during their lifetime. Clearly induced abortion is a widespread, and significant, means of fertility control in Pakistan. The empirical evidence indicates that the large majority of unwanted pregnancies, and especially those ending in induced abortion, occur to relatively older married women who already have several living children. These are women who have achieved their desired family size. The in-depth interviews reveal that these women and their husbands struggle with the very difficult choice between an induced abortion and an unwanted birth, mindful of the stress the latter will place on the family.

The project data provides much insight about how induced abortions are obtained in Pakistan – providers, methods, and financial costs. In all these respects, there is considerable variation between urban and rural areas, and between the poor and those who are better off. The project also gathered information on post-abortion complications. This evidence raises serious concerns about the large number of women who experience serious health complication each year in Pakistan as a result of unsafe abortion, and who are treated in medical facilities. An estimated 197,000 women are treated each year for complications resulting from unsafe induced abortion, in public health facilities (including teaching hospitals, District and Tehsil Headquarters hospitals and Rural health Centres) and private teaching hospitals. Clearly, morbidity resulting from unsafe abortion has a substantial impact on women's health and results in a significant burden on the health care system. The research findings are also reason for concern about the quality of existing post-abortion care (whether following a spontaneous or induced abortion). The care provided in both public and private facilities falls short of desirable

standards: staff are not adequately trained, female staff are in short supply, and appropriate equipment is lacking.

It is better that unwanted pregnancies be prevented through effective contraceptive practice than resolved through induced abortion. For this reason, the relationship between contraception and induced abortion is a major focus of this study. The data reveals that a large fraction of the women who have induced abortions are well acquainted with contraception: virtually all of them are aware of contraceptive methods (including many modern methods), and many of them have actually practiced family planning in the past. The unwanted pregnancies occur because of contraceptive failures (itself a reflection of heavy reliance on ineffective methods) and because couples have discontinued contraceptive use despite wishing to avoid pregnancy.

That women who wish to avoid becoming pregnant do not use contraception can be attributed to several important factors. Existing family planning services are inaccessible to many women and, of equal importance, those who are poor struggle to afford the recurrent financial costs of contraceptive supplies. In some cases, the husband wants to have more children although his wife does not. A major obstacle to use of contraception is the fear of health side effects and misperceptions: it appears that many Pakistani women and men regard continuing contraceptive practice as more threatening to their health than an occasional induced abortion.

Among the recommendations emerging from this study, the following deserve particular emphasis:

- **Family planning services need to be improved with the underlying goal of weakening the various obstacles that prevent Pakistani couples from practicing effective contraception.** The family planning calculus of Pakistani women and men must be transformed if induced abortions are to become a rare event. Services need to be more accessible and less costly. Women and men's fears of health side effects of contraception need to be squarely confronted.
- **Medical care for post-abortion complications should be more available and of higher quality.** Given the current high incidence of induced abortion, post-abortion care must become a central concern in the maternal health arena. Among improvements that can be recommended are a larger number of facilities prepared to offer post-abortion care (more rigorous training of staff, including mid-level professionals, upgrading of equipment and supplies) and, more specifically, increased availability of well-trained female staff.
- **Men should be more effectively incorporated in resolving the various problems surrounding unwanted pregnancy – ineffective contraception, induced abortion and its repercussions.** A cross cutting recommendation is that efforts to reduce unwanted pregnancies include more direct approaches to men. The data reinforces the findings from

other studies that men have a critical role in reproductive health decisions in Pakistan – both contraceptive decisions and decisions about induced abortion.

SECTION 1: INTRODUCTION

Pakistan was among the last nations in South Asia to experience a substantial and sustained decline in fertility. Demographic estimates for the period from the 1960s through the 1980s indicate that women on average had six or more births over their reproductive career (as represented by the “total fertility rate” [TFR]). Since the 1980s, fertility has departed from this long-standing plateau, with the most recent estimates of the TFR ranging between four and five births per woman. The TFR has declined by almost two births in a period of less than two decades. This is evidence of both an increased desire on the part of Pakistani couples to limit their number of births, and increased practice of fertility regulation.

However, the reduction in fertility has not been accompanied by a concomitant reduction in unwanted pregnancies. This is as expected – the experience of many countries demonstrates that when fertility transition is proceeding apace, declines in the desired number of children often match, or even run ahead of, the adoption of effective family planning practices. What distinguishes Pakistan is the relatively high prevalence of unwanted pregnancy. The first demographic surveys conducted in Pakistan in the 1960s revealed that a large fraction of married women – in the order of one-quarter to one-third – wished to avoid pregnancy but were not practicing any method of family planning, a circumstance commonly labelled “unmet need for family planning”. As compared to other Asian countries and countries in other regions, the level of unmet need in Pakistan was high in the past, and this has continued up to the present. High levels of unmet need result in high levels of unwanted pregnancy, and this too has characterized Pakistan in recent decades.

These aspects of reproduction in Pakistan and related parameters are presented in Table 1, using data from three national demographic surveys conducted since 1990 (the 1990-91 Pakistan Demographic and Health Survey, the 1996-97 Pakistan Fertility and Family Planning Survey, and the 2000-01 Pakistan Reproductive Health and Family Planning Survey). The recent decline in fertility is evident and, assuming it has continued since 2001, suggests that the TFR is currently about 4.5 births per woman. The desire to limit fertility has remained relatively high and constant, with 44% of currently married women in 2000-01 stating a desire to have no further births. The percentage using any method of contraception is substantially lower, at 28% in 2000-01, and some of this use is by women who wish to have

further births sometime in the future. The discrepancy between fertility desires and contraceptive use is unmet need for family planning, a very important parameter from the standpoint of this research on unwanted pregnancy; the percentage of currently married women with unmet need stands at 33% in 2000-01, only slightly lower than the peak of 38% in 1996-97. That is, one in three currently married women in Pakistan is at risk of an unintended (mistimed or unwanted) pregnancy.

Table 1: Fertility indicators, 1990 - 2001

Indicator	1990-91 PDHS	1996-97 PFFPS	2000-01 PRHEPS
<i>Fertility:</i>			
Total Fertility Rate	5.4	5.4	4.8
<i>Fertility preferences:</i>			
Percent desiring no more children	40	46	44
<i>Contraceptive use:</i>			
Percent currently using any method	12	24	28
Percent currently using modern method	9	17	20
<i>Unmet need for family planning:</i>			
Percent with unmet need	28	38	33

Source: Pakistan Reproductive Health and Family Planning Survey 2000-01, Preliminary Report.

When a woman does not want another child yet becomes pregnant, she may seek an induced abortion. Induced abortions are known to occur in Pakistan, and indeed the medical community has long recognized that this is a widespread phenomenon. But to date there has been limited scientific research on induced abortion, in particular research that is national in scope². The national demographic surveys do not provide valid data on this highly sensitive topic (hence no estimates are presented in Table 1). Despite the challenges of conducting research on the topic, induced abortion should not be ignored because of its significant repercussions – for women’s health (both physical and emotional), for the financial and social standing of the couple, and for the health care system in Pakistan.

The principal objective of the project summarized in this report is to better understand the reasons for unwanted pregnancies in Pakistan and the resolution of a fraction of these pregnancies through induced abortion. More specific questions that are addressed by this research are:

² Awan, Asghari and Pervez Akram. n.d. Abortions in a rural Community. Lahore: MCWAP.
Miller, P., A. Kayani and A. Minhas. 2000. “On the dynamics of contraceptive use in Pakistan.” Paper presented at the conference on Pakistan’s Population Issues in the 21st Century, Karachi, 24-26 November 2000.
Population Council. 1998. Pakistan Contraceptive Prevalence Survey: Final Report. , Islamabad: Population Council.
Rehan, N. 1998. Unsafe Abortion. Lahore: Family Planning Association of Pakistan.
Saleem, Sarah, and F. Fikree. n.d. “Does awareness of post-abortion complications deter Pakistani women from seeking clandestine abortions?” Mimeographed paper.

- What is the incidence of induced abortion in Pakistan?
- How are induced abortions obtained in Pakistan? Who provides them, what do they cost?
- What is the incidence and nature of post-abortion complications, and how are these treated?
- What are the characteristics of women and couples who have induced abortions?
- Why do many couples who wish to avoid pregnancy not practice effective family planning?
- What are the obstacles to effective contraceptive practice?

To address these questions, four separate sets of data were collected under the auspices of this project. The datasets are briefly described in Figure 1 (and in more detail in Annex B). The data ranges from survey interviews with health professionals to qualitative in-depth interviews with women (and their husbands) who had recently experienced an induced abortion. It should be noted that two of the four data collection exercises sampled all four provinces – the Health Professionals Survey and the Health Facilities Survey. With the four-province coverage of these two surveys, the incidence of induced abortion can be estimated for all four provinces and for the nation as a whole. The In-Depth Interviews were conducted in Punjab and Sindh; for reasons of project logistics, it was only feasible to carry out this component of the study in the two larger provinces that encompass most of the population of Pakistan. The Post-Abortion Survey was conducted in Punjab, Sindh, and NWFP provinces; Balochistan contains very few facilities with a substantial number of post-abortion care patients, a prerequisite for the sample recruitment for this survey.

This project provides the most comprehensive nationwide examination to date of unwanted pregnancy and its resolution through induced abortion. The estimates of the incidence of induced abortion, in particular, are the first national estimates obtained through a rigorous scientific methodology.

From the outset, and as is made clear in the final section of this report, the overarching goal of this research is to inform policies and programs that can reduce the incidence of unwanted pregnancies and reduce the incidence of unsafe abortions.

Definitions of Types of Abortion

A *spontaneous abortion* or miscarriage is the termination of a pregnancy without exogenous causes, an unintended abortion that is due to natural or accidental causes; internationally, a time limit (before the 20th or 28th week, differing across countries) or size of the fetus (less than 35 cm length) may also be used to define a spontaneous abortion and to distinguish it from a still birth.

An *induced abortion* is the intentional termination of a pregnancy before the embryo or fetus have reached extra uterine viability, through use of a range of procedures, including safe methods such as surgical and pharmacological methods, and unsafe methods that range widely in type and effectiveness.

Induced abortions are illegal in Pakistan, unless they are required to save the woman's life or provide "necessary" treatment. The Qisas and Diyat Ordinance, based on Islamic teachings, and the civil penal code laws differ in the severity of punishment attached to inducing abortions. Doctors usually obtain a second opinion before performing a therapeutic induced abortion. However, there are no established national guidelines for the medical profession mandating such permission. Post-abortion care however, is part of the National Reproductive Health package and includes pre- and post-abortion care among its components.

Figure 1: Sources of data

This report analyzes four sets of data that were collected in 2002-2003. More detail on each dataset is provided in Annex B of this report.

Health Professionals Survey (HPS). 154 structured interviews were carried out with a wide range of health professionals known to have knowledge of women's health issues, including induced abortion. The sample was drawn from all four provinces. The aim of this survey was to obtain information on the conditions under which women obtain abortions and on the nature of post-abortion complications, and therefore the respondents were selected on the basis of their length of experience. The majority were gynaecologists and obstetricians attached to teaching hospitals or larger facilities.

Health Facilities Survey (HFS). Senior medical staff were interviewed at 230 facilities (described in detail in Annex B) sample to represent facilities in all four provinces. 146 of the facilities were public and 84 were private. The survey respondents were senior physicians. The primary aim of this survey was to estimate the number of cases of post-abortion complications and to assess the health facility's capacity for providing post-abortion care.

In-Depth Interviews. Semi-structured interviews were conducted with (i) 27 health service providers and (ii) 102 women and husbands of women (60 wives, 42 husbands) who had experienced an induced abortion. The respondents resided in urban and rural areas of Punjab and Sindh. The aim was to explore factors underlying the decision to have an induced abortion, as well as the health and social consequences of induced abortion.

Post-Abortion Survey. 448 structured interviews were conducted with married women who had recently experienced a spontaneous or induced abortion (259 spontaneous, 189 induced). The women were recruited at medical facilities in Punjab, Sindh, and NWFP. Women who had an induced abortion were asked how the unwanted pregnancy came about, and about the abortion experience. Women who reported post-abortion complications were asked about the nature of the complications and treatment received.

SECTION 2: THE INCIDENCE OF INDUCED ABORTION

Research on Unwanted Pregnancy: Induced Abortion as a Key Concern

As noted in the Introduction, unmet need for family planning is relatively high in Pakistan, and this in turn results in a large number of unwanted pregnancies. According to the 2000-01 Pakistan Reproductive Health and Family Planning Survey, the total fertility rate is 4.8 births per woman and the wanted total fertility rate is 3.86 births per woman. This can be interpreted as an average of 0.94 unwanted births over a woman's reproductive career.

Later in this report, reasons why Pakistani couples have unwanted pregnancies are explored at some length (see Section 6). Many women and couples are seeking to prevent unwanted pregnancies through contraception, but fail to use their method continuously or effectively. For this reason, investigation of the obstacles to effective contraceptive practice was a major objective of this project. That couples resort to induced abortion can be viewed as symptomatic of shortcomings in the provision of family planning services in Pakistan. It may also be indicative of various social obstacles to contraception and/or concerns about health side effects. What is clear from the evidence presented later in this report (Sections 5 and 6) is that in general women and their husbands do not take lightly the decision to terminate a pregnancy, rather for most of them this is a very painful choice among two poor alternatives – to have an induced abortion, or to have an unwanted birth. Either choice can have significant health, social, and financial repercussions for the woman and her family.

One reason to study the highly sensitive topic of induced abortion is to develop a fuller picture of the family planning needs of the population and the factors (programmatic and otherwise) that block the satisfaction of those needs. A second reason to conduct research on induced abortion is to better understand and increase awareness of the level and the context within which unsafe abortion is occurring, because unsafe abortion is directly related to significant impacts on maternal morbidity and mortality. For these two reasons, the number of women suffering from abortion complications, the total number of induced abortions and the induced abortion rate per 1000 women of reproductive age are important public health

parameters. The formulation of population and reproductive health policies and programs should be informed by knowledge of these parameters.

However, precise estimates of the numbers of induced abortion, safe or unsafe, are difficult to obtain in every society; induced abortion is a highly sensitive issue that many women prefer not to discuss. And where induced abortion is restricted by law and, as in Pakistan, essentially illegal except to save the life of a woman, there is even more reluctance to report an abortion when directly questioned in surveys. For these reasons, official statistics are unavailable.

Recognizing the difficulty of obtaining direct measurement of the incidence of induced abortion, a method has been developed that relies on indirect estimation techniques. (The methodology is described in detail in Annex C, and briefly at the end of this section.) This methodology produces an estimate of the number of induced abortions that take place annually. The method requires information from two of the four types of data collected in Pakistan in 2002 as part of this study, namely the Health Professionals Survey and the Health Facilities Survey (see Figure 1), supplemented by information from the 1998 Census and national demographic surveys. While this method has limitations, it is an accepted approach that has been successfully applied in several countries in different regions during the past decade.³

The Level of Induced Abortion in Pakistan

The national estimate from this study is 890,000 induced abortions occurring during 2002. The breakdown by province is presented in Table 2. For the purposes of comparison among provinces (or with other countries), the annual rate per 1,000 women of reproductive age (15-49) is a more meaningful measure. Based on the national estimate of 890,000 induced abortions, and estimates of the number of women aged 15 to 49, the estimated annual abortion rate is 29 per 1,000 women aged 15-49.⁴ If women of reproductive age were to experience this rate over their lifetime, the average Pakistani woman would experience about one abortion in her lifetime.

There is considerable variation across provinces in abortion rates. Estimated abortion rates are close to the national average in Sindh province (31), lower in Punjab (25) and

³ Singh S., J. V. Cabigon, A. Hossain, H. Kamal and A. E. Perez, Estimating the level of abortion in the Philippines and Bangladesh, *International Family Planning Perspectives*, 23:100-107 & 144, 1997.

Singh S. and D. Wulf, Estimated levels of induced abortion in six Latin American countries," *International Family Planning Perspectives*, 20:1, 1994.

Henshaw S. K., S. Singh, B. A. Oye-Adeniran, I. Adewole, N. Iwerek and Y. Cuca, The incidence of induced abortion in Nigeria, *International Family Planning Perspectives*, 24(4):156-164, 1998.

⁴ This is the medium estimate within a range that is based on different assumptions of the proportion of women with miscarriages who would be treated in health facilities (23%, 35% and 50%). The low estimate of the abortion rate is 25 per 1,000 women aged 15-49 (assuming that 50% of women with miscarriages of 13-22 weeks obtain facility based care), and the high estimate is 31 per 1,000 women (assuming that 23% obtain care).

substantially higher in Balochistan and NWFP provinces (37). Interestingly, those provinces with higher abortion rates also have lower contraceptive prevalence rates; the contraceptive prevalence rates are 16 percent and 24 percent in Balochistan and NWFP, respectively, whereas the national rate is 28 percent. As compared to estimates for other countries, the rate of abortion in Pakistan can be characterized as moderately high nationally and in all four provinces.

Another useful measure is the abortion ratio, defined as the number of abortions per 100 births. The abortion ratio is a concrete and readily understood indicator of how commonly induced abortions occur, and almost certainly is directly linked to the proportion of pregnancies that are unintended. For Pakistan as a whole, the estimated abortion ratio is 20 abortions per 100 births, ranging from a low of 18 per 100 births in Punjab province to a high of 26 per 100 births in NWFP. Put differently, nationally about one in six pregnancies are terminated by abortion. What is strikingly clear from these estimates is that induced abortion, most of which are clandestine, is a widely used method of preventing unwanted births in Pakistan.

Table 2: Estimates of the annual abortion rate per 1000 women aged 15-49, abortion ratio per 100 births, and number of induced abortions, nationally and by province, Pakistan, 2002

Province	Abortion Rate per 1000 Women 15-49	Abortion Ratio per 100 Births	Total Number of Induced Abortions
Punjab	25.4	18	457,000
Sindh	30.9	20	218,000
NWFP	37.3	26	160,000
Balochistan	37.5	22	54,456
<i>Pakistan</i>	<i>29.0</i>	<i>20</i>	<i>890,000</i>

Figure 2: Abortion rates per 1000 women (15-49), by province

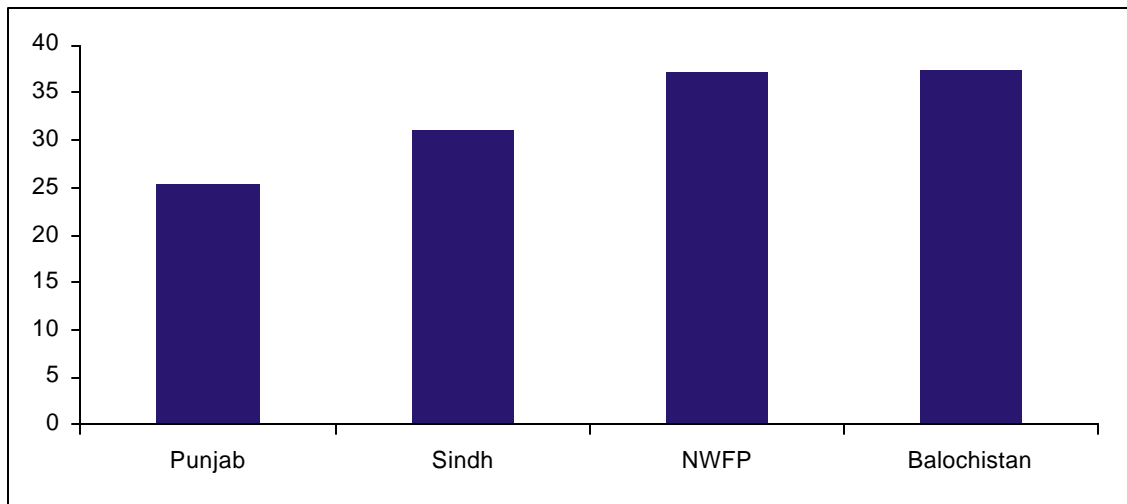
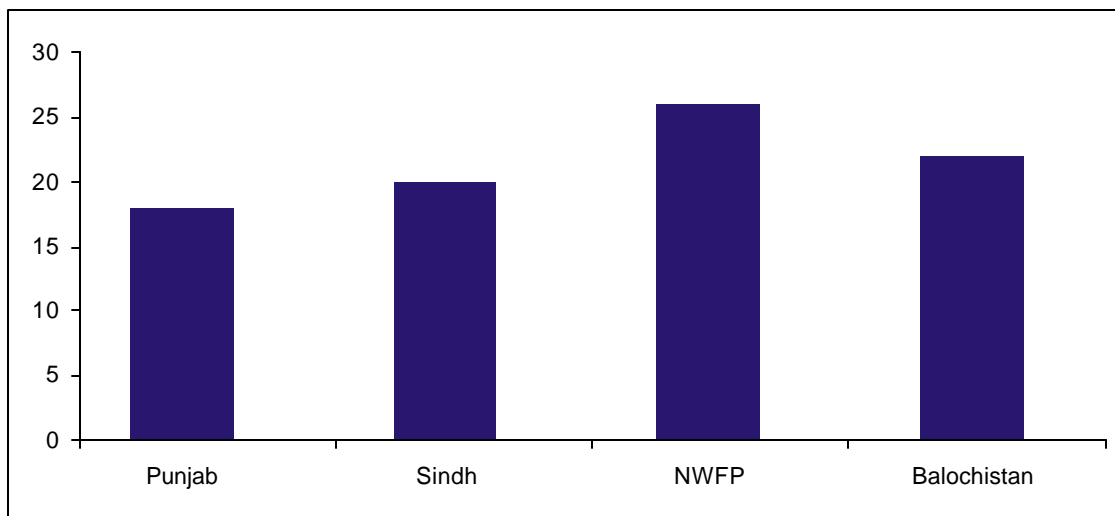


Figure 3: Abortion ratios per 100 births, by province



Brief Description of Methodology

Annex C contains a full description of the methodology as well as detailed estimates.

The method used to estimate induced abortions requires an estimate of the number of women treated annually for abortion complications. This was obtained from a survey that drew a sample from the full listing of public facilities down to the rural health centre level and a sample of private teaching hospitals. The number of women treated for complications of spontaneous pregnancies is then estimated and subtracted from the total number of post-abortion cases, yielding the number of hospitalized induced abortion patients. Separately, the proportion hospitalized among all women who have an induced abortion must be estimated. This serves as a “multiplier”. For example, if 20% (1 in 5) of women having

induced abortions are hospitalized, the multiplier is 5: that is, for every woman hospitalized for an induced abortion, four other women had an induced abortion.

Estimating the multiplier is a key step in this method. In most societies, hospitalized women represent only the tip of the iceberg; under the surface are all other women having clandestine abortions but largely invisible because they do not present themselves at hospitals for treatment. More specifically, there are two such groups whose size must be estimated. The first group is women who have a safe though clandestine induced abortion, and who do not experience serious medical complications that require hospitalization. This group is likely to consist of women who are financially better off and therefore can afford the fees of trained health professionals in the private sector (doctors and midwives), and women residing in urban areas who therefore have easier access to modern medical care. This group may also contain better-educated women who recognize the dangers of seeking an abortion from an unskilled provider. The second group consists of women who suffer serious complications but who do not obtain hospital treatment. This group will include many of the women who die from the complications. These women may be fearful of drawing attention to the fact that they have done something illegal, or they may not know where to obtain hospital treatment, or they may live too far from a medical facility, or they may not be able to afford the travel to a hospital or the costs of treatment.

Based on interviews with knowledgeable health professionals, this study estimates that nationally 23% of all women who obtain an abortion are hospitalized for treatment of the complications they experience, or roughly one out of every 4.5 such women. This ratio can be regarded as a rough indicator of the combined effect of two important factors: the safety of abortion, and the difficulty of access to medical care. The more safe the provision of induced abortion (fewer women experience complications and need care), and the more difficult access to care (fewer women are able to obtain the care they need), the lower this ratio is. The ratio estimated by this study is similar across all provinces, but is somewhat lower in NWFP and Balochistan provinces and somewhat higher in Sindh and Punjab. The estimate of 23% converts to a multiplier of roughly 4.5. As it happens, this value is similar to the value in other countries where this method has been applied.

SECTION 3:

INDUCED ABORTIONS: PROVIDERS, METHODS AND COSTS

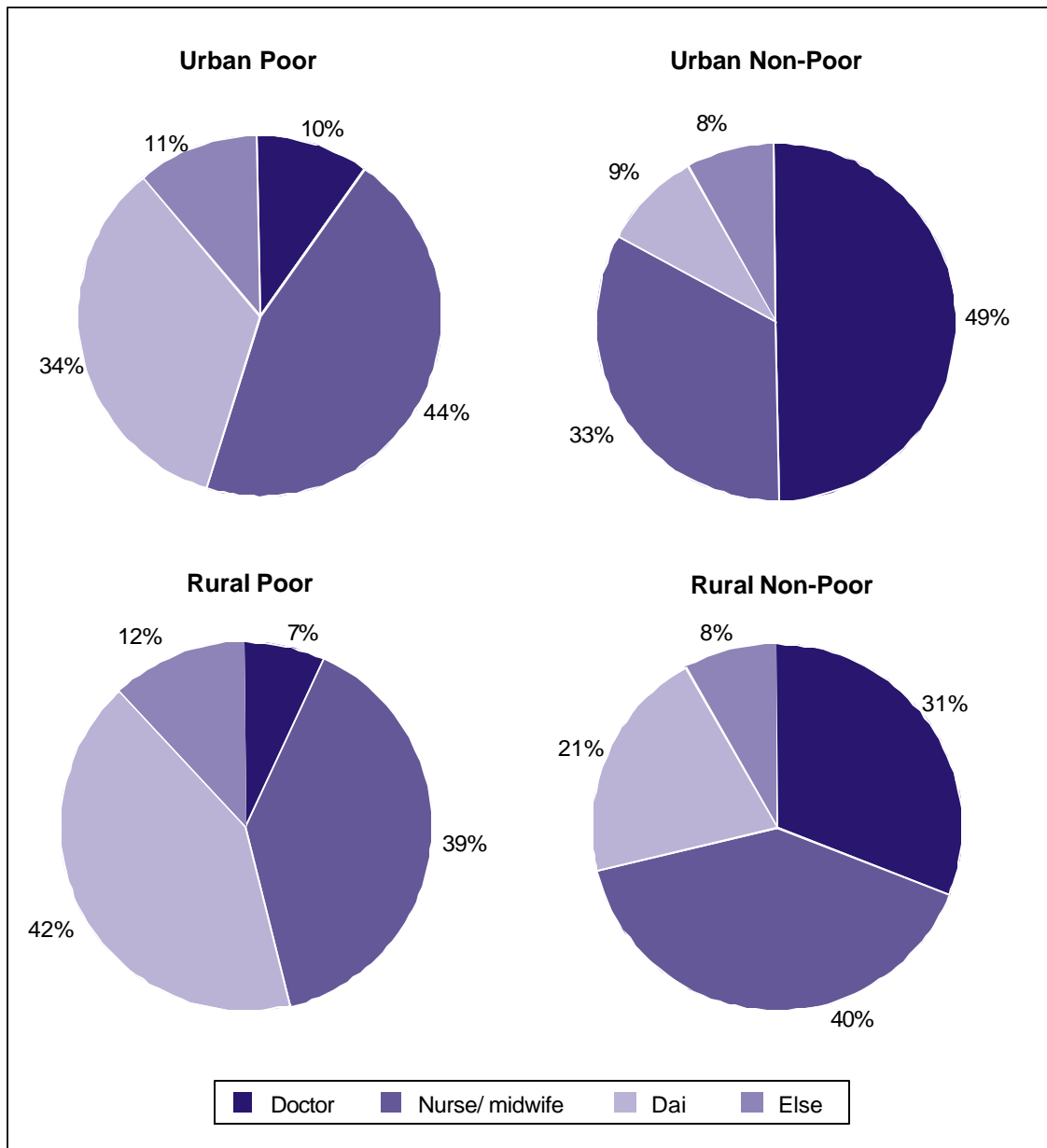
The multiple types of data collected in this project provide many insights about how women obtain induced abortions in Pakistan: the providers, the procedures employed, and the financial costs. Of great concern is safety, which is affected by the procedure, the level of training of the provider, and the conditions under which abortion is performed. Unsafe procedures can have severe consequences for women's health. In addition, even when a hygienic and medically safe procedure is used by a trained medical provider, the clandestine nature of the provision of this service may result in other difficulties for women – for example, they may receive no counselling or contraceptive services.

Providers

It is difficult to obtain a precise picture of the fraction of abortions performed by each type of provider. The Health Professionals Survey, a nationally representative sample of 154 health professionals who are knowledgeable about abortion service provision (and residing in all four provinces), contains some information on this issue. The health professionals were asked to estimate the percentage of women who obtain abortions from each of four main types of providers, and they were asked to make these estimates for each of four segments of the population: urban poor, urban non-poor, rural poor, rural non-poor. The poor vs. non-poor distinction relies on the perceptions of providers, which in turn is based on appearance (particularly clothing), profession, and residential area of client.

The health professionals' responses are displayed in Figure 4. The extremes are represented by the urban non-poor and the rural poor, with the urban non-poor relying mainly on doctors and the rural poor relying primarily on traditional birth attendants (*dais*) but also on nurses, midwives, and Lady Health Visitors. Among the rural non-poor, *dais* are a relatively common provider of induced abortions.

Figure 4: Most common provider of induced abortion: percentage distribution



Source: Health Professionals Survey

The In-Depth Interviews reveal a great deal about the *dais* and the abortion services they provide. *Dai* is a term that encompasses diverse sets of traditional health practitioners. One set are women who have learned their skills informally through attending childbirth and in other ways assisting senior *dais*. These women are largely uneducated and lack formal training. For a second set of *dais*, this is an ancestral profession, inherited from their mothers. Like the first set, these women are mostly uneducated and their training in the profession is informal, but in general their training is more thorough than the first set of *dais*.

A third set of *dais* has also acquired skills informally and is uneducated, but in addition has experienced formal training in maternal health (including birth delivery) and childcare.

The *dais* themselves express conflicting views about induced abortion in the In-Depth Interviews. Many feel it is immoral, with some indicating that they refuse to assist women in abortion and others regarding induced abortion as an unfortunate necessity. Some of the same *dais* also oppose use of contraception for reasons of health or morality which makes their clients' reliance on induced abortion even greater. The *dais* also acknowledge that induced abortions can be a significant source of income. This mixture of views is reflected in the following excerpts from an interview with a *dai* in urban Sindh:

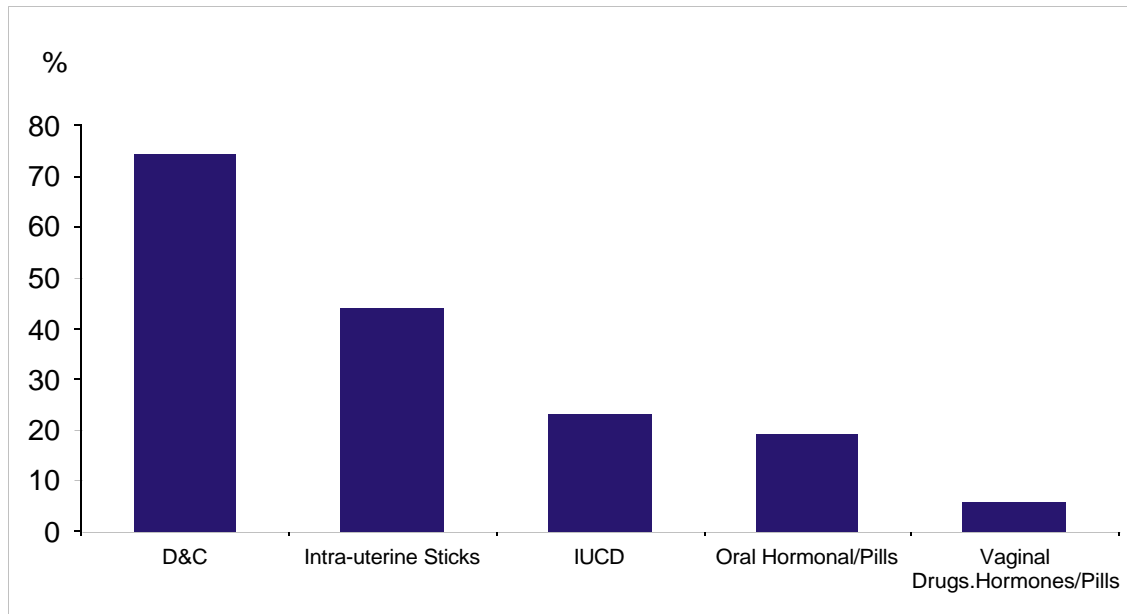
Abortion is a sin. But when people come to me crying and ask for help, then what should I do? I have to perform it, because my employer pays my salary. If I do not attend such patients, then where would the money come from? My employer has established his centre and invested a lot of money. I have to consider all these factors. (Karachi, Service Provider, 20 years of experience)

Induced abortion is a delicate procedure, and the risk of causing serious harm and damage to the woman is always present. From the standpoint of ensuring safe and hygienic conditions, the distribution of providers in Pakistan is worrisome. Consider, for example, the respondents in the Post-Abortion Survey. These women were drawn disproportionately from clinics where the training of personnel and the hygienic conditions are thought to be superior. Even so, the induced abortions of one-half of the respondents in this survey were performed by individuals unlikely to be properly trained and in conditions that may be unhygienic. In these circumstances, post-abortion complications are far more likely.

Procedures

The research uncovered many different procedures that are employed in Pakistan to induce abortion. In the Health Professionals Survey, the respondents were asked to list the techniques that are used. About twenty-five were mentioned (some of low efficacy and/or with serious health risks), falling into three groups: surgical, vaginal (drugs or instruments) and oral. The health professionals were then asked to select the two procedures that, in their opinion, are used most frequently for inducing abortion in Pakistan. The five procedures named most often are shown in Figure 5. D&C and various forms of intra-uterine sticks were most commonly cited as procedures used to induce abortions. Intra-uterine sticks include a variety of intra-uterine objects, such as knitting needles, catheter and bamboo sticks. IUCD while well known as a contraceptive method, in this instance was being used to induce an abortion.

Figure 5: Health professionals' perceptions of the most commonly used procedures to induce an abortion



Source: Health Professionals Survey*

Similar procedures were reported by women interviewed in the Post-Abortion Survey. However, as this sample of women was drawn disproportionately from NGO clinics that rely heavily on the Manual Vacuum Aspiration (MVA) technique, this was the second most common technique that they reported. (MVA was included among the twenty-five techniques listed by the health professionals, but very few of the health professionals identified MVA as one of the two most common procedures.) Medical abortion (pills) is also named more often by the women in the Post-Abortion Survey than by health professionals.

The Health Professionals Survey also asked about the techniques that women themselves use to induce abortion. The techniques mentioned fall into twelve categories and are listed in Figure 6.

* Health professionals were asked to provide a first and second method that women use for an abortion. These are combined together in this chart, and therefore the sum of the percentages exceeds 100 percent.

Figure 6: Abortion techniques used by women

<p>Drugs</p> <ul style="list-style-type: none"> • Purgatives • Quinine • Ergot Alkaloids • Hormones • Analgesics <p>Herbs</p> <ul style="list-style-type: none"> • Herbs taken orally • Herbs inserted into vagina <p>Other methods</p> <ul style="list-style-type: none"> • Insertion of objects • Heavy exercise • Heavy massage on abdomen • Hot dietary items (dry dates, eggs, cheese) • Cotton swab
--

The techniques include some that are probably ineffective in inducing abortion, and others that could result in an abortion but could also easily cause medical complications (such as insertion of physical objects into the uterus).

Not surprisingly, the women who have undergone an induced abortion are not always certain about the procedure that was employed. This is apparent in the In-Depth Interviews. The women count on the knowledge and skill of the provider whom they have entrusted with the procedure.

She (the provider) put some medicine inside the vagina, and this started pain and spotting. Next day she took out the medicine and heavy bleeding started, after which she did “Safai”. (Bahawalpur, Rural, 33-year-old with 4 living children)

She inserted a wire inside me, which initially started the bleeding. Later on it was excessive bleeding with clots. (Faisalabad, Rural, 36-year-old with 5 living children)

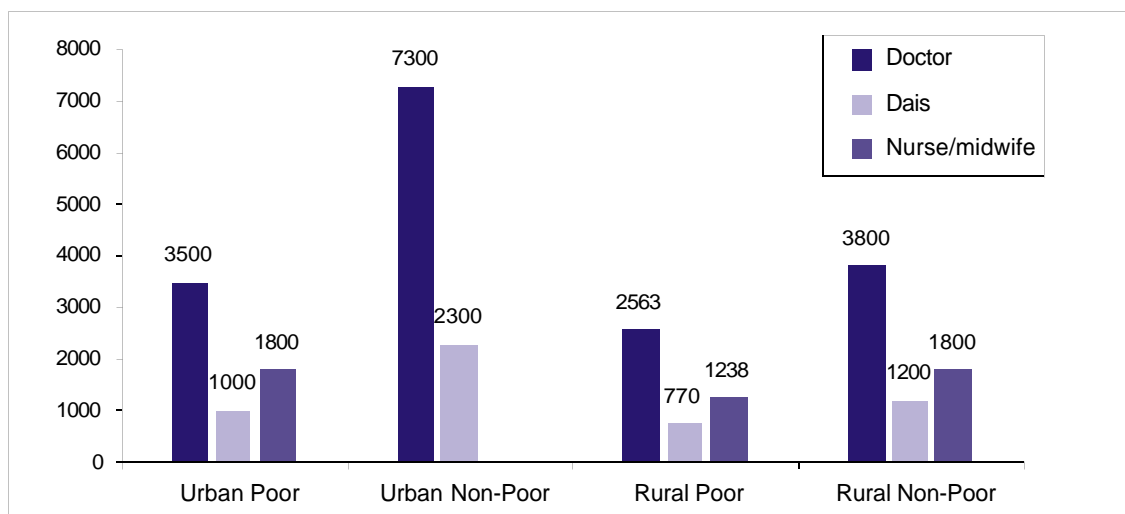
She placed some medicine inside me and gave a slow drip. After some time the bleeding started. Then she did the “Safai”. (Shikarpur, Rural, 25-year-old with 3 living children)

After my third child I became pregnant again. This pregnancy was of two months when I decided to abort. I had a prescription from a doctor who once gave me some tablets to regulate my menses. I bought those tablets from the store and ate them. These tablets caused heavy bleeding with clots and I had severe pain. So I went to a dai at the welfare centre. She did my “Safai”. (Karachi, Urban, 27-year-old with 3 living children)

Financial costs

Induced abortions are expensive for Pakistani couples, especially for the poorer segments of the population. Naturally the costs vary by type of provider, area of residence (urban or rural), and socio-economic status of the couple. Information on financial costs is contained in three of the project data-sets: the Health Professionals Survey, the Post-Abortion Survey, and the In-Depth Interviews. While not very precise, the responses about costs from health professionals and women themselves are fairly consistent

Figure 7: Average costs (in Rupees) for induced abortion, by type of provider, based on health professionals' estimates.



Source: Health Professionals Survey

The respondents in the Health Professionals Survey provided estimates of the cost of obtaining an abortion from different types of providers, and for different subgroups of women, as shown in Figure 7. Poor urban women on average were charged Rupees (Rs) 3,500 by a doctor in private practice and lower amounts by nurses (Rs. 1,800) and *dais* (Rs. 1,000). Rural poor women were charged Rs. 2,600 by a doctor. Non-poor women, irrespective of residence status, were generally perceived to pay more for abortion services than poor women. For the non-poor, doctors in private practice on average charged an estimated Rs. 7,300 in urban areas and Rs. 3,800 in rural areas, while *dais* charged the non-poor Rs. 2,300 and Rs. 1,200 in urban and rural locales, respectively. If the health professionals' perceptions are correct, then financial costs are roughly twice as high for the non-poor as for the poor, and twice as high if performed by more skilled providers in the private sector as compared to less skilled providers. Health professionals estimate that charges are as much as twice as high in urban areas as compared to rural areas. All of this suggests that providers, consciously or not, are following a sliding-scale payment scheme that takes into account women's ability to pay. However, even with this allowance, an

abortion from a trained provider is most likely out of the reach of poor urban and poor rural women. The women interviewed in the Post-Abortion Survey reported somewhat lower financial costs of their own recent induced abortions. The costs ranged from no charge to Rs. 5600, averaging Rs. 1145. The relatively low average cost can be explained by the fact that the majority of these women obtained their abortions at clinics where the consultation fee (which constitutes most of the total cost) is ordinarily set at Rs. 1000.

Some information on the cost of abortion is also available from In-Depth Interviews that were conducted with over 100 women who had recently obtained an induced abortion. These women, most of whom are poor, report financial costs ranging from Rs. 300 to Rs. 1500. A few indicated that the abortion was performed free of charge, due to their dire poverty and/or their prior relationship with the abortion provider. Consistent with the perceptions of the health professionals, *dais* charge less than doctors and nurses, and major NGO clinics charge about Rs. 1000 on average.

Induced abortions are in all likelihood far more expensive if the pregnancy is pre-marital or extra-marital. This is a clear message in the In-Depth Interviews. (See Section 5.) Some informants report fees that are twice as high if the pregnancy is out-of-wedlock, while others report fees as much as twenty times higher (for young never married women). In fact even though providers cannot always be certain that a pregnancy is extramarital, they appear quite confident in making the distinction.

As indicated in Section 6, many couples resort to induced abortion rather than practicing effective contraception in part because the one-time financial costs of induced abortion are felt to be easier to bear than the recurrent financial costs of contraceptive supplies. But this does not mean that many couples do not struggle to marshal the necessary funds. The In-Depth Interviews reveal that sometimes the women themselves manage to pay for the induced abortion:

“Women collect money by pinching it from their husband’s pockets. Then they pay for getting their pregnancies terminated.” (Faisalabad, Urban, 33-year-old with one living child)

“These women do embroidery and earn their own money. Most of the money they spend for family expenditures, but some they save for the costs of their abortions.” (Shikarpur, Service Provider, 47-year-old)

More often, it would appear, the funds are taken from earnings of the husband alone or of the husband and wife together, with the husband well aware of the expense and, indeed, providing most of the required money.

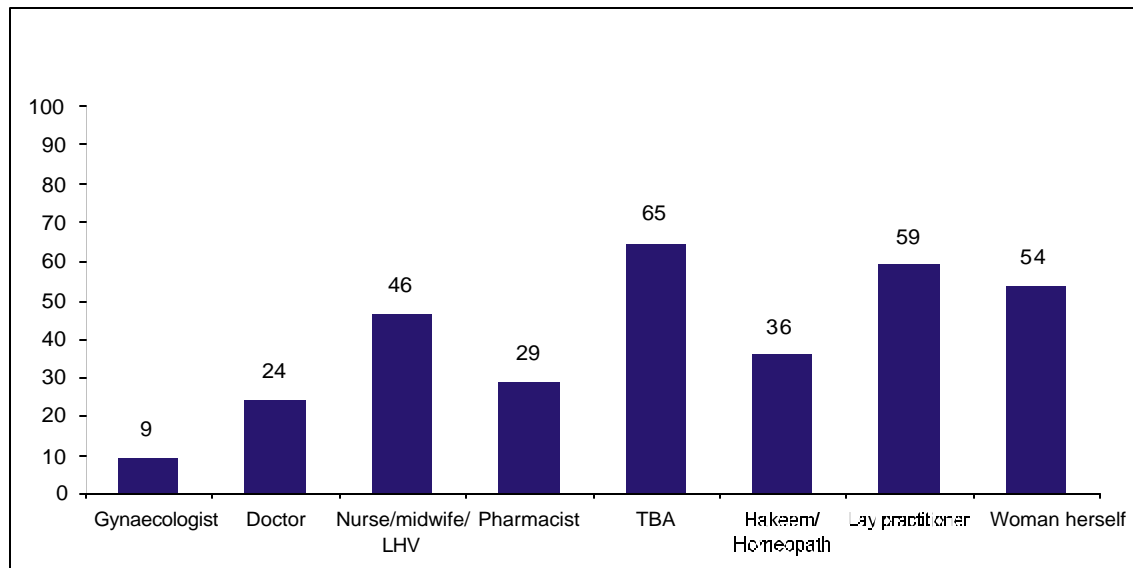
SECTION 4:

POST-ABORTION COMPLICATIONS AND THEIR TREATMENT

Abortions, whether spontaneous or induced, are often followed by medical complications that can be serious and even life threatening. In the case of induced abortions, complications are especially likely if the provider is not well trained or the conditions under which the abortion is performed are not hygienic. Because post-abortion complications are an important public health concern, this study collected extensive information on post-abortion complications – the prevalence and nature of the complication, and the subsequent treatment that was sought.

Prevalence and Nature of Complications

In the Health Professionals Survey, the respondents were asked to assess the likelihood that an induced abortion would be followed by serious complications that require medical treatment, and how this varies by the type of provider and by population subgroup. The health professionals' responses are summarized in Figure 8. The fraction of induced abortions leading to serious complications, based on the perceptions of this group of experienced informants, ranges from roughly one-tenth of abortions performed by a gynaecologist to two-thirds of abortions performed by a *dai* or TBA (traditional birth attendant). Women who had an abortion performed by nurses, midwives and Lady Health Visitors were also perceived to have a very high likelihood of complications – almost one-half. Interestingly, while the health professionals were asked to give rates of post-abortion complications by type of provider separately for population sub-groups – urban and rural, poor and non-poor – they perceive very little difference in risk among the sub-groups. Instead, they believe the risk of post-abortion complication is primarily a function of type of provider.

Figure 8: Percent of induced abortions resulting in complication, by provider, according to health professionals

Source: Health Professionals Survey

Another perspective on the risk of post-abortion complication is provided by the Post-Abortion Survey. The women in this survey were asked, “What complications did you experience after the abortion?” with the categories focusing on relatively serious complications. This question was asked of women who had either a spontaneous or an induced abortion. Among those women who had an induced abortion, slightly more than one-third (37%) reported a post-abortion complication.

The number of women who have abortion complications

Information on the number of women treated in a health facility for post-abortion complications was obtained in the Health Facilities Survey [HFS]. This is a national sample of public sector facilities at the level of the Rural Health Centre or higher, as well as private teaching hospitals. (All teaching hospitals were included in the survey). These are the facilities that are likely to treat women suffering from post-abortion complications. The respondents for the survey were senior physicians in the facilities. They were asked how many women on average were treated at the facility each month for complications of an abortion (spontaneous or induced). These averages include patients who stayed one or more nights in the hospital, as well as those treated as outpatients.

Two additional groups of facilities were surveyed, but the design and coverage do not permit inclusion of these data in the national estimates presented below. Firstly, a small number of Basic Health Units were sampled, to explore the role that these primary care facilities may be playing in post abortion care. As there are over 5000 of these facilities nationwide, our sample is insufficient to provide a national data for this category of facilities.

In addition, interviews were conducted in a sample of 72 private facilities (other than private teaching hospitals) ; the sample was designed so that some facilities from each level in each province were selected. Again, the purpose is to explore the capacity and the role of this category of health facilities, but lacking a complete listing of these facilities, national estimates could not be calculated.

The estimated total number of women treated annually for any post-abortion complications in all public facilities and private teaching hospitals is 250,000. This total includes some women who have been hospitalized because of complications from a spontaneous pregnancy loss (miscarriage) rather than an induced abortion. In fact, not only in Pakistan but in other countries where induced abortion is restricted, the distinction between complications of spontaneous versus induced abortion is not accurately reported, whether by key informants or through hospital records. This is partly due to the reluctance of women to reveal that they have had an induced abortion, but also because in many instances the symptoms do not in themselves indicate the cause of the abortion. (Often bleeding is the only obvious condition upon admission.)

Women treated for complications from a miscarriage must be separated out in order to obtain an estimate of the number treated for induced abortion. Using an indirect estimation technique, this study calculates that 53,000 women are hospitalized each year for the treatment of complications resulting from spontaneous miscarriages (Table 3; also see Annex C). This number can be subtracted from the total of 250,000 women hospitalized for abortions of any type (second column of Table 3), yielding an estimate of 197,000 women admitted annually to public medical facilities and private teaching hospitals for the treatment of complications of induced abortion. This is clearly a heavy burden on the national public health system in Pakistan.

Table 3: Estimates of the number of women hospitalized for abortion complications by type of abortion, nationally and by province, Pakistan, 2002

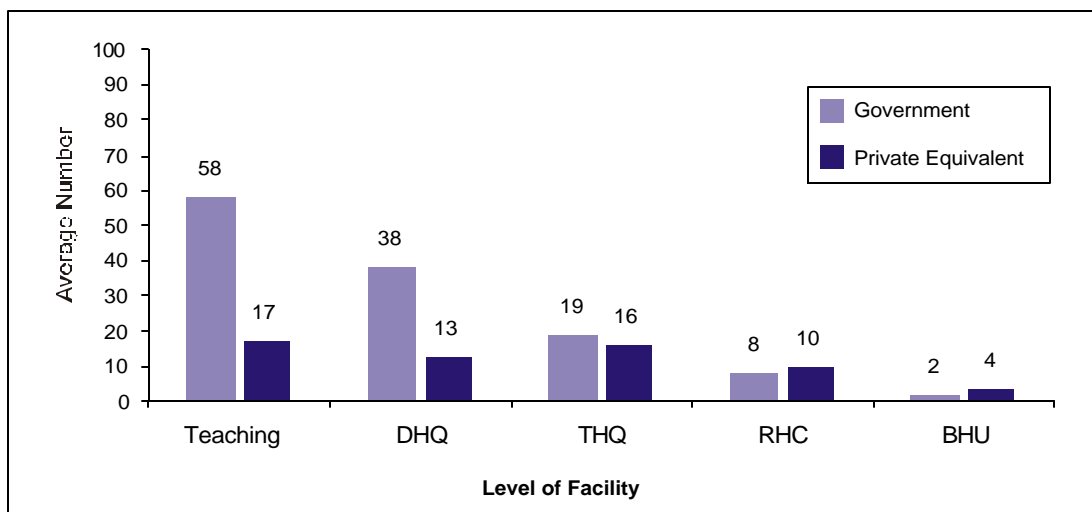
Province	Number hospitalized for abortion	Number hospitalized for spontaneous abortion	Number hospitalized for induced abortion
Punjab	127,977	29,963	98,014
Sindh	58,758	13,040	45,717
NWFP	48,150	7,419	40,730
Balochistan	15,140	2,930	12,210
<i>Pakistan</i>	<i>250,025</i>	<i>53,353</i>	<i>196,671</i>

The estimated number of women treated for post-abortion complications is almost certainly an underestimate, for the following two reasons. For one thing, private health facilities (other than teaching hospitals) also receive and treat post-abortion patients. Just over 31,000

women (for a one-year period) were reported by the 69 surveyed private health facilities. These facilities are typical of all non-teaching private health facilities in the country, suggesting that this group of health care facilities contributes significantly to the total number of women treated for complications. However, as indicated above, the design of the study does not permit a national estimate of the number of women treated at private non-teaching health facilities. In addition, Basic Health Units, which provide primary health care and serve rural populations, do not contribute to the above estimates. In a small exploratory sample of 12 BHUs, the average number of women treated in each BHU each year for post-abortion complications is 25. More research is needed on BHUs and the services they provide, to ascertain whether this sample of 12 is typical of the more than 5000 BHUs in Pakistan. The omission of this category of sites from the estimates clearly contributes to underestimation of the total number of women treated for post-abortion complications.

As expected, the caseload varies according to the size and type of facility (Figure 9). This average is higher in the larger facilities that are able to provide more comprehensive care: government teaching hospitals report an average of about two per day, whereas Rural Health Centres (and their private equivalent) report about two per week, and Basic Health Units (and their private equivalents) about two per month. It is to be expected that the caseloads will be light in the lowest level facilities, because women with post-abortion complications requiring medical attention realize that they will require the type of treatment that is offered at tertiary facilities (tehsil headquarter hospitals, district headquarter hospitals, and teaching hospitals). As a result, it is these types of facilities -- especially the government facilities -- that bear the brunt of the caseload from abortion complications, averaging one or two per day (Figure 9). It is not surprising that the staff at these facilities are acutely aware and deeply concerned about the public health consequences of induced abortion in Pakistan.

Figure 9: Monthly average number of patients with induced abortion complications



Source: Health Professionals Survey

Figure 9 shows an interesting pattern of government-private differences, with the caseloads larger in government facilities at the tertiary and secondary level and larger in private facilities at the two smallest categories of facilities (RHC, BHU). This suggests that, when given a choice of equivalent services in the public and private sector, women will choose public services. This may be because public services are less costly, or because they do not want to return to the private provider who performed the abortion. But if a woman has access to lower-level facilities only, as is the case for many rural women, then she may opt for a private facility because at this level private facilities are perceived to offer more reliable and comprehensive services.

The respondents in the Post-Abortion Survey were asked to describe the medical complications from which they suffered. The four complications cited most often are excessive bleeding, excessive pain, passage of soft tissues, and fever. Excessive bleeding is perhaps the most widely recognized complication of induced abortion, and it is mentioned by about two-thirds of these women. Mentioned more often, however, is excessive pain; the pain could be caused by a number of more specific medical problems, as identified also in the Health Professionals Survey. The four complications of abortion (induced or spontaneous) mentioned by the highest proportion of health professionals are excessive loss of blood, followed closely by sepsis, damage to the uterus (e.g. perforation), and infection of the uterus.

Whether one goes by the set of complications reported by the women in the Post-Abortion Survey or the more medically-informed listing provided by the health professionals, it is clear that induced abortion can have serious consequences for women's health, short-term as well as long-term. The most serious consequence, of course, is the death of the woman. This project was not designed to estimate the prevalence of maternal mortality in Pakistan due to induced abortion. Recent research has indicated that in Asia as a whole the annual maternal mortality due to complications from induced abortion is 34,000 deaths, or roughly 13 percent of the total number of maternal deaths in the region (WHO 2004)⁵.

Treatment of Post-Abortion Complications

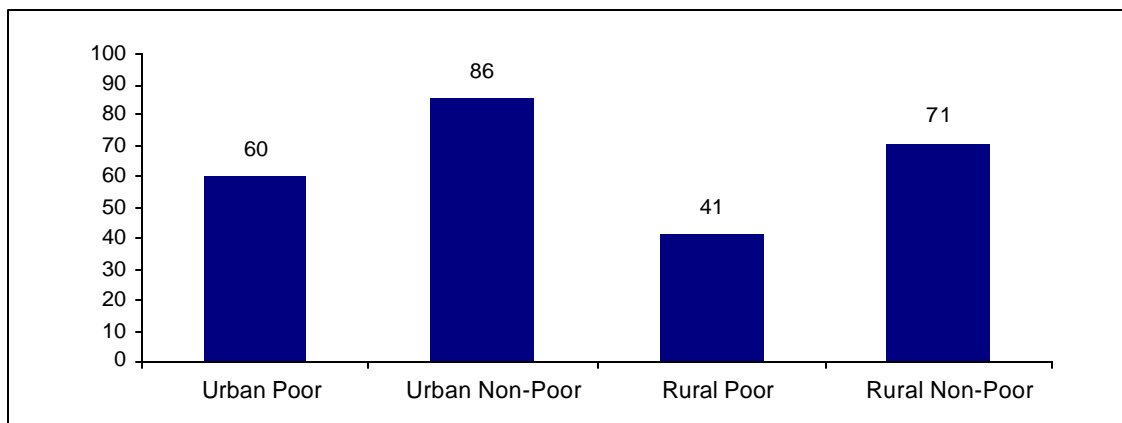
Once a woman recognizes that she is suffering complications of an induced abortion, she must decide whether or not to seek medical treatment. The process of coping with the complication can stretch out over many days. In the Post-Abortion Survey, women with complications from induced abortion report an average period of seventeen days between the onset of the complication and treatment at the facility where the interviews occurred. During this period, the woman may attempt to deal with the symptoms on her own, or she

⁵ WHO 2004 "Unsafe Abortion-Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2000" Geneva.

may approach other health care providers. Among the women in the Post-Abortion Survey with complications from induced abortion, 19% report that they first tried to treat themselves, 47% sought prior care from a private healthcare provider, and 31% sought prior care from a *dai*.

Some women with serious complications eventually seek care at a hospital. Health professionals were asked their perception of the likelihood that women with post-abortion complications would be treated in a medical facility. Their responses are shown in Figure 10. The data clearly show how the treatment received varies by social class and type of place (urban vs. rural). Health professionals believe that a very large fraction of the urban non-poor (86%) obtain medical treatment, whereas at the other extreme less than one-half of the rural poor (41%) eventually obtain treatment. Together with Figure 9, Figure 10 underscores how much stress post-abortion complications place on the health care system in Pakistan. Note that in Figure 10 government and private hospitals are combined together. Additional findings from the Health Professionals Survey show, not surprisingly, that poor women are more likely to obtain care from government facilities and non-poor women in private hospitals and medical facilities; this patterns holds in both urban and rural communities. The demand placed on public-sector health services by post-abortion complications comes primarily from poor women.

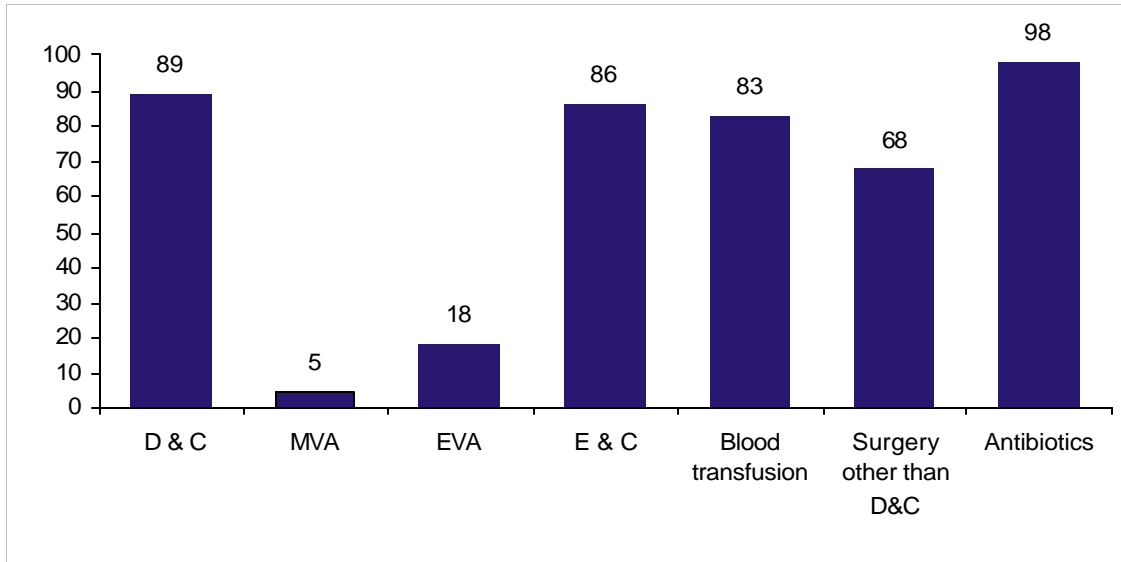
Figure 10: Percentage of women with post-abortion complications treated in hospital according to health professionals



Source: Health Professionals Survey

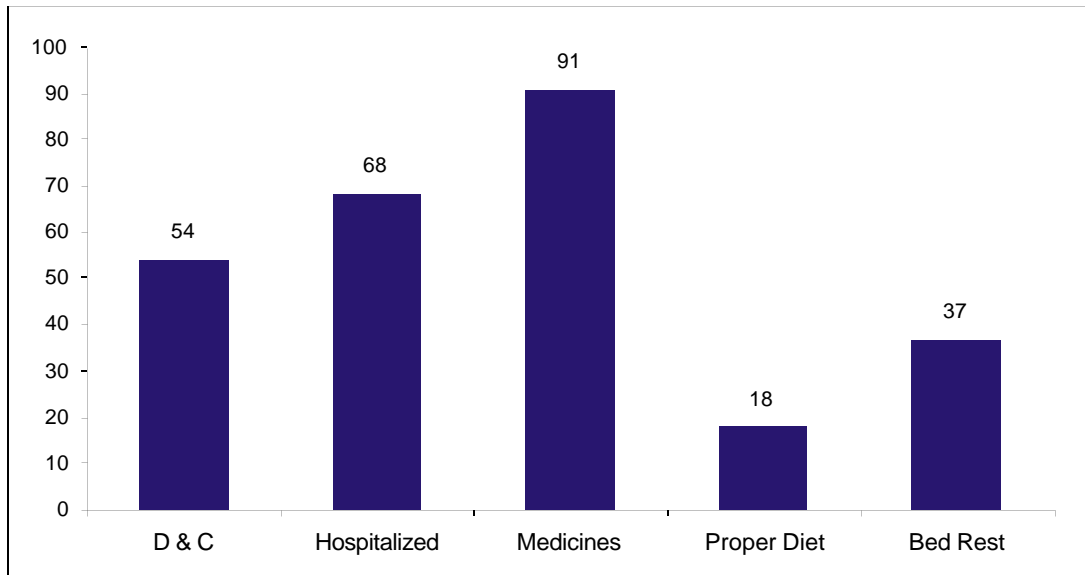
In the hospitals and other health facilities, the women receive a variety of treatments, depending on the nature of the complication from which they are suffering. The Health Facilities Survey provided information on the types of procedures and treatments they offer (Figure 11). Antibiotics are offered at virtually all facilities. Dilatation and curettage (D&C) is also usually available (89% of facilities), as is evacuation and curettage (E&C) (86% of facilities). Blood transfusion and surgery other than D&C are also available at a majority of the facilities (83% and 68%, respectively).

Figure 11: Procedures used to treat post-abortion complication, according to health professionals



Source: Health Facilities Survey. Percentages sum to more than 100 because multiple responses allowed.

Figure 12: Procedures used to treat post-abortion complication, as reported by clients



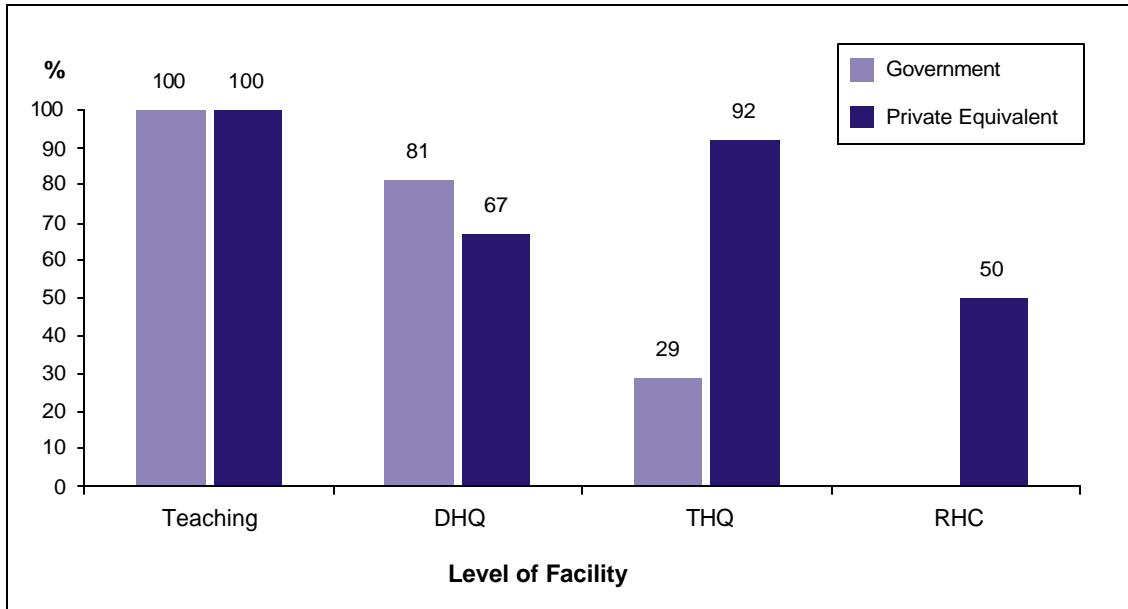
Source: Post-Abortion Survey. Percentages sum to more than 100 because multiple responses allowed.

Parallel information was gathered in the Post-Abortion Survey, which sampled women who had received care at a facility (either an induced abortion or care for a post-abortion complication). These women were asked what care they actually received for post-abortion complications. As shown in Figure 12, virtually all of them received “medicines” (91%), presumably antibiotics and painkillers. Of more consequence, 68% report that they were hospitalized, and 54% report having undergone a D&C. The data in Figures 11 and 12

reinforces the point that proper treatment of post-abortion complications requires staff that are skilled in a number of techniques, along with adequate stock of pharmaceuticals and other supplies. This further underscores the challenge for medical services in Pakistan presented by post-abortion complications.

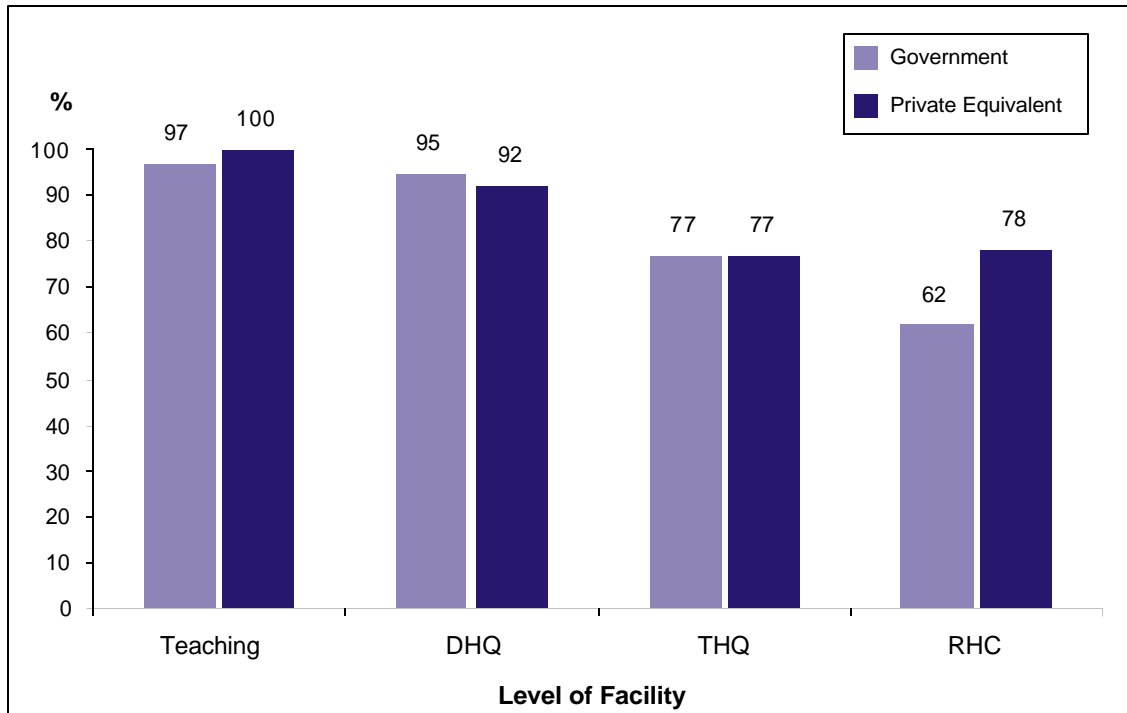
A staffing issue of particular importance is the sex of key staff members. For all reproductive health-related matters, Pakistani women and their husbands strongly prefer that women be examined by women rather than men. Female professional staff provide post-abortion treatment that is more socially acceptable and comfortable; female staffing can be validly regarded as higher-quality care in the Pakistani context. The percentages of facilities with at least one female gynaecologist or at least one female doctor (or other specialist) are shown in Figures 13 and 14, as derived from the Health Facilities Survey. Virtually all of the teaching and DHQ hospitals in the public sector, as well as equivalent facilities in the private sector, have at least one female gynaecologist and one female doctor (or other specialist) on staff. About three-quarters of facilities at the THQ level have a female doctor, and in the private sector over ninety percent have a female gynaecologist. Public-sector facilities at the THQ level, however, lack female gynaecologists. At the RHC level, none of the government facilities has a female gynaecologist, as compared to one-half of the private facilities, and a majority of the facilities in both sectors have a female doctor (or other specialist). These figures refer to formal staffing of the facilities. Absenteeism is common, and hence regular female staffing of these facilities may be more of a problem than Figures 13 and 14 would suggest. In general, higher-level facilities are more likely to have female staff trained to treat women with post-abortion complications, and private sector facilities are more likely to have such staff than government facilities. Clearly there is room to improve this feature of the staffing of facilities, a feature known to be highly valued by Pakistani women and their husbands.

Figure 13: Percentage of facilities with at least one female gynaecologist



Source: Health Facilities Survey

Figure 14: Percentage of facilities with at least one female doctor or other specialist

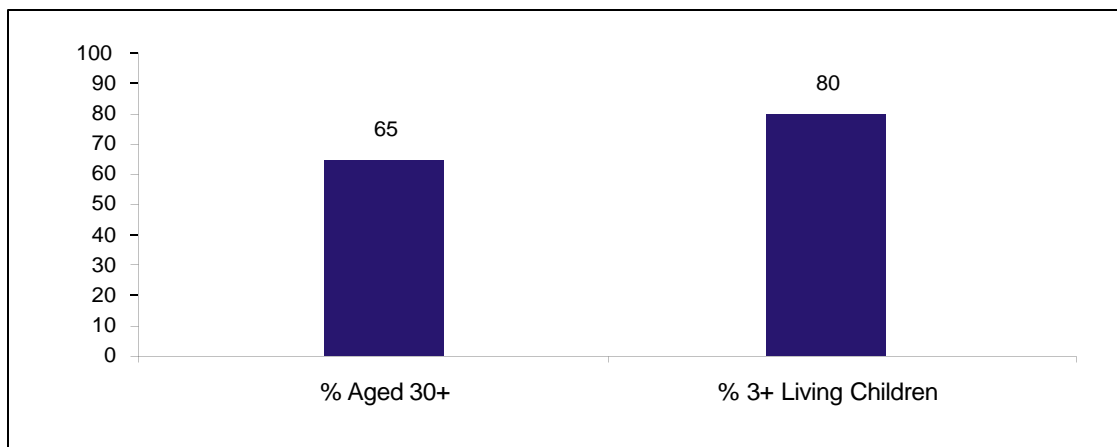


Source: Health Facilities Survey

SECTION 5: A PROFILE OF WOMEN HAVING INDUCED ABORTIONS

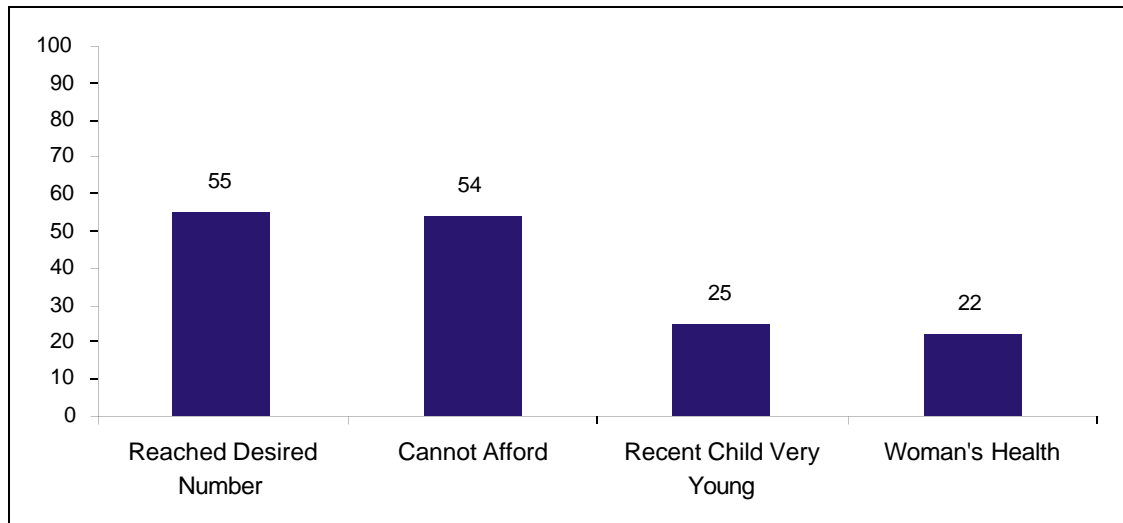
Most women who have induced abortions in Pakistan have reached the later stages of their childbearing career. The women are aged thirty or above, and they already have three or more living children. This is the profile of the typical abortion patient, as perceived by health professionals who are knowledgeable about post-abortion and abortion care, and the same profile emerges in the Post-Abortion Survey (Figure 15). The women in the Post-Abortion Survey were asked directly about why they did not want the most recent births. The four common reasons given by those women who had an induced abortion are shown in Figure 16. Roughly one-half state that they had reached their desired family size, and one-half indicate that it would be very difficult to afford another child. One-quarter report that their youngest child is still very young, and one-quarter are concerned about the stress on their health of another pregnancy. The dominant picture is of women who wish to terminate childbearing and who are anxious about the burden – to their health and to the household economic situation – of another pregnancy and birth.

Figure 15: Women having an induced abortion: age and number of children



Source: Post-Abortion Survey

Figure 16: Women having induced abortion: reasons for not wanting pregnancy



Source: Post-Abortion Survey. Percentages sum to more than 100 because multiple responses allowed.

These and related considerations are more tangibly described in the In-Depth Interviews. These interviews reveal how the burden of raising additional children is particularly heavy for the large fraction of low-income households. Consider this woman with five children who decided to have an induced abortion when she became pregnant again:

My husband does not want any more children. He says, “In our given income, it is difficult to bring up even these five children. We cannot have any more”. For this reason, I opted for Safai. (Faisalabad, Urban, 35-year-old with 5 living children)

And this woman, who decided to abort for essentially the same reason:

My husband does not have a job. Only my son is a labourer, and he feeds the whole family. When I came to know about my pregnancy, I went for an abortion, thinking: where will I get food for another child? (Shikarpur, Rural, 42-year-old with 8 living children)

This is the statement of a labourer in Karachi:

We have brought up these four children. Now their demands are increasing, and if we do not fulfill the demands then the children adopt wrong ways for getting their desires met. We have low income and cannot afford to have more children. This made my wife to abort. (Karachi, Urban, 36-year-old with 4 living children)

Parents are acutely aware of the many costs of raising children, as analyzed by this man:

I have three sons and two daughters. My daughters are of marriageable age. I will hardly manage the expenses of their weddings. I thought: If a third daughter is born, then it will create problems. So we decided to abort the pregnancy. (Faisalabad, Urban, 40-year-old with 5 living children)

In other cases, concerns about the woman's health predominate, as indicated by this accountant in Karachi:

I have seven children. The youngest child is of 10 years. My wife does not keep well. Due to her poor health, she should not produce more children. She has had one spontaneous abortion, and we got two pregnancies terminated. (Karachi, Urban, 52-year-old with 7 living children)

Some women feel that for social reasons they have passed their childbearing years, as explained by this woman in rural Punjab who already has seven sons and two daughters:

After my seventh son, I again became pregnant. I decided to get it aborted, because my sons and daughters are grown up and I feel shy in carrying a child in front of them. (Bahawalpur, Rural, 43-year-old with 9 living children)

And this case of a man age 42 who has four living children:

I am no more in the age of producing children. My daughter is married and has a child. I am a grandfather now, so should not produce another child. Therefore we got my wife's pregnancy aborted. (Karachi, Urban, 42 year old with 4 living children)

While the most common cases are women who are using induced abortion in an effort to avoid having a larger family than desired (that is, for stopping childbearing), the In-Depth Interviews reveal other motives such as the need to space children that lead women to have induced abortions. In some instances the women feel a need to delay the next child, as in the case of this woman:

My children are small, and as such it is difficult to handle all three of them. So I decided to abort my pregnancy and wait for some time before I have more children. Otherwise one child is hardly toilet-trained and the next one is produced. (Karachi, Urban, 27-year-old with 3 living children)

Another reason to terminate a pregnancy is because it has occurred outside of marriage. Naturally women and men are very reluctant to discuss such occurrences, but they are mentioned by the health service providers who were interviewed as key informants in the

In-Depth Interviews. If the woman is young and never married, no time is wasted and the pregnancy is aborted as quickly as possible:

Abortions of unmarried girls of this community and from our rich neighbourhood are quite common. Such clients want quick service. (Faisalabad, Service Provider, 30-year-old)

I never investigate the clients about the reason for abortion, because I immediately can assess whether the woman is married or not. (Karachi, Service Provider, 37 year old)

The cost of induced abortions for unmarried women is especially steep. A man in rural Sindh who works for an NGO reports that:

The nurse charges Rs. 20,000 for aborting a pregnancy of an unmarried female. Such cases are usually paid by the big landlords and their sons. They impregnate unmarried females and pay for the abortions to hide it. Such cases are of 'Karo Kari' and of police involvement, but they pay the nurse and finish them off. (Shikarpur, Service Provider, 40-year-old)

Instances of extra-marital pregnancies are also reported, as in this statement from a doctor in urban Sindh:

Sometimes women come here for an abortion and confess their sexual relationships. A woman came to me and said, "I am carrying my husband's younger brother's child and want to get it aborted." (Karachi, Urban, Service Provider, 40-year-old)

Almost certainly a small minority of aborted pregnancies occurred outside of marriage in Pakistan. The majority of induced abortions are the decisions of married women and their husbands who feel they cannot afford the strain on the economic situation of the household, nor on the woman's health, of another child. Nevertheless, illegitimate pregnancies are a phenomenon that should not be ignored, because they have important public health implications.

The In-Depth Interviews and the Post-Abortion Survey provide a great deal of insight into how the decision was made to terminate a pregnancy. Of particular interest is the extent to which the husband was involved in this decision. It is hardly surprising that the husband exercises significant influence over the decision to have an induced abortion, given his dominance in other reproductive decisions (including contraceptive decisions – see Section 6). In some instances, a woman would like to terminate a pregnancy but her husband is opposed, as related by this health provider:

Married women who become pregnant but do not wish to continue their pregnancies come to ask for our help. Their husbands and mothers-in-law do not permit them to have an abortion. In such cases we have to take them somewhere. (Faisalabad, Service Provider, 35-year-old)

And, to avoid legal repercussions, the husband's permission is often required by providers before an induced abortion will be performed.

A wife cannot abort her child without her husband's permission. This would cause domestic conflict and tension. The wife has to spend her life with her husband, so she cannot do things without his consent. (Shikarpur, Rural, 23-year-old with 4 living children)

My husband gave me permission for a D & C, because our children are still small. (Karachi, Urban, 27-year-old with 3 living children)

I eventually convinced my husband for the termination of my pregnancy by saying that I cannot keep on producing. (Bahawalpur, Rural, 33-year-old with 4 living children)

I permitted my wife to have an induced abortion, not because I did not want the child but because my wife complained about her poor health and was reluctant to continuing producing children. (Karachi, Urban, 48-year-old with 7 living children)

Involvement of husbands in the decision to have an abortion is also confirmed by the Post-Abortion Survey. Among the 189 women in this survey who had an induced abortion:

- 80% discussed with their husband the possibility of terminating the pregnancy
- 89% indicated that the husband was aware that an induced abortion occurred
- 70% report that the final decision to terminate the pregnancy was made by the husband alone (4%) or by the husband and wife jointly (66%)

Like their wives, Pakistani men have deeply ambivalent feelings about the moral acceptability of induced abortion, as articulated by these two men:

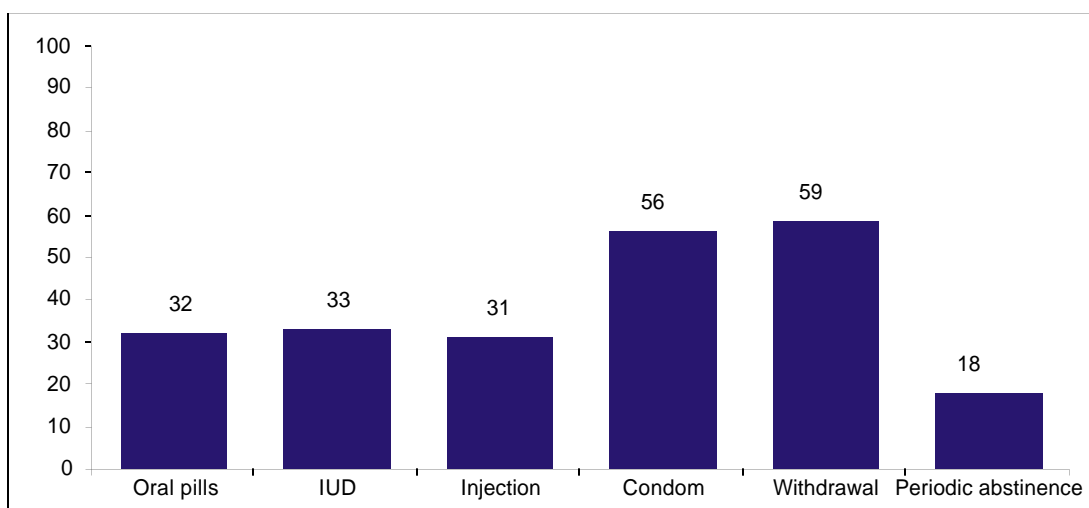
Allah sent a soul for this world, and we have wasted it. It is a sin. But we had to do it, due to the poor health of my wife. [Karachi, Urban, 36-year-old, 4 living children]

My wife became pregnant and her health is very poor. I thought that if she continues the pregnancy and during the childbirth if she cannot bear the pains, she will die. Then I decided to save my wife and lose the child, and we got the pregnancy aborted. (Faisalabad, Urban, 40-year-old with 5 living children)

SECTION 6: PREVENTING UNWANTED PREGNANCIES: BARRIERS AND NEEDS

Induced abortions end an unwanted pregnancy and as such are a means of birth control. An alternative means of preventing unwanted births is effective practice of contraception. The overarching objective of this research project was to better understand unwanted pregnancies – why they occur, how they might be prevented. With this larger objective, it is important to examine the association between contraception and induced abortion: why do some women, instead of successfully preventing pregnancy through contraception, have an unwanted pregnancy that they then feel compelled to abort? Note that the answer to this question can include unsuccessful contraceptive practice, i.e. contraceptive failure.

Figure 17: Women having induced abortion: percent ever-used contraceptive method



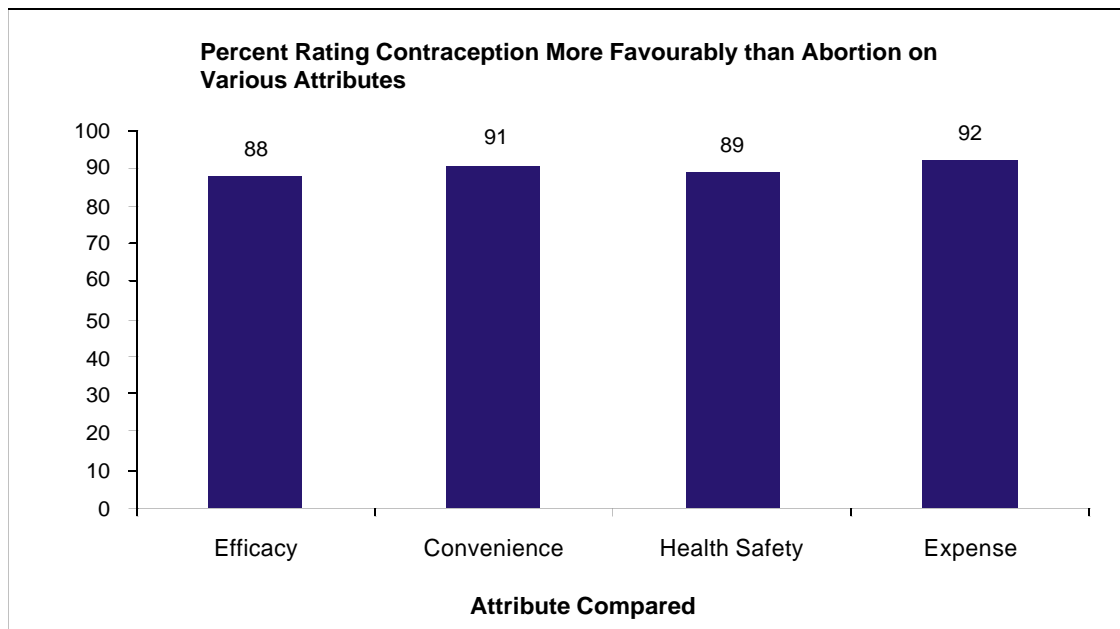
Source: Post-Abortion Survey

The Post-Abortion Survey interviewed women who had visited clinics (public and private), in most instances for treatment of post-abortion complications (spontaneous and induced abortions). The women in this survey who had induced abortions are quite knowledgeable

about contraception (99 percent are aware of a modern method of contraception). Moreover, most of these women have past experience using contraception, as indicated in Figure 17. Overall, 86 percent of these women have used a contraceptive method at some time in their lives, with 78 percent having used a modern method and 64 percent having used a traditional method. This experience with contraception is more extensive than the norm for Pakistani women of reproductive age. (In the national PRHFPS of 2000-01, 56 percent of urban women have ever used a contraceptive method, with 49 percent having used a modern method and 26 percent having used a traditional method.) Moreover, the Post-Abortion Survey indicates that about two-thirds of the women who had an induced abortion used contraception in the interval preceding the unwanted pregnancy. The two most common methods were condom and withdrawal, together accounting for about two-thirds of the use in the interval and about three-quarters of the use at the time of conception, i.e. contraceptive failures.

Of course it is possible that the women are inflating their past contraceptive use, and in particular their use at the time of conception, as a means of avoiding personal responsibility for the pregnancy. Such reporting bias is known to occur in some societies. We are unaware of any direct evidence, from this study or others, on the prevalence of such reporting bias in Pakistan, but we suspect it is rare. This suspicion is reinforced by the perceptions of health professionals: 75 percent of the respondents in the Health Professionals Survey believe that the typical woman seeking an induced abortion had used contraception in the period prior to the unwanted pregnancy.

Figure 18: Attitudes towards contraception and induced abortion among women with induced abortions



Source: Post-Abortion Survey

All of this suggests positive engagement with contraception on the part of these women. Moreover, when directly asked in the Post-Abortion Survey to compare contraception and induced abortion, the women strongly favour contraception, with about 90 percent of the women regarding contraception as: a more effective birth control method, more convenient, safer for health, and less expensive (Figure 18). Contrary to what might have been hypothesized, for the most part this is not a set of women who, for whatever reasons, favour induced abortion over contraception as a means of birth control. Yet it is also the case that roughly one-half of these women report that they became pregnant while using a method, revealing ineffective contraceptive practice, and many of the others became pregnant after discontinuing contraceptive use. Why are these experienced users not practicing sustained and effective contraception? The Post-Abortion Survey and In-Depth Interviews reveal multiple reasons why these women have failed as contraceptive users.

Some of this can be explained by their reliance on methods with relatively low use-effectiveness, in particular withdrawal. Whereas the women in the Post-Abortion Survey are about 50 percent more likely to have practiced contraception than currently married Pakistani women of reproductive age, they are about three times more likely to have practiced withdrawal. These women are also more likely to have used the condom, which in theory can be a very effective contraceptive but in reality has a high failure rate due to improper use. That is, women who resort to induced abortion have relied disproportionately on ineffective contraceptive methods, and hence it appears that a significant fraction of pregnancies that are aborted in Pakistan are consequences of contraceptive failure. Among the women interviewed in the Post-Abortion Survey, 52 percent report that they became pregnant while using a method of contraception. As noted above, the fraction of contraceptive failures may be inflated, in an effort to pass responsibility for the pregnancy to the contraceptive method. But we feel this bias is likely to be small in magnitude. This is an issue that merits further research.

Consider, for example, a couple interviewed in the In-Depth Interviews who started to use various family planning methods after the birth of their fifth child. Ineffective use resulted in three further births. When the wife became pregnant yet again, the husband reported:

We got fed up with the failing of the methods. We went for an abortion followed by an operation. (Faisalabad, Rural, 48-year-old with 8 living children)

A woman who lives in Faisalabad and recently had an induced abortion recounts:

We had been making all efforts to prevent pregnancy, but nothing worked. We bought pills and condoms from the medical store and used them, but this went to waste. (Faisalabad, Urban, 40-year-old with 10 living children)

Another couple in Bahawalpur who wanted to avoid another pregnancy started using modern contraception:

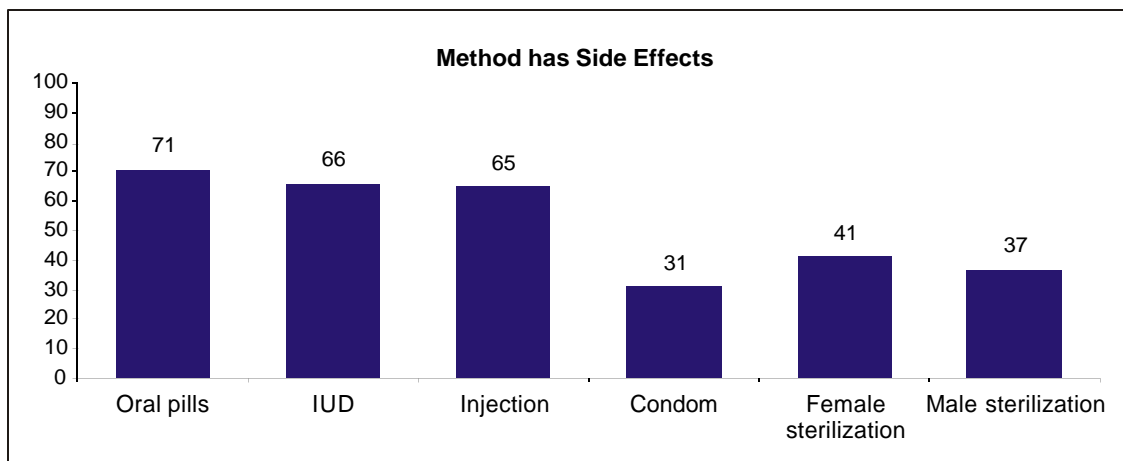
We got family planning treatment for quite sometime. I took pills, and my husband used condoms. But this was in vain, and I still conceived. (Bahawalpur, Urban, 38-year-old with 10 living children)

And this man from rural Sindh reports views about the low efficacy of modern methods that are apparently spreading through informal social networks:

We never used any method, nor do we think of doing so. We meet after eight days. We hear so much about the ineffectiveness of these methods that we never think of using them. We have heard that many women became pregnant even though they were taking pills. (Shikarpur, Rural, 30-year-old with 3 living children)

Couples' reliance on ineffective methods and their inconsistent use of effective methods (such as pills, injectables, and condoms) can be explained in part by the many negative perceptions that Pakistani couples hold of the more effective modern methods (pills, IUD, injection). The data indicates that the high efficacy of these methods is not fully appreciated. Equally important, a large fraction of women and men believe these methods cause detrimental health side effects (Figure 19). In the In-Depth Interviews, a repeated theme is that contraceptives harm woman's health. Some women report that they discontinued contraceptive use because of health side effects, while others indicate that fear of side effects is the reason they do not start using a method.

Figure 19: Women having induced abortion: percent believing that contraceptive methods have negative health side effects



Source: Post-Abortion Survey

The women who have taken pills say that they bleed heavily, and two to three times a month. Few drops of blood are left in their bodies, and they have become very weak. (Karachi, Service Provider, 41-year-old)

My husband and I have never used any method. These are very harmful to women. I have heard that pills cause palpitation and suffocation. Injection and IUD dry up the blood of the body. Therefore I never used any of these methods. (Shikarpur, Rural, 41 year-old with 8 living children)

In severe cases, it is believed, use of contraceptives can cause permanent damage to the woman's reproductive organs, even infertility:

Pills of family planning cause cancer in the uterus. This is the reason that people do not go for contraceptives. (Karachi, Urban, 29-year-old with 4 living children)

I was using condoms, but have given up because there are some chemicals in condoms that harm the uterus. I took my wife for a check-up, and the doctor told me that her uterus had developed blisters because of the condoms that I use. (Faisalabad, Urban, 46-year-old with 4 living children)

There is much that health workers could do to correct misperceptions of the health effects of using certain contraceptives, but unfortunately health workers sometimes appear to contribute to them instead (as in the previous excerpt).

Poverty is another important obstacle to effective contraceptive practice. Many contraceptive methods require periodic purchase of supplies, and this is difficult for poor couples to sustain. As a woman from urban Punjab states:

Whether one takes pills or injection, one needs money, and that is what we do not have. The income of my husband is so low that we can hardly buy flour. (Faisalabad, Urban, 38-year-old with 8 living children)

And this case of a woman in Faisalabad:

I want to have injection, and it suits me well. But the problem is that I have to buy an injection for 40 rupees and also pay the person who injects it. The truth is that I decided not to get injection because with that money I can cook curry for two days. (Faisalabad, Urban, 33-year-old with 4 living children)

Coping with health side effects can add to the cost of using contraception, as explained by this Lady Health Visitor in urban Punjab:

I work hard to convince women to use contraceptives. When they agree, we give them injections or insert an IUD. This can cause spotting and bleeding. We do not have any medicine to give to these women free of cost to recover from the side effects. Instead, we write a prescription to buy ten capsules. This can cost sixty or seventy rupees, plus some more to buy tonic. People who come to us are usually from low-income groups, and they cannot afford this. Therefore these women conceive and resort to abortion, which actually women do not want to do. (Faisalabad, Service Provider, 20-year experience)

When couples feel that they must choose between using contraception and feeding their families, and also feel short on cash for clothing and schooling for their children, it is hardly surprising that they do not choose to spend on contraception. These Pakistani couples face a cruel choice: they do not want further children, and yet they do not feel they can afford to buy contraceptives to prevent pregnancy. In contrast, induced abortion, while relatively expensive (see Section 3), is a one-time expense, which poor couples feel more able to manage than the recurrent costs of the most effective contraceptive methods. While in reality, the yearly costs of procuring contraceptives (which are largely subsidized in Pakistan) may be lower than that of incurring the costs of an abortion, not many respondents express this viewpoint.

The women also cite social factors as major barriers to using contraception, including opposition on the part of husbands and other family members. The husband is probably the key person from the standpoint of contraceptive decision-making, and the In-Depth Interviews contain a great deal of discussion about how husbands influenced the decision whether or not to use contraception. An important point to make is that by no means are Pakistani husbands and wives always at odds, indeed in many cases the husband favours birth control and actively assists in achieving this. Such cases were described in Section 5 in reference to induced abortions and are described below with reference to contraceptive use. At the same time, it is clear that in many cases the husband does constitute a major obstacle to effective birth control.

This can occur for several reasons. To begin with, the husband and wife may differ in their childbearing desires, with the husband wishing to have more children than the wife. Women perceive that their husbands want large families, and indeed the men themselves express the view that it is their wives' responsibility to continue bearing children:

Why do we give you food and clothes? Only for the purpose that you produce our children. Otherwise what else can you offer us? (Bahawalpur, Rural, 34-year-old with 4 living children)

Some women are especially distressed by their husbands' apparent lack of concern about the health burden of continued childbearing:

My husband never bothered about my health. I have produced six children. He does not agree to use any contraceptive. He never thinks of bad consequences to my health, and he gives no importance to my health. (Karachi, Urban, 30-year-old with 6 living children)

Or, as one FHW commented:

A man is not bothered about the hardship a woman must experience to produce a child and then rear the child. A man spends much of his time outside the home. He thinks that it is a big favour if he earns and feeds his wife. (Shikarpur, Service Provider, 40-year-old)

Another obstacle to contraceptive practice is the husband's view that contraception itself is sinful or unhealthy. This is clear in the statements that some men make to health workers, such as the following:

Women of your kind who want to reduce our population will go to hell. (Bahawalpur, Service Provider, 29-year-old)

And this statement from a woman in Karachi

I want to get operated, but my husband does not permit me. He says that it is a sin. (Karachi, Urban, 35-year-old with 4 living children)

But just as men's opposition is a major factor accounting for the high level of unmet need for family planning in Pakistan, in other cases it is the support of the husband that is the decisive factor in the decision to limit the number of children and practice contraception. This is illustrated in these two statements from a couple from Faisalabad with 5 living children:

It is better to get operated, because these days the necessities of life are so expensive that one cannot afford to have many children. (Husband)

My husband has started to use condoms, which he brings himself. If the stock of condoms is exhausted, I tell him and he does not come near me (Wife)

The involvement of husbands in the decision to use contraception is also evident from the Post-Abortion Survey: of those women who have used contraception, almost ninety percent report that their husband participated in the decision.

All the hindrances to effective contraceptive use described above are compounded by poor services. Throughout the In-Depth Interviews, couples pointed to the non-availability of family planning services in many locales and the poor quality of those services where they are available. A man from Karachi reports:

There is a facility of family planning services but it gives us no attention. They just visit households and gather information. They should ask people to visit their facility for general health, and then people would be convinced to adopt family planning methods when they visit the facility, instead of directly addressing the family planning issue. (Karachi, Urban, 50-year-old with 7 living children)

Even the health service providers concede that the services they offer are often sub-standard, among other reasons because of erratic re-supply of contraceptive methods.

The community worker told me that one has to pay for injectables. It is suitable if just one injectable is to be taken but we cannot spend 60 to 90 rupees every two months (Faisalabad, Rural, 38-year-old with 8 living children)

Induced abortions are unwanted pregnancies, and therefore it is important that women who resort to an induced abortion receive information about family planning, so that further unwanted pregnancies can be averted. Yet among the women in the Post-Abortion Survey who had an induced abortion, only one-quarter report receiving family planning counselling at the facility where they obtained the abortion. This suggests that family planning counselling is not the norm for women showing complications of induced abortion.

SECTION 7:

CONCLUSIONS: IMPLICATIONS OF THE FINDINGS FOR POLICY AND PROGRAM DESIGN

Drawing on multiple types of data – interviews with health professionals, interviews with staff of health facilities, in-depth interviews with married women and men, and interviews with women who have experienced an abortion (spontaneous or induced) – this project offers a rich portrait of unwanted pregnancies in Pakistan, their causes and consequences. There are multiple dimensions to the problem of unwanted pregnancy, and therefore there are multiple policy and program implications. Unwanted pregnancies present a challenge to many segments of the society, most especially the large number of couples who must manage, by some means, to cope with the reality of an unwanted pregnancy.

The important findings, and their policy and program implications, are as follows.

- **The incidence of induced abortions in Pakistan is high, higher than previously thought.** Perhaps the most significant results from this study are the estimates of the prevalence of unwanted pregnancies and, in particular, the significant fraction of these pregnancies that are terminated by an induced abortion. The estimated national abortion rate is 29 per 1000, implying 890,000 abortions per year in Pakistan. Clearly this is a phenomenon that cannot be ignored, among other reasons because of the serious repercussions for women's health (and, accordingly, the health care system in Pakistan). The data indicates that the large majority of unwanted pregnancies, and especially those ending in induced abortion, occur to relatively older married women who already have several living children. These women and their husbands have achieved their desired family size but nevertheless have become pregnant again. In order to avoid adding another child to their family, they seek an induced abortion and, in so doing, take on the accompanying financial expense, the risk to the woman's health, and, for many of them, the sense of sin.
- **Morbidity from unsafe abortion is very high in Pakistan.** The number of women who experience serious health complications each year in Pakistan, as a result of unsafe abortions is large: an estimated 197,000 women are treated each year in public sector

facilities at the Rural Health Centre level and higher, and in private teaching hospitals. The number would be even larger if women treated in other private medical facilities and small public facilities were to be included in the estimate. Clearly, morbidity resulting from unsafe abortion has a substantial impact on women's health, and results in a significant burden on the health care system.

- **Too many Pakistani couples are choosing to risk an unwanted pregnancy, and then resort to induced abortion, rather than practicing effective contraception.** For many reasons, effective contraception is much preferred to induced abortion as a means of preventing unwanted births. Yet the data indicates that a large percentage of the women who have induced abortions are knowledgeable about contraception (including modern contraceptive methods) and, indeed, have used contraception in the past. Could it be that in Pakistan -- an Islamic society where abortion is highly restricted and out of the domain of legitimate choice -- couples are deliberately selecting induced abortion rather than contraception as their strategy for preventing unwanted births? This is known to occur in some countries where induced abortion is a common strategy for averting unwanted births. Given the estimated incidence of abortion in Pakistan, this possibility must be confronted. And yet this study offers much evidence that argues against an affirmative answer: most Pakistanis appear to hold unfavourable views of induced abortion, but a variety of constraints -- financial costs, fear of health side effects -- prevent them from practicing effective contraception.
- **Family planning services need to be improved, with the aim of weakening the various obstacles that prevent Pakistani couples from practicing effective contraception.** The high incidence of induced abortion underscores the priority that must be given to improving the quality of family planning services. As noted, awareness of contraception is almost universal among Pakistani women who have induced abortions, and a strikingly large fraction of these women have past experience with contraception. And yet clearly there remain significant obstacles to effective contraceptive practice. These must be addressed by expanded access to affordable services of good quality. These services should be more receptive and responsive to Pakistani women's needs and concerns. Clearly one concrete priority is more convenient location and hours of clinics. More choice in contraceptive methods might also serve to increase contraceptive prevalence; emergency contraception, in particular, might avert unwanted pregnancies in those instances when, inadvertently, unprotected sexual intercourse has occurred. In addition, there is a need for educational campaigns and individual counselling -- especially targeted to women who resort to induced abortions -- designed to address the various concerns (especially fears about side effects of contraceptive methods) that discourage couples who wish to avoid pregnancy from adopting and practicing effective contraception. Medical staff need to be trained to better communicate about family planning, to be cognizant of common fears and apprehensions about contraception and, further, be more sympathetic than reprimanding.

The current situation is that Pakistani couples are experimenting with contraception and then dropping this strategy, choosing instead to take the risk of becoming pregnant and, when this occurs, resorting to induced abortion. Induced abortion is regarded as the simpler and, all things considered, less costly solution. This birth control calculus of Pakistani women and men must be transformed if induced abortions are to become a rare event.

- **Medical care for post-abortion complications needs to be more available and of higher quality.** The data in this study raise serious concerns about the care available to women who suffer post-abortion complications (whether following a spontaneous or induced abortion). Care for post-abortion complications falls short in both public and private facilities. Among improvements that can be recommended are a larger number of facilities prepared to offer post-abortion care (more rigorous training of staff, including mid-level health professionals, upgrading of equipment and supplies) and, more specifically, increased availability of well-trained female staff. In addition, staff dealing with post-abortion complications should have supportive attitudes that permit them to effectively inform patients about the health hazards created by repeated induced abortions and to effectively counsel them about the advantages and suitability of using contraception. More generally, the challenge of post-abortion care should be placed more squarely in the maternal health arena. As noted, women having induced abortions tend to be older and at high parities, the stage of the reproductive career when maternity leads to inordinate risks of maternal morbidity and mortality.
- **Men should be more effectively incorporated in resolving the various problems surrounding unwanted pregnancy – ineffective contraception, induced abortion and its repercussions.** A cross cutting recommendation for improving family planning practice and for strengthening post-abortion care is to draw in men as far as possible. The evidence available from this study demonstrates the critical role of men in reproductive health decisions in Pakistan. Men are already involved in most decisions, and they can be expected to retain significant decision-making power even as fertility declines and the Pakistani family undergoes significant changes. The aim should be to incorporate men in supportive roles that enhance options for their wives and, above all, do not obstruct their wives from seeking appropriate reproductive health care.
- **Research on unwanted pregnancies must continue to be pursued.** Because unwanted pregnancies are so prevalent in Pakistan, and because our understanding of their causes and consequences remains incomplete, it is essential that further empirical research be conducted. This is all the more important because reproductive change is underway in Pakistan, as indicated by the decline in fertility levels during the past fifteen years, and it cannot be assumed that at this historical juncture the causes and consequences of unwanted pregnancy will remain stable. Policies and programs that have been effective may need to be adjusted to the changing reproductive context.

Several promising directions for further research can be identified. First, while this study was national in scope, the samples are modest in size and do not adequately capture provincial variation. It would be desirable to conduct a study that uses larger national samples representative of all four provinces and their urban and rural segments. Second, there is a need for basic social science research that probes more deeply into the reasons why almost one million Pakistani women resort to induced abortion each year. The critical choice between preventing a pregnancy via family planning versus relying on induced abortion needs to be examined more closely, ideally employing multiple disciplinary perspectives (anthropology, psychology, sociology). Judging from the present study, critical factors bearing on this choice include community and household-level poverty, and mortalities and morbidities (perceived and actual) that are associated with contraception and induced abortion. Third, operations research is recommended on three issues: (i) the feasibility of introducing emergency contraception as a strategy for reducing unwanted pregnancies; (ii) greater involvement of men in reproductive health decisions, with the aim of improving both contraceptive practice and post-abortion care; and (iii) the improvement of post-abortion care, especially through a client-centered approach.

Annex A:

National Steering Committee

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Annex B:

Design of the Study

In Pakistan, as elsewhere, unwanted pregnancy is a difficult subject to research. Women and men are especially reluctant to discuss induced abortion. Accordingly, to investigate the various aspects of unwanted pregnancies and their resolution through induced abortion, four types of data were collected under this project. Each type of data offers a distinctive insight on the problem of unwanted pregnancy in Pakistan; taken together, a more complete picture of the phenomenon emerges.

Health Professionals Survey (HPS). To obtain information on the conditions under which women obtain induced abortion and information on abortion complications, 154 structured interviews were carried out with a sample of health professionals known to have knowledge of women's health issues, including abortion. The choice of professionals to be interviewed was largely guided by the Steering Committee members, with the aim of selecting those professionals with the most knowledge and experience with post-abortion complications. The selected health professionals fall into five categories (see Table B.1). The largest categories are gynaecologists at teaching (Category I) and non-teaching (Category II) hospitals, in view of their extensive experience (17 years on average for Category I). The hospitals are located mainly in urban areas, and therefore the health professionals in Category I are disproportionately urban (49%). A majority of their clients, in contrast, live in rural districts, especially the clients of public facilities. Consequently, most of the respondents in the HPS are sensitive to the situation of rural women, despite the urban location of many of the Category I respondents. Moreover, a majority of the health professionals in Categories II, III, and IV are based in rural areas. The distribution of the sample by type of health professional and province is shown in Table B.1.

The questionnaire for the Health Professionals Survey was adapted from a similar instrument used by the Alan Guttmacher Institute in Bangladesh, the Philippines, several Latin American countries, Nigeria and Uganda. Topics included: common methods for terminating unwanted pregnancies; characteristics of women seeking an induced abortion; providers of abortions services and post-abortion care; costs of induced abortions; probabilities of medical complications due to induced abortion and likelihood of hospitalization; relationship between family planning and induced abortion. The fieldwork for this survey occurred between May and June 2002. Teams of 2-3 doctors carried out the interviews, under the direction of Drs. Gul Rasheeda, Zakir Hussain and Naushaba Chaudhry.

Table B.1: Health Professionals Survey: distribution of respondents by type and province

Category	Type of Professional	Percentages				Total
		Punjab	Sindh	NWFP	Baloch-Istan	
Category I	Gynaecologists from teaching hospitals	48	47	55	37	49
Category II	Gynaecologists from non-teaching hospitals	22	27	21	18	24
Category III	Doctors with experience in gynaecology	6	10	11	18	9
Category IV	Paramedics (Lady Health Workers, Midwives, nurses)	15	8	5	18	10
Category V	Researchers, lawyers, women activists, policy makers	9	8	8	9	8
		100	100	100	100	100
Percentage Urban		70	76	61	82	70
Total N		54	51	38	11	154

Health Facilities Survey (HFS). The aim of the Health Facilities Survey was to estimate the number of post-abortion complication cases, to assess the capacity for providing post-abortion care, and to assess the quality of post-abortion care, counselling, and family planning services. The HFS interviewed a nationally representative sample of all public health facilities that are likely to be treating post-abortion complications. The sample of public sector facilities comprises those that are likely to treat women suffering from post-abortion complication - from the level of Rural Health Centre up to the highest level, teaching hospitals. The sample of public facilities was drawn from a master list of the HMIS (Health Management Information System) of health facilities of the Ministry of Health.

All 50 teaching hospitals in Pakistan (39 public and 11 private) were included in the sample, because these facilities are expected to treat large numbers of abortion complications cases. For facilities other than teaching hospitals (DHQ or district hospitals, THQ or *Taluka* hospitals and RHC or Rural Health Centres), a stratified cluster sample design was used. 40 Districts were randomly selected across the country (the number of districts selected in each province was proportional to the population size of the province), and *Talukas* were randomly selected within sampled districts. In the public sector, a total of 40 DHQ facilities, 30 THQ facilities and 20 RHC facilities were surveyed. To provide a more complete picture of post-abortion care, a small number of Basic Health Units (12 BHUs) were also surveyed. However, the BHUs do not figure into the national estimates, because the sample design does not permit them to be weighted up. Finally, to assess the contribution of private health facilities (other than private teaching hospitals) in treating post-abortion complications, a

purposive sample of 69 private health facilities (in all provinces of the country and at all facility levels) other than teaching hospitals was also selected. Because a comprehensive listing of private sector facilities was not available, the sample private facilities do not figure into the national estimates. The distribution of the selected facilities, by type and province, is shown in Table B.2. Also shown in this table, in the right-hand column, is the percent of the facilities that were public, by type of facility, for all four provinces combined. Overall, 146 are from the public sector (63%) and 84 are private facilities (37%).⁶ (Private facilities were selected that are roughly equivalent, in size and services, to the categories of public facilities listed in Table B.2.)

The survey respondents were senior physicians (at the level of director or chief of the gynaecology department in the larger facilities). They were asked to make use of medical records whenever possible. The questionnaire was adapted from a similar instrument used by the Alan Guttmacher Institute in Bangladesh, the Philippines, several Latin American countries, Nigeria and Uganda. The fieldwork for this survey occurred between May and June 2002. Teams of 2-3 doctors conducted the fieldwork, under the close supervision of senior staff of the Population Council.

Table B.2: Health Facilities Survey: distribution of sampled public and private facilities by type and province

Type of Facility	Percentage					Percent Public
	Punjab	Sindh	NWFP	Baloch-istan	Total	
Teaching	24	22	22	17	23	77
District Headquarters Hospitals [DHQ]	30	28	31	25	29	63
Tehsil Headquarters Hospitals [THQ]	23	29	22	25	25	54
Rural Health Centres [RHC]	16	17	19	17	17	54
Basic Health Units [BHU]	7	4	6	17	6	80
Total Percentage	100	100	100	100	100	63
Percentage Urban	54	52	53	42	52	
Total N	110	76	32	12	230	

⁶ A total of 230 health facilities were surveyed. 51 of these were teaching hospitals. This covers almost all the teaching hospitals of Pakistan in public and private sector. Remaining facilities were sampled from the four provinces according to the population distribution. Further sampling was done as randomised multi staged sampling. Public and private facilities were sampled with 2:1 ratio. For public facilities District Headquarter Hospitals, Tehsil Head Quarter Hospitals, Rural Health Centres and Basic Health Units were randomly selected with 4:3:2:1 ratio. Private hospitals equivalent to public facilities were selected on the criteria of bed strength. A total 230 health facilities including 51 teaching hospitals of public and private sector were covered.

In-Depth Interviews. To explore the factors underlying the decision to have an induced abortion, as well as the health and social consequences of induced abortions, 129 semi-structured interviews were conducted with two types of respondents: health service providers (27), and wives and husbands (60 wives and 42 husbands). Among the wives and husbands, 36 were married spouses. All the wives had a recent experience of an induced abortion. A wide range of topics was investigated in the In-Depth Interviews. Particular attention was given to spousal dynamics, how the induced abortions were obtained, and feelings about the morality of the decision. The interviews were tape-recorded and transcribed. The distribution of the In-Depth Interviews, by type of respondent, sex and province, is shown in Table B.3. Note that these interviews were conducted in Punjab and Sindh -- for reasons of project logistics, it was only feasible to carry out this component of the study in the two larger provinces that encompass most of the population of Pakistan. These interviews were conducted between August 2002 and March 2003 by teams of social scientists, mostly with anthropological training or experience, led by experienced Population Council staff.

Table B.3: In-depth interviews: distribution of respondents by type, sex, and province

Type of Respondent	Punjab	Sindh	Total
Health Service Providers			
Male			
Urban	5	2	7
Rural	1	1	2
Female			
Urban	7	6	13
Rural	3	2	5
<i>Total</i>	<i>16</i>	<i>11</i>	<i>27</i>
Wives and Husbands			
Male			
Urban	10	21	31
Rural	5	6	11
Female			
Urban	15	25	40
Rural	13	7	20
<i>Total</i>	<i>43</i>	<i>55</i>	<i>102</i>

Post-Abortion Survey. In a further effort to understand the experience of abortion (spontaneous or induced), 448 structured interviews were conducted with married women who had experienced a spontaneous or induced abortion (259 spontaneous, 189 induced). The respondents were recruited at facilities where they had received an induced abortion or

treatment for post-abortion complications. The facilities were selected on the basis of the Health Facilities Survey (HFS) conducted earlier, purposively selecting those facilities that showed a fairly high caseload of post-abortion care patients. (This criterion limited the Post-Abortion Survey to Punjab, Sindh, and NWFP provinces; Balochistan contains very few facilities with a substantial number of post-abortion care patients.) Thus the sample is weighted towards women making use of larger facilities and facilities located in urban areas. Women were administered a survey questionnaire that asked about their reproductive career to date, with particular emphasis on their past contraceptive experience. They were also asked about the circumstances surrounding the abortion, the treatment they received, and the later consequences. The distribution of the Post-Abortion Survey by the type of facility where the women were recruited, type of abortion, and province is shown in Table B.4. Whether the abortion was spontaneous or induced was determined by the woman's self-report. These interviews were conducted between January and March 2003.

Table B.4: Post-Abortion Survey: distribution of respondents by type of facility and province

Type of Facility	Punjab	Sindh	NWFP	Total
Public	141	84	32	257
NGO	30	47	16	93
Private	92	6		98
Total Percentage	100	100	100	100
Percentage Urban	64	75	52	66
Total N	263	137	48	448

Annex C: Methodology for estimating the incidence of induced abortion.

1. Estimating the number of post-abortion cases treated in medical facilities

The Health Facilities Survey [HFS] sampled public health facilities and all teaching hospitals, and from this survey can be derived the national and provincial total number of women treated for any post-abortion complication, including both outpatients and inpatients, as well as complications resulting from both spontaneous and induced abortions. Senior officials in the facilities were interviewed in person, and were asked to report the number of women treated for any post-abortion complication in each of the above categories (inpatient and outpatient, in the past month as well as in the average month). Lacking patient-level data, key informants who are very knowledgeable about their facilities are an acceptable source of the required information on post-abortion complications. This data was weighted to represent all such facilities in the country; the weights were derived from HMIS data on the number of beds for all public facilities by province and by type of facility, supplemented with additional data on bed size for private teaching hospitals. Applying the weights yields estimates of the total number of post-abortion hospitalizations, nationally and by province, that are treated at public facilities and private teaching hospitals in Pakistan (Table C.1). However, because the HFS sample did not include the smallest public facilities (Basic Health Units and private sector facilities other than private teaching hospitals), this is an underestimate of the total number of post-abortion patients that receive medical treatment at all health facilities, nationally.

Table C.1: Estimates of the number of hospitalizations for abortion complications, nationally and by province, Pakistan, 2002.

Province	Number of government* facilities surveyed	Unweighted hospitalizations for abortion	Weighted hospitalizations for abortion
Punjab	76	60,263	127,977
Sindh	40	29,740	58,758
NWFP	23	21,990	48,150
Balochistan	7	6,612	15,140
<i>Pakistan</i>	<i>146</i>	<i>118,605</i>	<i>250,025</i>

* Includes Private Teaching Hospitals

2. Estimating the number of spontaneous abortions treated in medical facilities

Some hospitalized abortion patients are treated for the complications of a spontaneous pregnancy loss rather than an induced abortion. In settings in which induced abortion is illegal, it is difficult to obtain accurate information on whether an abortion was spontaneous or induced, because of reluctance to admit to an induced abortion but also because the symptoms (in many instances bleeding is the only obvious condition upon admission) are insufficient for the health provider to be able to determine the type of pregnancy loss.

The methodology utilized here has the advantage of being comparable across areas and populations. It is an indirect method of estimating the number of women expected to be hospitalized for spontaneous abortions (miscarriages), based on the known biological pattern of pregnancy loss by gestational month. The distribution of spontaneous pregnancies losses by length of gestation and the proportion of pregnancies resulting in live births are both fairly constant across populations; both are available from historical research and from recent clinic-based studies in the United States and other countries.⁷ Because early or first trimester spontaneous abortions generally do not result in medical complications serious enough to require hospital care, the proportion of hospitalized post-abortion patients who are being treated for spontaneous pregnancy losses is derived from estimates of the number of late miscarriages (gestation of 13-22 weeks), the type of miscarriage that is more likely to be accompanied by complications that require hospital care. Late miscarriages may be expressed as a proportion of pregnancies ending in live births, and this standard proportion may then be applied to the actual number of live births in an area or country to obtain an estimate of the number of women having late miscarriages.⁸

In the absence of induced abortion, miscarriages at 13-22 weeks gestation account for about 2.89% of all observed pregnancies (i.e., of pregnancies that are observed at five weeks gestation), and for 3.41% of pregnancies that end in live births (84.8% of all observed pregnancies end in live-births, and $2.89/84.8 = 3.41\%$).⁹ The annual number of births is calculated by applying age-specific fertility rates (from the 2000-2001 Pakistan Reproductive Health and Family Planning Survey) to estimates of the number of women in each five-year age group (from the 2001 Pakistan Demographic Survey). Multiplying the resulting number by 3.41% yields an estimate of 152,400 total late spontaneous abortions in 2001.

⁷ S. Harlap, P. H. Shiono and S. Ramcharan, "A Life Table of Spontaneous Abortions and the Effects of Age, Parity and Other Variables," in E. B. Hook and I. Porter, eds., *Human Embryonic and Fetal Death*, Academic Press, New York, 1980, Table 1, pp. 148 and 157.

⁸ World Health Organization, *Abortion: A Tabulation of Available Data on the Frequency and Mortality of Unsafe Abortion*, Geneva, 1994; S. Singh and D. Wulf, "Estimated Levels of Induced Abortion in Six Latin American Countries," *International Family Planning Perspectives*, 20: 4, pp. 4-13, 1994.

⁹ Pregnancy losses of 22 or more weeks are not considered because they are usually not classified as abortion, but as fetal deaths.

To obtain the number of women likely to be hospitalized because of a late spontaneous abortion, a further adjustment is necessary. Not all women who need hospital care for the treatment of late spontaneous abortion have access to a hospital. One strategy is to assume that the proportion of women having a late spontaneous abortion who are likely to be hospitalized is the same as the proportion of women giving birth who deliver in a hospital. This last piece of information is available from the 2000-2001 Pakistan Reproductive Health and Family Planning Survey: nationally, 23% of women delivered at a health facility. However, a miscarriage may be perceived as an illness, and thus women may be more likely to seek modern medical care than would do so for a normal delivery. Hence two additional estimates are generated, based on higher proportions of late miscarriages treated in hospitals, namely 35% and 50%. Together, these three levels of treatment (23%, 35% and 50%) provide a range within which the abortion rate is estimated to fall. The medium estimate is based on the assumption that 35% of late spontaneous abortions are hospitalized.

3. Estimating the number of induced abortions treated in medical facilities

Under the assumption that 35% of late spontaneous abortions result in the woman seeking care in a medical facility, the estimated annual number of hospitalized spontaneous abortion cases is 53,300. This represents slightly more than one-fifth of the total number of women hospitalized each year for abortion (250,025 – see Table C.1). By deduction the remainder -- 196,700 -- are women hospitalized due to complications of induced abortion.

4. Estimating the “multiplier”

Given an estimate of the number of women hospitalized for treatment of complications following an induced abortion, the challenge is determining what proportion of women who obtain induced abortions end up hospitalized. The inverse of this proportion is the “multiplier”, or inflation factor, that is applied to the number of hospitalized women. For example, if 20% of women having induced abortions are hospitalized for complications, the inflation factor would be 5, and the number of hospitalized induced abortion cases would have to be multiplied by 5 to obtain an estimate of the total number of abortions that occurred during the reference period. In general, the safer clandestine abortion services are, the larger the multiplier, because for every one woman hospitalized, many others are likely to undergo safe abortions that do not result in complications or hospitalizations. Concomitantly, the poorer and less safe the available abortion services, the smaller the multiplier, because a higher proportion of women having induced abortions are likely to have serious complications that require treatment. Safety is not the only consideration. The multiplier is also a function of the general availability of hospital emergency services in a given setting. Where such services are easily accessible, the proportion of women with complications who receive hospital treatment will be larger. In poor areas or remote rural

areas, on the other hand, a woman are far less likely to receive needed treatment, even if her condition is serious.

The multiplier must be grounded in the reality of the country. This inflation factor is estimated for Pakistan based on information collected in the Health Professionals Survey [HPS] from 154 health professionals across the country on their perceptions of some key aspects of abortion provision, differentiated according to four main population subgroups (poor urban, non-poor urban, poor rural and non-poor rural). The poor vs. non-poor distinction relied on the perception of providers, who made this judgment mainly on the appearance (particularly clothing) , profession and residential area of clients.

The health professionals were asked in the HPS for: the percentage distribution of all women seeking an abortion according to where they seek the procedure (doctor, midwife, untrained provider, pharmacist and the woman herself); the probability that a woman will experience serious medical complications if she obtained an induced abortion from each of these sources; and the probability that a woman would obtain medical care for such complications. Combining these pieces of information provided by knowledgeable key informants, the proportion of all women seeking an induced abortion in Pakistan who are likely to be hospitalized for complications can be calculated.

These probabilities are gathered separately with reference to women who are poor/non-poor and women who live in urban and rural areas, under the assumption that the situation is usually very different for these four subgroups. The proportions reported by the sample of health professionals are averaged for the whole sample, and weighted according to the proportion of all women who are in the four population subgroups (urban poor/non-poor and rural poor/non-poor). The weights are derived from estimates of the proportion classified under the poverty line as presented in the Poverty Reduction Strategy Paper of the Ministry of Finance (published in December 2003). The result is a single multiplier for the country as a whole, and in parallel, for each of the four provinces.

5. Estimating the total number of induced abortions

The estimated total number of induced abortions is simply the product of the multiplier times the number of hospitalized induced abortion cases. The multiplier accounts for women who had an induced abortion but did not need, or did not seek, treatment in a hospital. The estimates are shown in Table C.2.

The alternative estimates in Table C.2. correspond with the three different assumptions about the proportion of women who are likely to obtain hospital care when they have a late spontaneous abortion. For Estimate A, this proportion is 23%, which is equal to the proportion who deliver live births in a hospital (according to the 2000-2001 Pakistan

Reproductive Health and Family Planning Survey). For Estimate B, this proportion is 35%, assuming a greater likelihood of seeking medical care for a spontaneous abortion than for delivery. For Estimate C, this proportion is 50%, which is even more conservative (from the standpoint of estimating the number of induced abortions) by assuming an even greater likelihood of seeking medical care for a spontaneous abortion. The medium assumption (Estimate B) is recommended.

Table C.2: Alternative estimates of total number of induced abortions

Province	Multiplier (based on HPS)	Total number of induced abortions		
		Estimate A	Estimate B (Recommended)	Estimate C
Punjab	4.66	505,000	457,000	397,000
Sindh	4.77	241,000	218,000	192,000
NWFP	3.93	169,000	160,000	147,000
Balochistan	4.46	59,000	54,000	49,000
<i>Pakistan</i>	<i>4.49</i>	<i>974,000</i>	<i>890,000</i>	<i>785,000</i>

