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## The Role of Providers and the Public Financial Cost

Manju Rani, Shiyao Chao, Gulzada Arystanova, and Meruert Rakhimova

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## Health, Nutrition and Population (HNP) Discussion Paper

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# Health, Nutrition and Population (HNP) Discussion Paper

## Fertility Regulation in Kazakhstan: *The Role of Providers and the Public Financial Cost*

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**Abstract:** This study examines fertility regulation in Kazakhstan, with dual emphases on providers' attitudes toward abortion and the public financial costs of abortion provision. Though abortion incidence declined sharply in the 1990s in Eastern European countries and in the former Soviet republics, it stagnated at relatively high levels in the early 2000s, accounting for a substantial proportion of gynecological morbidity and maternal mortality. Limited literature is available on the role of health service providers' attitudes that may encourage or discourage abortion culture. Additionally, most studies examine abortion incidence from the perspective of its impact on women's health, while the issue of the public financial burden imposed by the provision of services for "avoidable" abortions remains unexplored. This study sheds lights on these two areas by conducting a two-part field survey in Kazakhstan

Three-stage stratified sampling was used to select 126 providers from 52 health facilities from four oblasts and two major cities (Almaty and Astana) at different administrative levels to assess providers' attitudes and perceptions; and to analyze the public costs of providing abortion and family planning services.

Findings from the provider survey suggest that providers' biases towards certain contraceptive methods—partly attributable to their lack of training in alternative methods—leads them to limit the choice of contraceptive methods on offer, thereby reducing the quality of family planning services and potentially contributing to stagnating abortion rates.

Findings from the costing survey suggest that in terms of cost per birth averted, contraceptives are almost 3.2 times more cost-effective than abortion services. In 2004, abortion services accounted for almost 1% of total public health spending. The study

suggests that by expanding family planning services, including increasing contraceptive choices, the reliance on abortion for fertility control may be reduced. Savings may be redirected to improved family planning services or other public health interventions.

**Keywords:** Abortion, Contraceptive use, Attitudes, Costing, Providers

**Disclaimer:** The findings, interpretations and conclusions expressed in the paper are entirely those of the authors, and do not represent the views of the World Bank, its Executive Directors, or the countries they represent.

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## I. INTRODUCTION

In the 1990s, countries in Eastern Europe and Central Asia experienced significant declines in fertility. Most reached below-replacement levels, i.e., 2.1 children per woman, on average. The reduction in fertility partially reflects the expansion of contraception use and the availability of abortion. However, while countries in Western Europe had some of the lowest abortion rates in the world (11 per 1000 women 15-44 year of age), countries in Eastern Europe, including many of the former Soviet Republics, had some of the highest (about 90 per 1000 women) (Henshaw *et al.*, 1999a). Abortion has long been a major method, if not the principal method, of fertility control in most of the Eastern European countries and former Soviet republics. Nevertheless, in the 1990s, a sharp decline in abortion incidence was documented in almost all of these countries (Henshaw *et al.*, 1999b). This decline in abortion incidence was accompanied by substantial declines in desired family size and in fertility rates (Henshaw *et al.*, 1999 b).<sup>1</sup> Furthermore, some countries documented increasingly negative attitudes towards abortion among women.

Nevertheless, at the beginning of the 21<sup>st</sup> century, abortion incidence remains at high levels in most of these countries, as compared to developed countries. For example, in the early 2000s, the total abortion rate per woman was still over one in almost all of these countries and more than three in Azerbaijan, Georgia, and Romania, compared to less than half in many Western European countries. These high rates remain of concern because medical complications from abortion are a major contributor to maternal mortality and gynecological morbidity in many of these countries (Kaupova *et al.*, 1998). Furthermore, the financial burden of abortion services may strain national health care systems—an area that remains to be fully explored and documented.

In addition to the still high abortion incidence, there is additional evidence of stagnating decline of abortion incidence, and stagnating contraceptive use rates in recent years in many Eastern European countries and former Soviet republics. These observations warrant assessment of the factors still contributing to the relatively high abortion rates in these countries. The proponents of abortion culture theory argue that abortion is not just a matter of individual choice but is also a social phenomenon, and as such, involves many actors, including the State, service providers, and “society” (Grant, 2005). Of these many contributing actors, relatively good data exists documenting women’s and the State’s perspectives on abortion (Agadjanian, 2002; Westoff, *et al.*, 1998; Westoff, 2000; Westoff, 2005). However, there is a dearth of data on the attitudes and perceptions of health service providers that may encourage or discourage abortion culture.

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<sup>1</sup> Declines in desired family size and in fertility rates differentiate these countries from some African and Asian countries where relatively high abortion rates occur in a context of overall high fertility rates, low contraceptive use and legal restrictions. Though there may be some features in common, the cultural, policy and program issues leading to high abortion rates in Eastern Europe and the former Soviet republics apparently differ from those in Asian and African nations, and warrant separate examination.

In addition, though there are many studies from the Eastern European countries and former Soviet republics documenting unacceptably high abortion rates and the impact on women's reproductive health and mortality, few studies examine the extent to which the provision of services for avoidable abortion services consumes scarce public health resources. While many countries have estimated the cost of providing contraceptive services—which in many developing countries are funded by donor organizations—few countries have data documenting how much they spend on providing abortion services, especially for “avoidable abortions” —abortions which could have been prevented by the provision of more effective contraceptive services. Provision of abortion services could very well be a hidden unacknowledged burden on health care systems.

Therefore, estimating the comparative financial implications of providing avoidable abortion services in place of effective family planning services will provide valuable information for health care policy makers. Such analyses are even more urgently needed now when most of these countries are facing economic crises, including declining health care budgets and rising health care costs.

This study attempts to fill these two empirical gaps by assessing the issue of abortion culture from the point of view of health service providers and by estimating the current public sector spending on the provision of abortion and contraceptive services, by costing each service in one of the former Soviet republics: Kazakhstan. The study will provide useful policy and program insights not only for Kazakhstan but also for other Eastern European countries and former Soviet republics that still face high abortion incidences.

The specific objectives of the study are:

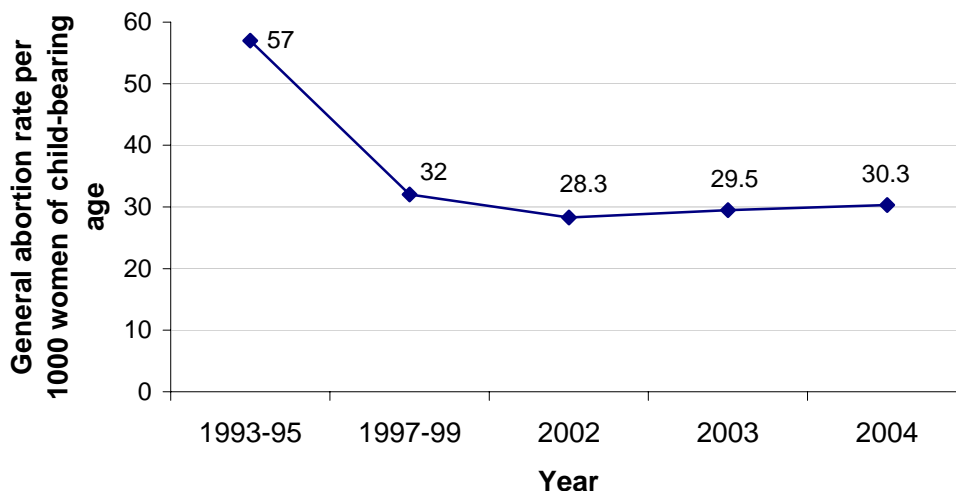
- To assess service providers' attitudes towards contraception and abortion that may encourage or discourage “abortion culture” in Kazakhstan.
- To understand the financing of abortion and contraceptive services and estimate the public financial burden of avoidable abortion services in Kazakhstan.

The following section provides the background on abortion and contraception use in Kazakhstan and briefly reviews the changes in state policies and changing attitudes of women towards abortion and contraceptive use in the 1990s, as the context for the results from the provider and costing surveys.

## **1.1 STUDY CONTEXT**

Kazakhstan is the fourth most populous former Soviet republic, with a total population of 14.9 million, fifty-six percent of which lives in urban areas. With a per capita gross national income of US \$ 2250, Kazakhstan falls in the category of lower middle-income countries. Kazakhstan has experienced a continual decline in fertility in the 1990s across all social groups, with the total fertility rate declining by 29% from 2.9 in 1988-89 to 2.1 in 1996-99 (census, 1989 and KDHS 1999). Contraceptive prevalence increased from 59% in 1995 to 66% in 1999 (KDHS 1995; 1999). From 1992-1995 and 1996-1999, the

**Figure 1.1: Stagnating abortion rates after the late 1990s (MOH data)**

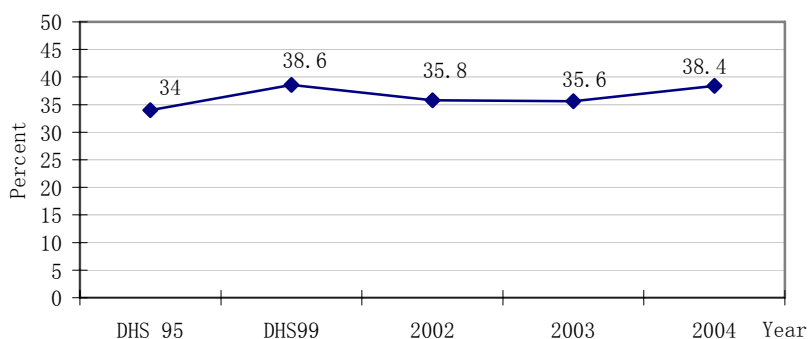


total abortion rate per woman declined by almost 18%, from 1.8 abortions to 1.4 abortions per woman (KDHS 1995; 1999).

However, the total abortion rate, at 1.4 per woman, remains high, as compared to countries

with similar or lower fertility levels [e.g. 0.7 per woman in the USA and in the Republic of Turkey (Westoff, 2005)]. Indeed, the general abortion rates, as recorded in the database of the Ministry of Health (MOH), did not change significantly between 1996-99 and between 2002-04, remaining at about 30 per 1000 women, implying stagnation of the declining patterns of abortion seen in early 1990s (Figure 1.1). The MOH data also suggests stagnation in the contraceptive prevalence rates in the early 2000s (Figure 1.2). An abortion rate of almost 30 per 1000 women in Kazakhstan suggests that abortion remains

**Figure 1.2: Trends in percentage of all women (15-49 years) using a modern contraceptive method, 1995 and 2004**



a widely-utilized method of fertility control. Yet complications resulting from abortion are a major contributor to maternal mortality and gynecological morbidity (Kaupova *et al.*, 1998). It is

Data sources: KDHS 1995, 1999; MOH 2002-2004.

estimated that abortions contribute to 32.4% of all maternal deaths in Kazakhstan (WHO, 1999)<sup>2</sup> and to 40-49% of all obstetric and gynecological admissions (UNFPA & WHO, 2000). The impact of high abortion incidence on public health spending remains undocumented.

Beginning in the early 1990s, the Kazakhstan government made active efforts to increase access to safe and effective modern contraceptive methods (Foreit and McCombie, 1995). Order 33 of February 1994 approved a family planning program mandating all medical institutions to provide and massively expand family planning services, in order to help women achieve their desired family size and to reduce abortions and maternal mortality. Kazakhstan now has a national program of family planning with a national advisory group in the form of a coordinating committee on reproductive health within the health committee. Most modern methods of contraception, such as IUDs and injectables, are supposedly distributed free of charge in the public sector<sup>3</sup>. Other modern contraceptives, such as the pill and condoms, are also available for a fee at commercial facilities.

To reduce mortality associated with abortion, by an order of the Ministry of Health (2002), abortion services may be provided only through facilities having inpatient and emergency services, including anesthesia facilities. Abortion is available in Kazakhstan on request during the first 12 weeks of gestation. Thereafter, induced abortion is available within 28 weeks of conception on judicial, genetic, vital, broad medical and social grounds, as well as for personal reasons, if authorized by a commission of local physicians. Services for clinical abortions are provided free of charge in most health facilities, though some fee-for-service health facilities have now become available.

Government efforts to improve access to contraceptive services presumably played an important role in the decline in abortion rates and in the increase in contraceptive use in the 1990s, though a firm cause and effect relationship cannot be established. Research in the 1990s documented women's relatively negative attitudes towards abortion and an increasing demand for alternative contraceptive services (Agadjanian, 2002; Westoff *et al.*, 1998; Westoff, 2000; Westoff 2005). In the nationwide Kazakhstan Demographic and Health Survey conducted in 1999 (KDHS 1999), the majority of women (87.9%) approved of couples using family planning methods to avoid unwanted pregnancy. Only 8.5% of women surveyed approved of unconditional abortion. In the same survey, while almost two-thirds of women (62.7%) felt that getting an abortion as a method to control fertility is difficult, a much smaller percentage of women felt that getting services for IUDs (13.8%) or pills (15.2%) would be a problem. Relatively more respondents perceived financial problems in obtaining services for abortion (54.2%) than for obtaining IUDs (44.2%) or pills (45.7%). Similarly, significantly more respondents

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<sup>2</sup> Other causes include hypertension (22.3%), toxemia (12.3%), sepsis (9.5%), and ectopic pregnancy (3.9%).

<sup>3</sup> However, there is some anecdotal evidence concerning the widespread practice of under-the-table payments for services (Storey *et al.*, 1997).

perceived health problems/side effects associated with induced abortion (77.3%) than with using IUDs (51.0%) or pills (53.1%).

However, problems in the supply environment persist, potentially leading to stagnation in the declining trends of abortion rates. While the data cited above reflects a relatively favorable supply environment and positive attitudes towards contraceptive services, women's responses on the perceived side effects and reliability of most commonly-used methods (i.e. IUDs and pills) suggest that problems still exist on the supply-side that may retard further declines in abortion rates. More than half of the women surveyed perceived health problems/side effects associated with IUDs/pills that would make them reluctant to use these methods.<sup>4</sup> In addition, almost half the women who discontinued using the IUD in the five years prior to the survey (1995-99) did so due to side effects/health concerns, while 30% of the pill users did so during the same period (KDHS 1999). In addition, almost half of the women surveyed perceived the most commonly prescribed methods to be unreliable. More women perceived IUDs to be reliable (64%) than pills (34%).

Besides the perceived side effects/health concerns and poor reliability of the most commonly-used methods, women's responses on being informed by health providers about other methods, combined with the differential rates of stock-out for contraceptive methods in a UNFPA facility survey in 2001, suggest a limited choice of contraceptive methods available to women. For example, only 35% of the women who were currently using a modern contraceptive method reported having been informed by their health provider about other methods of contraception (KDHS 1999). A rapid assessment survey of the health facilities (UNFPA, 2001) in five pilot regions revealed that almost all family doctor outpatient facilities lacked supplies of injectables and all Family Group Practices in Astana lacked supplies of condoms. A significantly higher proportion of facilities reported stock-outs of injectables and condoms than of oral pills and IUDs. For example, while 75% and 56% of surveyed Family Planning Cabinets<sup>5</sup> reported no injectables and condoms respectively, 30% and 34.4% reported stock-outs of oral contraceptives and IUDs, respectively. At the level of Central Rayon Hospital, 79.4% reported no injectables, 58.8% no condoms, and 33% reported no oral contraceptives and IUDs.

Notwithstanding the current policies of the Government of Kazakhstan to improve access to contraceptive services, according to the "Population Policy Data Bank" maintained by the Population Division of the Department for Economic and Social Affairs of the United Nations Secretariat, the Government views the current fertility levels as unfavorably "low." The Government of Kazakhstan is therefore also currently pursuing a policy to increase fertility levels by encouraging women to bear more children. This pronatalist policy may come in conflict with the policy of providing appropriate contraceptive services and may

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<sup>4</sup> Though surprisingly few women who were not using contraception mentioned cost (0.7%), health concerns (2.4%), fear of side effects (1.6%), or inconvenience of use (0.1%) as the reasons for non-use (KDHS 1999).

<sup>5</sup> Family Planning Cabinets are clinics at the primary health care level that are either self-standing or are part of polyclinics specifically designed to deliver outpatient family planning services.

send ambiguous messages to providers. Such conflict is clearly reflected in the lack of any specific budget allocation for family planning services in most of the oblast<sup>6</sup> and city health departments. Contraceptive supplies are not included in the essential drug list. There are no special training funds earmarked for training in provision of contraceptive services. Most funds are provided through UNFPA or other national associations (e.g. The Reproduction Center in Almaty). Public advertising of contraceptive methods, unless available over-the-counter, is restricted by an order of the Committee of Pharmaceutical Control (2004).

It is within this context of changes in governmental policy, the supply environment and women's attitudes toward contraception and abortion, that the following sections examine our two areas of investigation: the results of the survey of providers' attitudes and perceptions and the analysis of the public financial burden of abortions in Kazakhstan.

## II. STUDY METHODOLOGY

The primary data were collected to evaluate providers' attitudes and perceptions and for estimating the cost of abortion and family planning services. The field work was done from July 2005 to September 2005. The findings from the primary data were triangulated with secondary data collected under the Kazakhstan Demographic and Health Surveys (KDHS) in mid-1995 and 1999 (KDHS 1995; 1999) and with other existing literature and data to derive the key recommendations and conclusions.

### 2.1 SAMPLING

Three-stage stratified random sampling was used to select the health facilities—the primary sampling units—for this survey. Kazakhstan is divided into six geographic regions which are then administratively divided into 14 oblasts (provinces) and 220 rayons (districts), in addition to Almaty and Astana City. In stage 1, one oblast with relatively higher abortion rates was sampled from each administrative region (except from Central Region), leading to the selection of four oblasts: South-Kazakhstanskaya; West-Kazakhstanskaya; North-Kazakhstanskaya; and East-Kazakhstanskaya. Since abortion rates vary much more across regions, rather than between oblasts within the same region, this strategy led to a selection of oblasts with high, medium and low abortion rates. In addition, at the request of the Ministry of Health, both Almaty and Astana were sampled. In the second stage, one rural district and one urban district were randomly-sampled from the list of all rural and urban districts, respectively, in the selected oblasts. Finally, one facility of each type, providing either family planning or abortion or both services, was sampled randomly from the list of all the health facilities

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<sup>6</sup> The oblast is the first sub-national administrative level in Kazakhstan, equivalent to a province or state. There were a total of 14 oblasts in Kazakhstan in 2006. A rayon is the second sub-national administrative level, equivalent to a district. There were 220 rayons in Kazakhstan in 2006.

in that particular district, arranged by type. A similar approach was used in the urban areas. Annex 1 provides the list of sampled health facilities.

### **2.1.1 Sampling and Methodology for Provider Survey**

At least two service providers involved in providing abortion and/or family planning services were selected from the sampled facilities. In all, data were collected from 126 service providers from 52 health facilities. Structured questionnaires were used to elicit the providers' responses. Follow-up qualitative questions were asked to gain additional insight into providers' attitudes. The questionnaires were translated into the local languages and were administered by two trained professionals. Annex 2 provides the questionnaire used for the provider survey.

### **2.1.2 Sampling and Methodology for Costing Survey**

A structured questionnaire was used to collect costing data on both abortion and family planning services. Costing data on abortions were collected from only 20 out of the 52 sampled health facilities, as only these health facilities provided abortion services, because of a Ministry of Health order stipulating that only facilities with inpatient and emergency services can provide abortion services. Family planning services, excluding female sterilization, are provided only through the primary health care facilities, such as city polyclinics, Family Group Practices, Women Consulting Centers attached to tertiary level institutions, *et al.* The costs for family planning services were collected from these facilities.

Medical personnel in charge of the provision of abortion and family planning services at the sampled facilities (gynecologists, nurses, midwives, *et al.*) were interviewed about the current clinical practices followed for abortion (including treatment of abortion complications) and for family planning services.

*An accounting model* was used to calculate the unit cost of each intervention for both family planning and abortion services.

*Assessment of inputs or cost factors per intervention for abortion services*

#### *1) Direct cost*

- **Drugs:** drugs used for local/general anesthesia; antibiotics for prevention of infection, analgesics, uterotonics (e.g. oxytocin), or other products (e.g. IV fluid, blood products, *et al.*)
- **Disposable supplies:** including gloves, disposable IV sets, syringes, needles, drapes, cotton gauge pieces, cotton, sanitary pads, *et al.*
- **Antiseptics:** antiseptics for patients, surgical instruments, and surgeons' hands during medical procedures.
- **Laboratory tests:** standardized costs for laboratory tests requested before or after an abortion. Some of these tests in the Kazakhstan context include vaginal smear and Wasserman tests, requested for almost 100% of women.

The quantity of each input required was assessed by asking the respondent staff to identify all drugs, equipment and supplies used in an intervention. In addition, respondents were asked to provide an estimate of the percentage of women who were likely to receive that particular drug/supply (e.g., anesthesia may not be used in 100% of all cases; the same applies for antibiotics or analgesics).

The accounting department in each health facility was contacted to provide data on prices in the year 2004 for different drugs, laboratory tests and disposable supplies identified as being used for abortion services.

2) *Shared cost of utilities and other miscellaneous costs.* These costs included:

- Utility costs: water and disposal of waste water; heating; electricity; and telephone bills.
- Building and office equipment repair and maintenance.
- Social insurance, social taxes, car insurance, staff business trips.

Four steps were followed in calculating the utility and other miscellaneous overhead costs per intervention:

- Information was collected on utility and other miscellaneous overhead costs, as listed above, for one year (generally for the calendar year 2004) from the planning and economics/accounting unit of the health facility.
- Data were also collected on the total number of beds in the health facility and the number of beds allocated to the gynecological department (the department responsible for providing abortion services).
- Calculation of proportion of utility expenses in the gynecology department. The total utility and other miscellaneous overhead costs of the health facility were prorated to the gynecological department based on the share of gynecological beds to the total number of beds in the health facility.
- Calculation of proportion of utility and miscellaneous overhead costs attributed to abortion services. The total utility and miscellaneous costs were then further prorated to abortion services based on the share of admissions for abortion services to the total number of gynecological admissions in the same reference period. The cost per intervention was then calculated by dividing the annual utility and miscellaneous costs attributed to abortion services by the total annual number of admissions for abortions.

3) *Shared cost of non-clinical support staff.* The support staff in Kazakhstan health facilities included administrative staff (e.g. statisticians, economist, office clerks, store keepers, *et al.*), and other housekeeping staff (e.g. cleaners, security guards, drivers, plumbers, *et al.*). The steps followed in calculating the shared cost of non-clinical support staff per intervention were the same as described above for utility and miscellaneous overhead costs.

4) *Cost of clinical staff per intervention.* The cost of time spent by all the clinical staff (gynecologist, anesthesiologist, operational nurse, assistant anesthesiologist, and attendant nurse) was calculated based on their monthly salary and time spent on each intervention.

The respondents were asked to provide an estimate of approximate clinical staff time currently spent on an average case for each intervention. For example, for one intervention, an average one hour of clinical time may be needed, plus the time for pre-abortion and post-abortion counseling (perhaps thirty minutes for each counseling session).

The hourly rate of the clinical staff was calculated by dividing the average monthly salary (according to data provided by the health facility) with the number of working days in a month (22) and by number of working hours in a day (8). This formula assumes that there was no down-time, and that staff actually worked for all eight hours in a day. The alternative was to allocate the time of the staff-time spent on abortion services, family planning services and all other services, but the first method was used in this study because of the difficulties in accurately allocating staff time to different services.

- **Costs not included:** Most health facilities in Kazakhstan are characterized by overcapacity and are old, with little opportunity cost. Hence, the capital cost of the health facility and equipment is not included in the calculation of cost per intervention.

#### *Assessment of inputs or cost factors per intervention for family planning services*

The same four major categories of inputs as used in assessing the abortion intervention costs were calculated as follows for family planning services:

*Direct costs:* In almost all the facilities visited, most contraceptives supplies (oral contraceptives, IUDs, condoms, injectables, and spermicides) are supplied by UNFPA under humanitarian aid and are provided supposedly free of charge to clients seeking services from public health facilities. Therefore, to calculate the cost of providing supplies, the cost of supplies (oral contraceptives, condoms, IUDs, Depo-provera, spermicides) was taken from the data provided by the UNFPA office in Kazakhstan. The cost of one couple-year of protection was calculated for facilitating comparison across methods. For oral contraceptives, one couple-year of protection equaled the cost of 12 cycles; for condoms, the cost of 100 condoms; for Depo-provera, the cost of four injections; and for an IUD, it was assumed that on average, a woman will use one IUD for two years. In addition, costs were included for disposable supplies (e.g. gloves and antiseptics for IUDs and Depo-provera; laboratory tests done before insertion of IUDs, etc.).

*Indirect utility and overhead costs:* Annual utility and overhead costs as collected from accounting and planning departments were prorated to total outpatient consultations in a year to calculate the cost for one outpatient consultation. It was assumed that three

consultations will be required for an IUD and for oral contraceptives, four consultations for Depo-provera and two consultations for condoms. Overall utility and overhead costs were attributed to individual contraceptive methods for one couple-year of protection.

*Support staff cost:* Most of the lower-level health facilities did not maintain separate data on non-clinical support staff. Based on a ratio of support staff to clinical staff costs at the higher-level facilities, a multiplication factor to the direct clinical personnel cost was applied to calculate the support staff cost.

*Direct clinical personnel cost:* Only one staff-member cost was imputed. It was assumed that three consultations per year would be required for oral contraceptives and for IUDs (one for insertion and two for follow-up), two consultations per year for condom users, and four consultations for Depo-provera users. The total time allocated for one couple-year of protection was 45 minutes for oral contraceptives, 30 minutes for condoms, and one hour for IUDs and Depo-provera, each. Depending upon the level of the health facility, the salary of a midwife or gynecologist was taken into account for the calculation of the cost of the clinical personnel time.

For calculation of average cost per intervention for *female sterilization*, the methodology followed was exactly the same as for abortion. Female sterilization was provided only in tertiary-level facilities with inpatient and emergency facilities.

## **2.2 ESTIMATING THE TOTAL PUBLIC SECTOR SPENDING AT THE NATIONAL LEVEL**

To ensure comparability, the Ministry of Health data were used to estimate the national/oblast incidence of abortion, of abortion complications and of use of family planning methods, as well as for the population of women and the total number of births. At the time of the fieldwork in July-September 2005, the latest year for which data were available was 2004.

The total public spending (public cost) on each type of intervention was calculated by multiplying the unit cost of each intervention by the total number of interventions performed in each oblast. The total public spending at the national level was adjusted by (weighted for) variations in the unit intervention costs as calculated in the study and by variations in the incidence of abortion in different regions as recorded in the Ministry of Health database.

## **III. RESULTS FROM THE PROVIDER SURVEY**

Though health facilities were sampled by urban and rural strata in anticipation of rural/urban differences, no significant rural/urban differences were observed in the providers' responses. Thus, to make the results more readable, findings are presented in aggregate for all 126 providers surveyed rather than by urban or rural locale or by level of health facility.

### 3.1 PROVIDERS' BIASES TOWARDS CONTRACEPTIVE METHODS

*IUDs perceived to be easiest to use and the most affordable*

To assess providers' attitudes towards nine contraceptive methods,<sup>7</sup> respondents were asked to assign a score, on a scale of 1-5, for each contraceptive method on five dimensions of safety, reliability, convenience of use, probability of their recommending a method, and perceived affordability of the method. If the respondent was not at all familiar with the method, a score of "0" was given. Table 3.1 presents the mean response for each dimension, by method. On the "dimension of safety," condoms were rated as the safest (4.36), followed by oral pills (4.05), female sterilization (3.85), and IUDs (3.31). Abortion (1.48), withdrawal (2.55) and injectables (2.78) were given the lowest scores. In terms of reliability, the highest average score was given for female sterilization (4.51), followed by oral pills (4.45), and IUD/injectables (3.9). In terms of ease of use, the highest score was received for IUDs (4.5), followed by oral pills (4.0). IUDs, then condoms, were perceived to be the most affordable methods.

**Table 3.1: The average scores on perceived safety, reliability, ease of use, financial affordability and likelihood of their recommendation for different contraceptive methods**

Contraceptive method	Safety	Reliability	Ease of use	Affordability	Likelihood of recommendation
Oral Pills	4.05	4.45	3.97	3.50	4.62
Condoms	4.36	3.49	3.47	4.32	3.75
IUDs	3.31	3.90	4.50	4.63	3.87
Injectables	2.78	3.91	3.87	3.46	2.60
Female sterilization	3.83	4.51	3.89	2.13	2.25
Periodic abstinence	3.24	2.68	2.71	na	2.13
Withdrawal	2.55	2.08	2.25	na	1.52
Induced abortion	1.48	2.32	1.52	2.72	0.99

*Note: on a scale of 1-5, with 1 representing the worst outcome (least safe/reliable/easy to use/affordable) and 5 representing the best outcome, based on responses from 126 providers.*

*Oral pills and IUDs most likely to be recommended*

Regardless of the perceived effectiveness on the different dimensions as shown in Table 3.1, providers are most likely to recommend oral pills (4.62), followed by IUDs (3.87) and condoms (3.75)—the three most commonly used methods in Kazakhstan—though these methods were perceived to be associated with health problems and low reliability by women surveyed in 1999 (KDHS 1999). Despite perceiving female sterilization to be safer than IUDs (3.83 versus 3.31) and almost as reliable and as easy to use as oral contraceptives, the likelihood of their recommending that method is low. Providers also

<sup>7</sup> These methods included oral pills, condoms, IUDs, injectables, female sterilization, male sterilization, periodic abstinence, withdrawal and induced abortion. However, most respondents were not familiar with male sterilization, hence this method was dropped from the final analysis. Most respondents also replied that they do not consider "induced abortion" to be a family planning method but they were nevertheless asked to provide a rating or were given a score of "zero".

perceive injectables to be much less safe than oral contraceptives and IUDs and are thus much less likely to prescribe them, as compared to oral pills and IUDs. When the providers were further questioned as to why they would not recommend injectables or female sterilization, they had no clear answers; some referred to their lack of training in these methods, and some said that those methods are just “not good” for women. *Thus though injectables and female sterilization are officially available in Kazakhstan, the methods and choices offered to women is limited for all practical purposes to oral pills, IUDs and condoms, even though a large percentage of women reported these methods inconvenient and unreliable in the KDHS 1999.*

### 3.2 PRESCRIPTION OF CONTRACEPTIVES TO UNMARRIED YOUNG MEN AND WOMEN: LIMITED CHOICE

Recently, an increasing trend has been observed in abortion rates among young single women. To assess providers’ attitudes towards prescribing contraceptive methods to young men and women, two sequential questions were asked. The first question asked whether the respondent would recommend a contraceptive method for unmarried, sexually-active women younger than 20 years old. If the respondents answered “yes” to this question, then they were asked subsequent questions as to what specific methods they were likely to recommend. The respondents could mention as many methods as they deemed fit. The same two questions were asked regarding young men.

Although almost all providers reported that would recommend a contraceptive to a young unmarried man or woman, the methods they would recommend remained limited to condoms and oral pills—the two methods with the highest failure rates on typical use (Table 3.2).

**Table 3.2: Percentage of providers that would recommend a particular method to unmarried young men and women**

Contraceptive method	Recommend to Women	Recommend to Men
Would not recommend any method	3.2	8.0
Oral Pills	85.7	3.2
Condoms	72.2	90.5
IUDs	7.1	0
Injectables	0.8	0
Female sterilization	0	0
Male sterilization	0	0
Periodic abstinence	9.5	6.4
Withdrawal	0.8	0
Induced abortion	0	0

### 3.3 POST-ABORTION PRESCRIPTION OF CONTRACEPTIVE METHODS

*Choice mainly limited to oral pills*

To assess current practices and providers' attitudes towards post-abortion contraceptive services, all respondents were asked to identify the contraceptive method they were most likely to recommend to a woman who had just undergone an induced abortion. "No method" was listed as one of the response categories, and respondents could mention as many methods as they would recommend under different circumstances for post-abortion women. If the respondent mentioned at least one method, he/she was asked a second follow-up question concerning how soon they would prescribe a method to a post-abortion client, specifying the exact number of days, weeks or months.

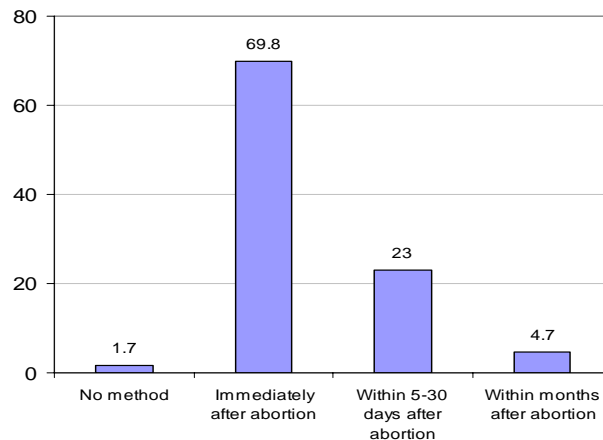
Almost all of the providers said that they would recommend a contraceptive method after performing an abortion. However, while a majority of providers (91.3%) reported that they would recommend oral pills as a post-abortion method, only 16% of providers mentioned IUDs (Table 3.3).

**Table 3.3: Percentage of respondents who recommend a particular method to their post-abortion clients**

Contraceptive method	% of respondents
Would recommend no method	1.6
Oral Pills	91.3
Condoms	26.2
IUDs	15.9
Injectables	10.3
Female sterilization	0.0
Male sterilization	0.0
Periodic abstinence	4.8
Withdrawal	0.0
Induced abortion	0.0

Most providers said that they would recommend a method immediately after the abortion, and only 30% said that they would recommend a method five days or later (Figure 3.1).

**Figure 3.1: Percentage of providers who would recommend a contraceptive method within certain duration to post-abortion women**



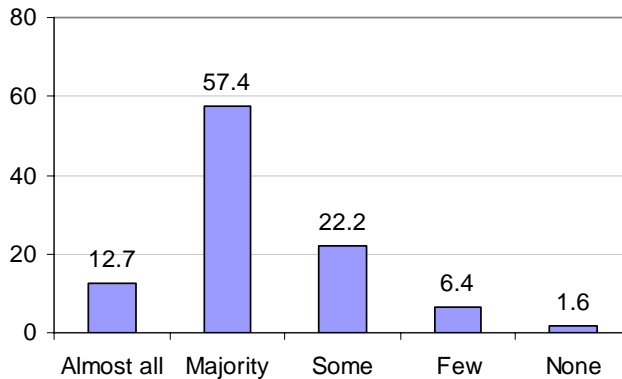
### 3.4 PERCEPTION OF WOMEN'S PREFERENCES/KNOWLEDGE

Perceptions of their clients' preferences may also bias providers towards recommending/prescribing a particular method. All respondents were asked to indicate a score on a scale of 1-5 for nine different contraceptives, regarding:

- how much the provider thinks the client knows about a method?
- how much the provider assumes their clients' preference for a particular method?

In addition, providers were asked about the proportion of their clients who approached them after having made up their minds in favor of a particular contraceptive method. The results are presented in Table 3.4. It is interesting to note that providers perceived clients to be less aware of injectables (2.9) and terminal methods than of oral pills, condoms and IUDs. This perception is in line with results of the KDHS 1999 in which a relatively smaller proportion of women reported being aware of injectables and female sterilization (53% each), as compared with oral pills (99%), condoms (94%) and IUDs (88%).

**Figure 3.2: Percentage of providers who think that most clients approach them after having made their contraceptive choice**



Providers also perceived that clients are less likely to prefer injectables and terminal methods—though this lack of preference may be due to their lack of knowledge about these methods rather than a considered lack of

preference for these methods. In addition, almost 70% of providers think that almost all or a majority of their clients approach them after having made up their minds regarding the contraceptive method they want to use (Figure 3.2).

**Table 3.4: Providers' perceptions about clients' knowledge of and preference for different contraceptive methods**

<b>Contraceptive method</b>	<b>Clients' knowledge</b>	<b>Clients' preference</b>
Oral Pills	3.8	3.9
Condoms	4.7	4.0
IUDs	4.4	4.3
Injectables	2.9	2.4
Female sterilization	2.4	1.5
Male sterilization	1.9	1.1
Periodic abstinence	3.5	2.5
Withdrawal	3.5	2.7
Induced abortion	3.5	2.5

*Note: on a scale of 1-5; 1 being least likely to know or prefer and 5 being most likely to know or prefer.*

### **3.5 PROVIDERS' KNOWLEDGE OF CONTRACEPTIVE METHODS**

Providers' knowledge of different contraceptive methods was assessed by asking respondents to list two contraindications and two side effects for each of the nine contraceptive methods. In addition, knowledge about oral contraceptives was assessed by asking them a question about what women should do if they forget to take one pill.

It is interesting to note that almost half of the respondents mentioned menstrual irregularities and increased menstrual bleeding as a side effect of oral contraceptives, which is incorrect. Five (out of 123) also mentioned heavy menstrual bleeding as a contraindication for oral pills. On the contrary, oral contraceptives help to reduce menstrual blood loss, make the cycles more regular and help reduce the prevalence of iron deficiency anemia. Other important contraindications of oral pills, as mentioned by respondents, include cardiovascular disease (e.g. hypertension), gastrointestinal tract disease, varicose veins (including venous thrombosis or thrombophlebitis), and liver disease (cirrhosis, hepatitis B and C). Obesity, smoking and age over 35 years were mentioned by only a few.

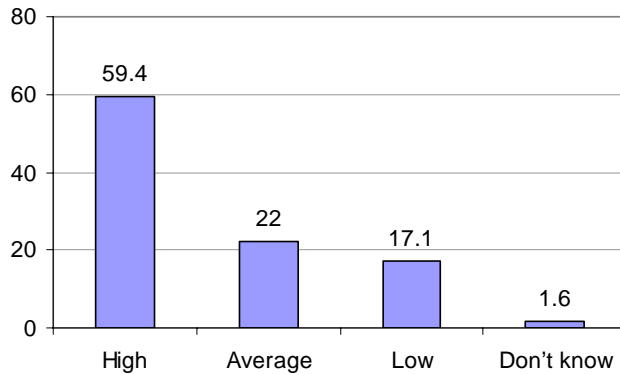
For condoms, "allergic reaction" and sexual dissatisfaction were the most common side effects mentioned. Almost four in ten respondents thought that condoms had no side effects and six respondents did not know of any side effects. A majority of respondents did not mention any contraindications for condoms.

For IUDs, almost all respondents could list at least one contraindication. A majority mentioned chronic inflammatory/infection disease of the genital tract (e.g. adnexitis, cervicitis) and uterine abnormalities (e.g. myoma, scar, erosion). Few mentioned menstrual disorders as a contraindication.

Many respondents were not well-informed on the side effects and contraindications of injectables. A high proportion of respondents mentioned irrelevant contraindications and incorrect side effects. In addition, a significant proportion of respondents were unable to

mention any side effects or contraindications. This data implies that the majority of the respondents are poorly informed about injectables.

**Figure 3.3: Providers' perspectives on the number of women who undergo abortions or the number of abortions per woman on average, as high, low or average**



*Informing women about other contraceptive methods and side effects.*

Almost all providers responded that they always inform clients about the potential side effects of the contraceptive methods. In addition, almost all providers said that they would inform clients about other contraceptive methods even when clients request a specific contraceptive method. However, this testimony contrasts sharply with clients' reports on being ill-informed

about other contraceptive methods, as elicited in the KDHS 1999, unless the service situation has changed dramatically since 1999.

### 3.6 PERCEPTIONS OF THE NUMBER OF WOMEN WHO SEEK ABORTION AND THE CAUSES OF ABORTION

The published literature abounds with the view that the current abortion rates are high in Kazakhstan and other former Soviet republics. In addition, most of the international agencies working in Kazakhstan and most top decision-making policy makers also believe that abortion rates are high. Yet there is no evidence indicating that the providers who come in contact with clients also believe the rates to be high. In order to elicit providers' perceptions on abortion rates, all respondents were asked to gauge whether or not "the number of women who choose abortion *or* the number of abortions a woman has on average during her reproductive years" is "high," "average" or "low."

The results indicate that providers may not perceive that abortion rates are high in the country. Almost four in ten providers regard abortion rates in the country as "low" or "average" (Figure 3.3).

#### *Three most important reasons mentioned by providers for high abortion rates*

Abundant literature exists describing the reasons given by women for undergoing abortion, and programmatic efforts for reducing abortion have long taken those reasons into account when fashioning strategies for change. But it is also necessary to take into account what providers think are the reasons women seek abortion. All providers were asked to list three reasons why women seek abortion. Table 3.5 lists the most commonly

cited reasons. Social conditions<sup>8</sup>, lack of awareness, financial reasons and unwanted nature of the pregnancy were the most commonly-mentioned reasons for women seeking abortions. Failure to use contraception to prevent pregnancy, incorrect use of contraception leading to high failure rates, poor accessibility or affordability of contraception were mentioned less often. The remarks included victim-blaming, with many providers mentioning “laziness” and “irresponsible behavior” as reasons for seeking abortion services.

These findings are similar to results from the study sponsored by Schering AG<sup>9</sup> in 2005 involving in-depth interviews with 21 providers (Social and Marketing Research Agency BRIF Central Asia, 2005). This study also noted that providers perceive financial concerns, adequate number of children, absence of a husband, poor timing of a pregnancy, and failure of contraception to be the most common reasons for women to seek abortions.

**Table 3.5: Providers’ perceptions of why women seek abortions**

Reason of abortion	Providers	
	Number	Percent
Social conditions	48	38.1
Lack of awareness	42	33.3
Financial reasons	38	30.2
Doesn’t want a baby due to untimeliness, student status, change of marital status (divorce, partner’s unwillingness, <i>et al.</i> )	36	28.6
Irresponsible behavior and lack of concern for health	30	23.8
Unmarried	25	19.8
Incorrect use of contraception	22	17.5
Medical conditions	12	9.5
Psychologically not ready for a baby	12	8.7
Laziness	9	7.1
Failure to use contraception	8	6.3
Adolescence	6	4.8
Affordability of abortion	6	4.8
Inaccessibility of contraception	5	4.0
Failure of contraception	4	3.2
Doesn’t know	3	2.4
Doesn’t know FP methods	2	1.6
Advanced age	2	1.6
Short interval between delivery	2	1.6
Availability of abortion	1	0.8
Migration	1	0.8
Underestimation of side effects of abortion	1	0.8

*Note: the total will not add to 126 (the total of respondents), as each respondent was invited to give up to*

<sup>8</sup> Respondents interpreted the term, “social conditions,” very broadly. On further probing, most interpreted “social conditions” to refer to relationships with husbands, jobs, or financial status.

<sup>9</sup> Schering AG is a multinational pharmaceutical company. The company manufactures and markets several brands of oral contraceptives and other contraceptives.

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*three reasons.*

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## IV. RESULTS FROM THE COSTING SURVEY

### 4.1 ABORTION AS A PROPORTION OF TOTAL GYNECOLOGICAL ADMISSIONS

Calculating abortion as a proportion of total gynecological admissions was the first step towards calculating total abortion costs, as some costs (such as utility and miscellaneous costs and support staff costs) were calculated for the gynecological department as a whole and then prorated to abortion services based on the share of abortions related to the total gynecological admissions. This calculation revealed that in some facilities, the existence of the department itself was entirely dependent upon the provision of abortion services.

**Table 4.1: Percentage of admissions for abortions out of total gynecological admissions, by region**

Region (# of health facility sampled)	% of abortion out of total gynecological admissions
South Kazakhstan (3)	4.9
East Kazakhstan (5)	28.0
Astana (capital city) (3)	26.8
Almaty (former capital city) (4)	58.9
West Kazakhstan (2)	37.5
North Kazakhstan (3)	68.1
<b>Average for the whole country</b>	<b>39.5</b>

This indicator varied from 4.9% in South Kazakhstan, the region with the lowest abortion rates in the country, to almost 60% in Almaty City (Table 4.1). The weighted average<sup>10</sup> for the whole country was almost 40%, which is similar to an earlier estimate in a WHO/UNFPA study (UNFPA & WHO, 2000).

### 4.2 COST OF ABORTION SERVICES

Table 4.2 shows the total cost of providing one abortion by geographical region. The lowest costs were observed in Almaty, East Kazakhstan and North Kazakhstan at about US \$21 per intervention. The cost was estimated to be about US \$29 per intervention in Astana and in West Kazakhstan. The highest cost per intervention was observed in South Kazakhstan at about US \$41 per intervention. The average weighted cost for the whole country per intervention was US \$26. As mentioned in the methodology, the cost does not include capital costs (construction cost of the health facility or the rent or the capital cost of the equipment). The cost per intervention in Kazakhstan is much lower than in Mexico (Johnson *et al.*, 1993), where it was above US \$71, but much higher than in

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<sup>10</sup> The weights are the percentage of total gynecological admissions in each region.

Bangladesh (\$3.2 to 7.8), Kenya (\$3.3 to 17.2) or Tanzania (\$1.9 to \$4.75) (Magotti *et al.*, 1995; Johnson *et al.*, 1993; Kay *et al.*, 1991).

Though the cost of personnel is low in Kazakhstan, with an average salary of a mid-career gynecologist varying from \$100-\$125 per month, it is the shared indirect cost which contributed to a relatively higher cost per intervention, due to the much higher capacity of the systems in terms of hospital beds. The overcapacity of the system also contributed to the higher cost per intervention by increasing the shared cost of support staff (cleaners, security staff, cooks, and administrative staff) per intervention. Recently, efforts were made to rationalize the inpatient admission capacity, but even now it remains on the high side, as compared to other countries with similar development status.

The variation in costs across health facilities and regions was accounted for by differences in clinical practices (e.g. difference in use of antibiotics, or anesthesia, or difference in the number and cost of laboratory tests requested). The cost of laboratory tests also varied across different regions and facilities, the reasons for which are not entirely known, though some of the reasons given range from manual output to computerized report, the method of administering tests, etc. The least variation was observed in the clinical staff costs—as there were not substantial differences in the salaries of the clinical staff across the region and across different health facilities.

**Table 4.2: Unit cost of providing abortion services, in US \$, by region**

Region (# of health facilities sampled)	Direct cost	Support Staff	Utility and Misc. costs	Clinical personnel	Total cost
South Kazakhstan (3)	8.7	9.4	21.1	2.3	41.5
East Kazakhstan (5)	12.8	1.0	5.5	2.0	21.3
Astana (3)	8.4	6.8	11.4	2.6	29.2
Almaty (4)	11.7	1.2	6.1	1.7	20.7
West Kazakhstan (2)	21.1	2.5	4.6	1.7	29.9
North Kazakhstan (3)	13.1	1.3	4.9	2.0	21.3
<b>Average for the whole country</b>	<b>12.9</b>	<b>3.0</b>	<b>8.2</b>	<b>2.0</b>	<b>26.1</b>

*Note: 1 US \$=131.49 Tenge*

#### 4.2.1 Percentage Share of Costs

The direct costs contributed to the highest share of the total costs, except in South Kazakhstan (21%) and in Astana (29%). In the other four regions, the share of direct costs ranged from 56% in Almaty to 70% in West Kazakhstan. The second highest share was of utility and miscellaneous overhead costs—ranging from 15% in West Kazakhstan to almost 51% in South Kazakhstan. With few exceptions, the cost of clinical personnel contributed to the smallest share in the overall costs, ranging from 6% in West Kazakhstan to 9% in East and North Kazakhstan.

**Table 4.3: Percentage contribution of cost-constituents to the total cost of one abortion, by region**

Region (# of health facility sampled)	Direct cost	Support Staff	Utility		Total cost
			and Misc. costs	Clinical personnel	
South Kazakhstan (3)	20.9	22.7	50.8	5.6	100.0
East Kazakhstan (5)	60.1	4.7	25.9	9.3	100.0
Astana (3)	28.7	23.4	39.1	8.9	100.0
Almaty (4)	56.3	6.0	29.5	8.3	100.0
West Kazakhstan (2)	70.5	8.3	15.5	5.8	100.0
North Kazakhstan (3)	61.5	6.3	22.9	9.3	100.0
<b>Average for the whole country</b>	<b>49.5</b>	<b>11.5</b>	<b>31.3</b>	<b>7.7</b>	<b>100.0</b>

#### 4.2.2 Total Expenditure on Abortion Services

Data were collected from the Ministry of Health on the number of abortions in each oblast. At the time of field work (July-August 2005), the latest year for which data were available was 2004. Table 4.4 provides data on the total number of abortions performed in different regions. Based on these data, excluding capital costs, the Ministry of Health spent US \$3.4 million in providing abortion services in 2004. In addition, this cost excludes the cost of treatment of abortion complications and the opportunity cost of women's time spent out of work, including lost wages, child care, and psychological stress during abortion. It is also to be noted that not all abortions were avoidable; these aggregate costs include abortions that might have been spontaneous, or were necessary on medical or social grounds. Out of the total US \$ 3.4 million, US \$ 1.67 million was spent on direct costs (drugs, disposable supplies used) during the intervention (Table 4.4).

**Table 4.4: Total public expenditure on abortion services (excluding treatment of complications and capital costs) (in US \$) in 2004**

Region	Total number of abortions (2004)*	Total Unit cost	Total cost	Total unit direct cost	Total direct expenditures
Almaty City	17,487	20.72	362,331	11.66	203,898
Astana	8113	29.18	236,737	8.36	67,825
South Kazakhstan	20,294	41.46	841,389	8.66	175,746
West Kazakhstan	17,549	29.94	525,417	21.10	370,284
North Kazakhstan	32,898	21.33	701,714	13.13	431,951
Central and East Kazakstan	33,126	21.28	704,921	12.78	423,350
<b>Total</b>	<b>129,467</b>	<b>26.08</b>	<b>3,372,510</b>	<b>12.92</b>	<b>1,673,054</b>

*Data source: Ministry of Health (2004).*

Annex 3 provides more details on the costing of abortion services.

### 4.3 COST OF TREATMENT OF ABORTION COMPLICATIONS

In 2004, Ministry of Health data recorded a total of 1826 abortion complications, half of which were recorded as hemorrhage, 23% as post-abortion infection and 24% as other or incomplete evacuation. Nineteen women died as the result of abortion complications (MOH, 2004), yielding a maternal mortality ratio of 11.33 per 100,000 live births. This rate accounts for 26% of the total maternal mortality rate as recorded by the Ministry of Health in 2004.

Table 4.5 provides the total public sector expenditure by type of abortion complication. The cost for one treatment intervention by type of abortion complication was calculated as the weighted average across different regions. A total of US \$ 108,197 was spent on the treatment of acute abortion complications excluding the treatment of the women who eventually died. These costs do not include the opportunity cost of women's time spent in hospitalization or the cost of any chronic complications such as infertility or chronic pelvic inflammatory diseases. Finally, there is a high likelihood of underestimation of abortion complications in the Ministry of Health database, as complications are viewed adversely in evaluating the performance of a provider/facility, and hence are less likely to be reported. These costs may then be underestimated to the extent that the data are underestimated.

**Table 4.5: Cost per intervention and total spending on treatment of abortion complications in 2004**

Type of abortion complication	Number*	Cost per intervention (US \$)	Total cost (US \$)
Uterine/cervix perforation	68	57.52	3,911.36
Bleeding	812	72.7	59,032.40
Infection	458	49.9	22,854.20
Other (incomplete evacuation)	488	45.9	22,399.20
<b>Total</b>	<b>1826</b>		<b>108,197.20</b>

*Data source: Ministry of Health (2004).*

### 4.4 PUBLIC SPENDING ON ABORTION SERVICES AS A PROPORTION OF TOTAL PUBLIC SPENDING ON HEALTH

According to the World Development Indicators database maintained by the World Bank, total per capita public sector health spending on health in 2002 at current prices was US\$ 29, which was 53.2% of the total per capita health spending of \$56 (World Bank, 2005). Based on these estimates of public health spending, and assuming that these estimates did not change significantly in 2004—the year when abortion cost estimates are made—public spending on abortion services was almost 1% of the total public health spending (Table 4.6). Even these costs, as discussed in previous sections, are likely to underestimate the total burden on public health resources, as this study used MOH data to estimate the number of abortions, abortion complications, and abortion-related mortality,

which are likely to be under-reported in the MOH database. In addition, these costs do not take into account the capital costs of health facilities and other costs borne by the women.

**Table 4.6: Total public spending on abortion as a proportion of total public sector spending on health**

Total public sector expenditure per capita (2002)	US\$ 29
Total population in 2004	14,909,018
Total public sector health expenditure (2004)	US\$ 444,169,464
Total spending on abortion	US \$ 3,409,283
<b>Total public spending on abortion as % of total health expenditure</b>	<b>0.8%</b>

#### 4.5 COSTS OF FAMILY PLANNING SERVICES

Table 4.7 presents the costing estimates for one couple-year of protection by different contraceptive methods. Since the cost of oral contraceptives can vary greatly by the brand used, in the calculation presented below, the cost of one cycle of Rigevidon FE (\$0.175) and Tri-Regol FE (\$0.19 per cycle)—the two brands procured and supplied by UNFPA in 2003—was taken into account. Similarly, for the IUD, the cost of Copper T 380A (\$0.414), manufactured by CONTECH Devices Pvt., LTD. and supplied by UNFPA, was used. The cost of one condom supplied by UNFPA was US \$ 0.02.

The results presented below show that the cost of one couple-year of protection ranges from US \$3.66 for condoms to US \$8.01 for female sterilization. The cost for oral contraceptives, IUDs, and Depo-provera injections are US \$ 4.59, 5.85 and 7.43, respectively.

**Table 4.7: Cost of one couple-year of protection, by contraceptive method, by region, in US \$**

Region	OC	Condom	IUD*	Depo-provera	Female sterilization*
South Kazakhstan	4.96	3.84	5.73	7.61	8.01
East Kazakhstan	4.65	3.64	5.34	7.20	7.31
Astana	4.05	3.34	6.41	6.60	8.57
Almaty	5.46	4.05	7.47	8.02	9.26
West Kazakhstan	4.22	3.43	6.41	6.79	8.01
North Kazakhstan	4.16	3.4	5.69	6.72	7.47
<b>Average</b>	<b>4.59</b>	<b>3.66</b>	<b>5.85</b>	<b>7.43</b>	<b>8.01</b>

*Note: for IUDs, an average year of protection is assumed to be two years, and for female sterilization, it is assumed that one intervention confers seven years of protection, given that in Kazakhstan, female sterilization is not offered before the age of 35 years.*

*Total costs incurred by the public sector in 2004:* According to the Ministry of Health data, there were 1,641,358 users of modern methods of contraceptives, excluding the users of female sterilization. The total population of women in the 15-49 year age group

in the Ministry of Health data was 4,273,762. This calculation gave a modern method contraceptive prevalence rate of 38.4%, almost the same as observed in the KDHS 1999 (38.6%).

Tables 4.8a and 4.8b give the total cost of contraceptive services in 2004 by couple-years of protection.

**Table 4.8a: Total public sector expenditure on oral contraceptive and condom users in 2004**

Region	Oral contraceptives			Condoms		
	Cost (US \$)	Users (MOH 2004)	Total cost (US \$)	Cost (US \$)	Users (MOH 2004)	Total cost (US \$)
South Kazakhstan	4.96	49,839	247,201.4	3.84	37,983	145,854.7
East Kazakhstan	4.65	64,166	298,371.9	3.64	100,165	364,600.6
Astana	4.05	23,066	93,417.3	3.34	12,265	40,965.1
Almaty	5.46	39,667	216,581.8	4.05	11,062	44,801.1
West Kazakhstan	4.22	26,622	112,344.8	3.43	28,468	97,645.2
North Kazakhstan	4.16	81,038	337,118.1	3.40	89,268	303,511.2
<b>National Average/Total</b>	<b>4.59</b>	<b>284,398</b>	<b>1,305,035</b>	<b>3.57</b>	<b>279,211</b>	<b>997,378.0</b>

**Table 4.8b: Total public sector expenditure on IUD and Depo-provera users in 2004**

Region	IUD			Depo-provera		
	Cost (US \$)	Users (MOH 2004)	Total cost (US \$)	Cost (US \$)	Users (MOH 2004)	Total Cost (US \$)
South Kazakhstan	5.73	370,882	2,125,154.845,156.	7.61	15,943	121,326.2
East Kazakhstan	5.34	158,269	149,135.5	7.20	6078	43,761.6
Astana	6.41	23,266	255,406.1	6.60	382	2521.2
Almaty	7.47	34,191	842,895.8	8.02	4086	32,769.7
West Kazakhstan	6.41	131,497	1,391,258	6.79	1107	7516.53
North Kazakhstan	5.69	244,508	5,608,991	6.72	2574	17,297.28
<b>National Average/Total</b>	<b>5.85</b>	<b>962,613</b>	<b>8</b>	<b>7.43</b>	<b>30,170</b>	<b>225,193.</b>

Ministry of Health data did not provide information on the recipients of female sterilization. Based on the KDHS 1999, in which 2% of women 15-49 years old were using female sterilization, it was estimated that 86,094 women used female sterilization, which gives the total cost of US \$ 689,982 for 86,094 couple-years of protection.

Aggregating across different contraceptive methods, the total public expenditure was US \$ 8.83 million for 1.5 million couple-years of protection. This yielded the average cost of US \$5.37 per couple-year of protection. The direct cost of commodities accounted for almost 50% of the total cost (except in the case of IUDs). Since all the commodities were supplied by UNFPA, almost 50% of the expenditures were subsidized by humanitarian aid from UNFPA.

#### 4.6 COMPARING THE COST-EFFECTIVENESS OF ABORTION AND FAMILY PLANNING SERVICES

Cost per birth averted or cost per disability-adjusted life year (DALY) or quality-adjusted life year (QALY) may be used to compare the cost-effectiveness of abortion and family planning services. DALY or QALY may be useful in assigning priority to interventions. However, the general consensus holds that, as a means of averting births, contraceptive methods (hormonal, barrier, voluntary sterilization, *et al.*) are preferred to abortion on medical grounds.

The renewal process model was used to compare the cost-effectiveness of abortion as a method of fertility to other contraceptive methods in terms of cost per birth averted. The period of infecundity after an abortion is relatively short. Since most abortions in Kazakhstan are performed by 12 weeks, and assuming one month of post-abortion infecundity, and six months of a “waiting period to contraception,” one abortion will provide contraception for about 10 months. One birth cycle is about twenty-five months (nine months of pregnancy + 10 months of postpartum infecundity<sup>11</sup> + six months of waiting period of contraception). This means almost 2.5 abortions (birth cycle/abortion cycle) will be required to avert one birth<sup>12</sup>. This means at an average cost of US \$26, almost US \$65 ( $\$26 \times 2.5$ ) will be required to avert one birth (excluding the cost of treatment of abortion complication and maternal deaths). On the other hand, at the cost of US \$5.37 per couple year of protection, US \$ 11.2 (cost of contraceptive protection for 25 months-- $\$5.37 \times 25/12$ ) will be required to prevent one birth by use of contraceptive methods. However, contraceptive methods do not have 100% use-effectiveness. The average use-effectiveness, estimated as the weighted average of the method-specific use-effectiveness levels<sup>13</sup>, with the weights equal to the proportion of women using a given method in the KDHS 1999, was 0.91. This average use-effectiveness in a median natural fecundity scenario will lead to a pregnancy rate of 18 per 100 women years or 0.18 per woman per year (Bongaarts and Potter, 1983). Thus, during the use of a contraceptive method during one birth cycle to prevent one birth, there is a risk 0.36 pregnancy that needs to be aborted. Thus, including the cost of abortion for 0.36 pregnancy

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<sup>11</sup> This rate is an assumption made in our study that will vary across countries depending upon duration of exclusive breastfeeding.

<sup>12</sup> See Bongaarts and Potter 1983, for more details.

<sup>13</sup> To calculate the average use-effectiveness, we used the use-effectiveness of individual methods published in a Philippine study (Laing, 1978).

( $0.36 * \$26 = \$9.36$ ), the total cost of contraceptive methods to prevent one birth will be \$20.56 ( $\$11.2 + \$9.36$ ). This means that the use of contraception as an alternative to abortion to regulate fertility is at least 3.2 times more cost-effective to avert one birth. However, this calculation does not take into the differential cost of treatment of complications associated with use of abortion and family planning methods.

## V. CONCLUSIONS AND DISCUSSIONS

The results of the provider survey and the costing survey offer important insights into the reasons for stagnating contraception use and stagnating abortion rates in Kazakhstan. Though we examined these issues only in the context of Kazakhstan, it is quite likely that similar situations exist in other Eastern European countries and the former Soviet republics with high abortion rates. Hence, some of the important conclusions and recommendations summarized below may be used to inform programmatic options not only in Kazakhstan but in other countries as well.

### **Conclusion # 1**

*Access to affordable abortion services does not create an abortion culture; rather, poor family planning services and an absence of perceived alternatives lead to a reliance on abortion.*

Abortion opponents have long pointed to the “abortion culture” and high abortion rates in the former Soviet republics as an example of the very humanitarian crisis they wish to avoid. But it is a mistake to assume that access to safe and affordable abortion necessarily leads to high abortion rates. Indeed, empirical evidence suggests otherwise. For example, access to free abortion in France (where the public health insurance system treats abortion as any other medical procedure—so a patient’s costs are almost fully covered—has not led to increased abortion rates in France (12.4 per 1000 women compared to 30 per 1000 women in Kazakhstan). Similarly, in the Netherlands, where abortion does not carry a stigma and the costs are covered by national insurance, such policies have not led to the high abortion rates witnessed in Kazakhstan and other former Soviet states. In addition, the data from the KDHS 1999 show parallels in attitudes towards abortion and contraception, thereby throwing into question any straightforward assumptions about the replacement of abortion with contraception (Agadjanian, 2002). Use of both abortion and contraception in Kazakhstan is linked to a strong desire to control family size. In Kazakhstan, despite documentation of favorable attitudes towards contraception, and negative attitudes towards abortion, in the absence of quality contraceptive services, abortion rates remain high.

Restricting abortion services or making abortions less affordable may not necessarily lead to a decline in the abortion rate, but may in fact lead to an increase in the prevalence of unsafe, illegal abortions. Thus, further reducing women’s reliance on abortion will require increasing the provision for convenient, safe and acceptable alternative family

planning methods and encouraging more consistent use of contraceptives through improved information and quality of service.

## **Conclusion # 2**

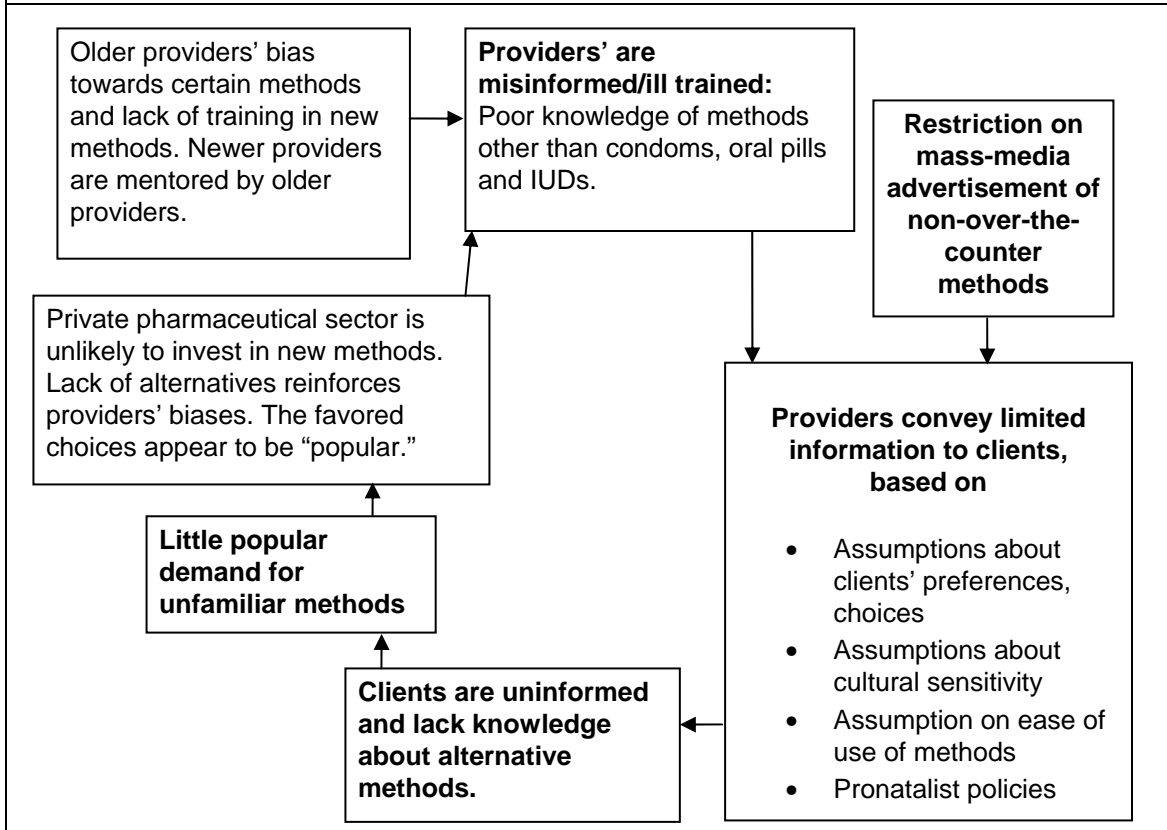
*The limited information about modern contraceptive methods and limited choice of methods may perpetuate an unnecessary reliance on abortion.*

Though officially almost all family planning methods are licensed and available in Kazakhstan (except implants), the results from our study and from previous literature suggest that the choice of methods is very much limited to condoms, IUDs, and oral contraceptives. Availability of other spacing methods (e.g. injectables and Norplant) and terminal methods (e.g. male and female sterilization) is quite limited. A Ministry of Health order dated 7 January 2005 restricted the provision of female sterilization as a method of family planning to citizens age 35 years or older who have at least two children. However, results from the provider survey suggest that the choice of terminal methods may be limited even for this age group. Most of the providers interviewed in this study have not received any training in performing female sterilization. Most respondents, even gynecologists with 25-30 years of service, have never performed a single sterilization procedure. The equipment for performing mini-laparotomy is not available in the majority of the hospitals licensed to provide this type of service. Thus few providers in our survey would recommend or provide information on this method to their clients even when the client is eligible according to the conditions set by the order of the Ministry of Health.

Similarly, though injectable contraceptive methods have recently been made available in Kazakhstan, their accessibility remains limited. Most respondents in our interview are not likely to recommend injectables. Many were not accurately aware of the side effects of injectables. Clients are unlikely to know about them and providers are unlikely to inform them. Further evidence on the limited choice of methods is provided by an UNFPA facility survey (a rapid assessment) done in 2001 (UNFPA Study, 2001) as discussed in section 1. Providers' limited knowledge and experiences certainly affect the quality of service provided.

The data from the provider survey presented in this study reveals a vicious circle of limited method choice promulgated by ill-informed and ill-trained providers who pass on limited information to clients. Providers are the only source of information for the methods not available over the counter, as these methods cannot be advertised in the mass media. Lack of awareness on the part of clients, in turn, results in lower popular demand for these methods, perpetuating the vicious circle of limited method choice, as shown in Figure 5.1.

**Figure 5.1: Barriers in expansion of method choice: vicious cycle of lack of information**



The results from this study clearly argue for the need to continue shifting away from abortion for fertility control to more effective contraceptive use for preventing unintended births. Such a shift could be achieved by improving providers' training on contraceptive methods; by educating the general public about contraceptive choices—including correcting misconceptions and increasing awareness about the variety of methods; and by making effective contraceptives easily available. Further, since young unmarried women have less access to family planning information and services than married women do, educational efforts and service-provision need to pay attention to the special needs of this population segment.

Experiences in other countries, such as Hungary and Germany, demonstrate that shifting from fertility control through abortion to fertility control through contraception is feasible. Such a shift requires a large investment in service provision, provider training, and incentives both for provision and use of alternative contraception. Our study clearly establishes the cost-effectiveness of investment to expand method choice over public spending to provide abortion services. Advocacy to further improve contraceptive services, and to increase overall contraceptive use, is a sound national investment.

### **Conclusion # 3**

*Though post-abortion contraceptive services are widely available, the post-abortion method provided is primarily limited to oral contraceptives, potentially reducing their effectiveness, especially when women do not perceive oral contraceptives to be convenient or reliable.*

According to the KDHS 1999, 70% of women 35 years or older who have had an abortion, have had more than one abortion, with almost one-fourth of this group having had four or more abortions. Many studies have suggested the effectiveness of post-abortion contraceptive counseling and services in preventing repeated abortions and future unwanted pregnancies (Fasuba and Ojo, 2004). However, in our study, almost all providers said that they would recommend a family planning method for use immediately after abortion, though most offer only oral contraceptives as the method for post-abortion women. Yet many women, as shown in the KDHS 1999 survey, find oral pills unreliable and inconvenient to use. Because of the division of services—family planning services being provided by primary care health facilities (such as Family Group Practices) and abortion services by tertiary-level hospitals—most clients in actuality are provided only one cycle of oral pills and are sent home or are referred to the primary health care facilities for family planning services. There is no way to follow-up on these clients and they may be at risk for repeated unwanted pregnancies. IUDs are seldom offered, despite the clear empirical evidence that immediate post-abortion IUD insertion does not carry a risk of higher expulsion rates or higher uterine or other complications than interval insertion (Gocmen *et al.*, 2002; El-Tagy *et al.*, 2003; Grimes *et al.*, 2004; Stanwood *et al.*, 2001; and Moussa 2001). In fact, one study in Turkey (Karabacak, 2001) showed that there was a higher drop-out rate among women who were offered an injectable method as a post-abortion contraception method than among women who were given an IUD.

Our study indicates that unintended pregnancy after an abortion can be reduced through education and through expanding provision of contraceptive services. First, providers' misconceptions about IUD safety need to be corrected through training and continuing education. Second, as far as possible, the post-abortion contraceptive method should be provided by the same facility in which abortion services are provided. For subsequent follow-up visits, clients can be referred to a primary health care facility.

### **Conclusion # 4**

*Service providers may not perceive abortion rates to be high or to be a public health problem.*

The discrepancy between the survey data of women who undergo abortions and providers' perceptions of women who undergo abortion suggests that providers seldom view abortion from a public health perspective. Many providers continue to view abortion as an acceptable means of birth control. They may not try to understand the underlying reasons women seek abortions. An in-depth interview of 21 medical professionals revealed that, according to the respondents, a typical woman who has an

abortion is a young unmarried woman of 20-35 years old with low levels of income and education (including a lack of awareness of contraception methods) (Social and Marketing Research Agency BRIF Central Asia, 2005). However, an analysis of the socio-economic backgrounds of women who have undergone abortions does not support that profile (KDHS 1995; 1999).

Since providers most often encounter individual patients and do not look at aggregate numbers, they may neglect the health risks associated with abortion. Changing providers' attitudes and increasing their awareness of the negative consequences associated with abortion is one of the critical steps to changing abortion culture in the country. Information about the health risks of high abortion incidence and international rates of comparison need to be disseminated through pre- and post-medical training.

### **Conclusion # 5**

*Substantial financial saving can be realized by reducing avoidable abortions; it is far more cost effective to prevent pregnancy than to prevent births through abortions.*

Almost 40% of all gynecological admissions were due to abortions, with each abortion intervention costing around \$26 on average, excluding the capital costs for building and equipment and opportunity cost of women's time. This amounts to the MOH spending almost \$ 3 million on provision of abortion services in 2004, not accounting for treatment of abortion complications. On the other hand, the average cost for one couple-year of protection was only \$5.4. In terms of cost per birth averted, provision of contraceptive services was at least 3.5 times more cost-effective than abortion services.

Although the resource savings are often calculated in monetary terms, the actual monetary savings may not be apparent because the resources "saved" are often immediately consumed by other operating expenses in a given hospital or health care system. Many institutions delivering reproductive health services operate significantly below their physical capacity, and much of the equipment required for expanding reproductive health services may already be available for use in family planning and other health services. Thus the marginal savings realized from a reduction in providing one type of intervention may be small (Mitchell *et al.*, 1999). For example, a substantial share of the total cost of abortion services is in the form of indirect costs (e.g. facility utility cost and other overhead costs)—which are related primarily to the underutilized capacity of the health care system in Kazakhstan, as reflected in the relatively higher cost of these components per intervention. These indirect costs may only be saved by the overall rationalization of the health infrastructure rather than by the simple reduction of abortion rates. However, when consumption of resources—such as time, space, personnel, drug and supplies—is reduced for treatment of incomplete abortions, these resources may at least be redirected to maternity services, family planning and other obstetric and gynecological needs (Johnson *et al.*, 1993).

However, even the direct cost of providing abortion services in the form of drugs and disposable supplies is still high, at about US \$1.67 million. Assuming that 90% of all

abortions<sup>14</sup> were unnecessary and avoidable by more effective delivery of family planning services, the savings from direct costs alone would be enough to finance all immunization programs in Kazakhstan, or may be directed to providing better family planning services, or towards other public health interventions.

## **Conclusion # 6**

*Facility performance evaluation and accreditation strategies should be devised with sufficient incentives for providing effective family planning services without necessarily restricting access to safe abortion services.*

The Government of Kazakhstan recognizes the need to develop a system for monitoring quality and resource-use efficiency. Such a monitoring system should be based on criteria and indicators that allow for performance evaluation and the use of both financial stimuli and punitive tools to ensure the provision of quality services. The current system does not provide appropriate financial incentives for improving family planning services, as current government policies allocate funds to lower-level health facilities based on the number of abortion procedures conducted. Further, there is no specific budget allocated for the provision of family planning services, as most contraceptive commodities are provided by UNFPA under humanitarian aid. Nor are incentives provided to service providers for encouraging modern contraceptive use.

Thus, the system of funds allocation to health facilities sends an ambiguous message to health service providers and undermines the emphasis on quality contraceptive services to reduce unnecessary abortions. To further reduce high abortion rates, the government needs to provide clear policy message and incentives for effective family planning services without necessarily restricting access to safe abortion services.

In the future, surveys and studies such as this one will be needed to monitor trends in contraceptive use and abortion rates and to explore further the factors contributing to changes in fertility regulation.

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<sup>14</sup> This figure assumes that 10% of all abortions are either spontaneous or done on valid medical (e.g. malformed fetus) or social (e.g. rape) grounds and were unavoidable.

## REFERENCES

- Academy of Preventive Medicine of Kazakhstan, Macro International. 1996. Kazakhstan: Demographic and Health Survey (KDHS) 1995. Calverton, MD: National Institution of Nutrition (NIN) [Kazakhstan] and Macro International, Inc.
- . 2000. Kazakhstan: Demographic and Health Survey (KDHS) 1999. Almaty, Kazakhstan: Academy of Preventive Medicine; Calverton, MD.: Measure DHS+, Macro International, Inc.
- Agadjanian V. 2002. "Is "abortion culture" fading in the former Soviet Union? Views about abortion and contraception in Kazakhstan." *Studies in Family Planning* 33 (3): 237-48.
- Agadjanian, V. and Qian, Z. 1997. "Ethnocultural identity and induced abortion in Kazakhstan." *Studies in Family Planning* 28(4): 317-29.
- Alan Guttmacher Institute. 1999. *Sharing Responsibility: Women, Society and Abortion Worldwide*. Report. New York: Alan Guttmacher Institute.  
<http://www.guttmacher.org/pubs/sharing.pdf>
- Bankole, A., Singh S., and Haas, T. 1999. "Characteristics of women who obtain induced abortion: a worldwide review." *International Family Planning Perspectives* 25(2): 68-77.
- Bongaarts, J. and Potter, R. 1983. *Fertility, Biology and Behavior: An Analysis of the Proximate Determinants*. Studies in Population Series. New York: Academic Press.
- Bongaarts, J. and Westoff, C. 2000. The potential role of contraception in reducing abortion. *Studies in Family Planning* 31(3): 193-202.
- Brambila, C. and Garcia, C. 1996. "Estimating costs of post-abortion services at General Hospital Valdivieso, Oaxaca, Mexico." *Final Technical Report*. New York: INOPAL III, The Population Council.
- El-Tagy, A., Sakr, E., Sokal, D.C., Issa, A.H. 2003. "Safety and acceptability of post-abortual IUD insertion and the importance of counseling." *Contraception* 67(3): 229-34.
- Fasubaa, O.B. and Ojo, O.D. 2004. "Impact of post-abortion counseling in a semi-urban town of Western Nigeria." *Journal of Obstetrics and Gynecology* 24(3): 298-303.
- Foreit, K. and McCombie, S. 1995. Family planning knowledge, attitudes, and practices among urban women in Kazakhstan. Washington, D.C.: The Futures Group.

- Gocmen, A., Demirpolat, N. and Aystin, H. 2002. "The efficacy of immediate post-abortion intrauterine device insertion." *Clinical Experiments in Obstetrics and Gynecology* 29(4): 274-6.
- Grant, G. 2005. *Towards a Framework for the Analysis of Abortion Culture*. Southampton, UK: Southampton Statistical Sciences Research Institute. (S3RI Applications and Policy Working Papers, A04/23.) <http://eprints.soton.ac.uk/14003/>.
- Grimes, D., Schulz, K., and Stanwood, N. 2004. "Immediate postabortal insertion of intrauterine devices." Research Triangle Park, NC: Family Health International.
- Henshaw, K.S., Singh, S., and Haas, T. 1999a. "The incidence of abortion worldwide." *International Family Planning Perspectives* 25(supplement): 44-48.
- . 1999 b. "Recent trends in abortion rates worldwide." *International Family Planning Perspectives* 25(1): 44-48.
- Janowitz, B., and Bratt, J.H. 1994. "Methods for costing family planning services." New York: United Nations Population Fund; Research Triangle Park, NC: Family Health International.
- Johnson, B.R., Benson, J., Bradley, J., Ordonez, A.R., Zambrano C., Okoko, L., Vazquez, L.C., Quiroz, P., and Rogo, K. 1993. "Costs of alternative treatments of incomplete abortion." Policy, Research working papers. WPS 1072. Washington, D.C.: World Bank.
- Johnson, B.R., Benson, J., Bradley, J., and Rabago Ordonez, A. 1993. "Costs and resource utilization for the treatment of incomplete abortion in Kenya and Mexico." *Social Science and Medicine* 36(11): 1443-53.
- Johnson, B.R., Horga, M., Andronache, L. 1993. "Contraception and abortion in Romania." *Lancet* 341: 875-78.
- . 1996. "Women's perceptions on abortion in Romania." *Social Science and Medicine* 42(4): 521-30.
- Johnson, B.R., Kabir, S.M. 1988. "A study of costs and behavioral outcomes of menstrual regulation services in Bangladesh." *Social Science and Medicine* 26(6): 597-604.
- Jones, E.F. and Forrest, J.D. 1992. "Contraceptive failure rates based on the 1988 National Survey of Family Growth." *Family Planning Perspectives* 24(1): 12-19.

- Karabacak, O., Arslan, M., Eren, L.C., and Erdem, A. 2001. "Contraceptive practices of women after abortion in Turkey." *European Journal of Contraceptive and Reproductive Health Care* 6(3): 129-33.
- Kaupova, N., Nukusheva, S., Biktasheva, H., Goyaux, N., and Thonneau, P. 1998. "Trends and causes of maternal mortality in Kazakhstan." *International Journal of Gynecology and Obstetrics* 63(2): 175-81.
- Kay, B.J., Germain, A. and Bangser, M. 1991. "The Bangladesh Women's Health Coalition." *Quality/Calidad/Qualite No. 3*. New York: The Population Council.
- Kay, B.J., Katzenellenbogen, J., Fawcus, S., Abdool Karim, S. 1994. "An analysis of the cost of incomplete abortion to the public health sector in South Africa." *South African Journal of Public Health*.
- Khan, A.R., et al. 1984. "Risks and costs of illegally induced abortion in Bangladesh." *Journal of Biosocial Science* 16: 89-98.
- Konje, J.C., Obisesan, K.A., and Ladipo, O.A. 1992. "Health and economic consequences of septic induced abortion." *International Journal of Gynecology and Obstetrics* 37: 193-7.
- Laing, J.E. 1978. "Estimating the effects of contraceptive use on fertility: Techniques and findings from the 1974 Philippine National Acceptor Survey." *Studies in Family Planning* 9(6): 150-162.
- Magotti, G., Magotti, R.F., Munjinja, P.G., Lema, R.S., Ngwalle, E.K. 1996. "Cost-effectiveness of managing abortions: Manual Vacuum Aspiration (MVA) compared to evacuation by curettage in Tanzania." *East African Medical Journal* 72(4): 248-51.
- Makinwa, P.K. 1981. "The national cost of illegal abortion: a case for a family planning programme." *Journal of Sociocultural Environment* 1.1: 36-50.
- Ministry of Health, Kazakhstan. 1996. Health of the population of the Republic of Kazakhstan and health services in 1995. Almaty, Kazakhstan.
- Mitchell, M.D., Littlefield, J., Gutter, S. 1999. "Costing of reproductive health services". *International Family Planning Perspectives* 25 (supplement): S17-S21 & S29.
- Moussa, A. 2001. "Evaluation of postabortion IUD insertion in Egyptian women." *Contraception* 63(6): 315-7.
- Mumford, E.A., Dayaratna, V., Winfrey, W., Sine, J., and McGreevey, W.P. 1998. "Reproductive health costs literature review." *Working Paper Series No. 3*. Washington, D.C.: Policy Project, Futures Group International.

- Nukusheva, S. n.d. "From abortion to contraception in modern Kazakhstan: A survey of 601 Kazakh women sheds light on why abortion is a popular form of fertility regulation." *From Abortion to Contraception series*. Almaty, Kazakhstan: n.p.
- Ortayli, N., Bulut, A., Sahin, T., and Sivin, I. 2001. "Immediate postabortal contraception with the levonorgestrel intrauterine device, Norplant, and traditional methods." *Contraception* 63(6): 309-14.
- Rosenthal, G. and Percy, A. 1991. *Maternity services in Cochabamba, Bolivia: Costs, cost-recovery, and changing markets*. Arlington, VA: Mothercare, John Snow, Inc.
- Senlet, P., Sian, L.C., Mathis, J., and Raggars, H. 2001. "The role of changes in contraceptive use in the decline of induced abortion in Turkey." *Studies in Family Planning* 32(1): 41-52.
- Social and Marketing Research Agency BRIF Central Asia and Schering. 2005. "Results of focus groups with women in Almaty about their attitude towards abortions and contraception." Almaty, Kazakhstan: Schering Corp.
- . 2005. "Results of 21 in-depth interviews with medical professionals about their attitude towards abortion and contraception." Almaty, Kazakhstan: Schering Corp.
- Stanwood, N.L., Grimes, D.A., and Schulz, K.F. 2001. "Insertion of an intrauterine contraceptive device after induced or spontaneous abortion: a review of evidence." *British Journal of Gynecology* 108(11): 1168-73.
- Storey, J.D., Ilkhamov, A., and Saksvig, B. 1997. Perceptions of family planning and reproductive health services: Focal group discussions in Kazakhstan, Turkmenistan, Kyrgyzstan and Uzbekistan. Field report number 10. Baltimore, MD: Center for Communication Programs, Johns Hopkins School of Public Health.
- UNFPA and WHO. 2000. *Family planning and reproductive health in Central and Eastern Europe and the newly independent states. From Abortion to Contraception*. Third edition. Copenhagen: WHO Regional Office for Europe. <http://www.who.dk/document/e71193.pdf>.
- UNFPA. 2001. *A report on the rapid assessment of medical facilities in Astana City, Karaganda, Kzyl-Orda, Southern Kazakhstan and Eastern Kazakhstan oblasts*. Almaty, Kazakhstan.
- Weissman, E., Sentumbwe, O., Mbonye, A.K., Kayaga, E., Kihuguru, S. M., and Lissner, C. 1999. *Uganda safe motherhood programme costing study*. Geneva: World Health Organization.

- Westoff, C. 2005. "Recent Trends in Abortion and Contraception in 12 Countries." DHS Analytical Studies, No. 8. Calverton, Maryland: ORC Macro. Available at: [www.measuredhs.com](http://www.measuredhs.com).
- , 2000. "The Substitution of Contraception for Abortion in Kazakhstan in the 1990s." DHS Analytical Series, No. 1. Calverton, Maryland: ORC Macro. Available at: [www.measuredhs.com](http://www.measuredhs.com).
- Westoff, C., Sharmanov, A., and Sullivan, C. 1998. "Replacement of Abortion by Contraception in Three Central Asian Republics." Calverton, Maryland: ORC Macro. Available at: [www.measuredhs.com](http://www.measuredhs.com).
- WHO. 1999. "Highlights on health in Kazakhstan." Second edition. Copenhagen: Regional Office for Europe. <http://www.who.dk/document/e72497.pdf>.

## ANNEX 1: LIST OF MEDICAL FACILITIES

Region and health facility	Number of respondents	Region and health facility	Number of respondents
<b>A. Astana</b>		<b>D. North Kazakhstan</b>	
Women consulting center # 1	2	<b><u>Petropavl (city)</u></b> Women consulting center	8
Maternity hospital # 1	3	City hospital №2	4
Family group practice, “Academia”	2	Women consulting center adjacent to oblast/regional prenatal center	3
City hospital # 1	3	oblast/regional prenatal center (gynecological department)	1
Perinatal center maternity hospital	1	<b><u>Kyzylgarskii</u></b> Central district hospital (gynecological department)	2
Women consulting center adjacent to perinatal center	2	Polyclinic adjacent to central district hospital	3
<b>B. South Kazakhstan</b>		Family group practice, “Peterfeldskau”	1
<b><u>Lenger (city)</u></b> City hospital (gynecological department)	2	Rural hospital	2
City polyclinic	1	Doctor’s assistant/midwife posts (FAPs) “Pencovskii”	1
City hospital	1	<b>E. West Kazakhstan</b>	
Family group practice, “Dostyk”	2	<b><u>Uralsk (city)</u></b> City polyclinic №1	8
Family group practice, “Kazygurt”	2	City polyclinic №4	4
<b><u>Otrarskii (rural)</u></b> Women consulting center adjacent to central district hospital	2	Joint-stock company, “Talap” hospital	1
Central district hospital (gynecological department)	1	Joint-stock company, “Talap” polyclinic	4
Doctor’s assistant/midwife posts (FAPs) “Densaulyk”	1	Maternity hospital №3	7
Family group practice “Talapy”	1	<b><u>Burliskii (rural)</u></b> Women consulting center adjacent to central district hospital	5
<b>C. East Kazakhstan</b>		Central district hospital (gynecological department)	2
<b><u>Ust-Kamenogorsk (city)</u></b> City hospital № 1	3	Family group practice, “Berezovka”	1
oblast/regional prenatal center	1	Assistant doctor/mid-wife post (FAPs), “Kyzyltal”	1
Women consulting center adjacent	2	<b>F. Almaty</b>	

<b>Region and health facility</b>	<b>Number of respondents</b>	<b>Region and health facility</b>	<b>Number of respondents</b>
to oblast/regional prenatal center			
Emergency hospital	3	Women consulting center adjacent to city polyclinic # 17	5
Limited partnership health care center-2	3	City polyclinic #15	5
Family group practice-9	2	Family group practice # 6	1
Health care facility «Ambulance center»	1	Maternity hospital # 5	3
<b>Ulanskii (rural)</b> Central district hospital	1	Maternity hospital #1	2
Polyclinic adjacent to central district hospital	1	Women consulting center adjacent to city polyclinic #12	2
Family group practice, «Saratovka»	1	Polyclinic adjacent to City reproduction of human center	1
Assistant Doctor/midwife post (FPs) «Vostochnyi»	1	City reproduction of human center (hospitals)	1
<b>Total health facilities: 52</b>		<b>Total health providers: 126</b>	

## ANNEX 2: QUESTIONNAIRE USED FOR PROVIDER SURVEY

<b>Section 1: Basic information on health facility</b>		
<b>No.</b>	<b>Questions and Filters</b>	<b>Coding Categories</b>
001	Date of Review (dd/mm/yy)	
002	Interviewer(s) name	
003	Respondent(s) information. Write name(s) and designation.	
004	Name of oblast	
005	Name of the rayon/city	
006	Type of area (urban or rural)	
007	Name of the health facility	
008	Type of health facility (e.g. city polyclinic, Women Consultation Center, central rayon hospital, <i>et al.</i> )	
009	Ownership of the facility (public, private)	
010	ID of the health facility visited	
011	Total population served by the health facility	
012	Total number of outpatient <u>clients</u> served by the health facility in the last 12 months (indicate number of <u>clients</u> and number of <u>consultations</u> )	
013	Total number of beds in the hospital for inpatient admission	
014	Total number of inpatient hospital <u>admissions</u> in last 12 months (if no provision for inpatient admissions exists, write 'N'.)	
015	Are the following services provided in the health facility? If the service is provided, write the number of clients receiving that service in last 12 months based on health facility records. If the services are not provided, write 'N'.	
	Abortion by vacuum aspiration	
	Abortion by Dilatation and Curettage	
	Treatment of abortion complications	
	Oral pills	
	Condoms	
	IUDs	
	Injectables (Depo-provera)	
	Female sterilization	
	Male sterilization	
	Other family planning method (please specify)	
016	Total number of inpatient hospital admissions. If the service is not provided, write 'N'.	
	Abortion by Manual Vacuum Aspiration	
	Abortion by Dilatation and Curettage	
	Treatment of abortion complications	
	Female sterilization	
017	Total number of beds in the health facility earmarked for abortion-related services	
018	Total number of beds in the health facility earmarked for FP-related services	
019	<b>Questions to elicit the cost and overhead expenses of the facility</b>	
019a	Total utility costs (telephone, water, electricity, heating, waste disposal, office stationary) on average per month	
019b	Total cost of construction of this facility if constructed today	

020	<b>Availability of standard clinical protocols.</b> Write the services/procedures for which standard protocols were followed and whose copies were seen by the interviewer.	<b>Yes, seen</b>	<b>Yes, not seen</b>	<b>No</b>
	Vacuum aspiration (mini-abortion)			
	Dilatation and Curettage			
	Treatment of abortion complications			
	Provision of different family planning methods			

	<b>Section 2: Basic information on respondent</b>	
201	Name of the respondent	
202	Qualification	
203	Years worked on the current job	
	<b>Section 3: Attitude towards different methods</b>	
<b>No.</b>	<b>Questions and Filters</b>	
301	How would you rate the <u>safety</u> of each of the following contraceptive methods, on a scale of 1-5, 1 being the most unsafe, and 5 being the safest, in terms of the health risk to the woman using the method? <b>Please rate each method. If no response, write "0".</b>	
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
	Induced abortion	
302	How would you rate the <u>reliability</u> of each of the following contraceptive methods, on a scale of 1-5, 1 being least reliable, and 5 being most reliable, in terms of risk of contraceptive failure to the woman using the method? <b>Please rate each method. If no response, write "0".</b>	<b>Write the score</b>
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
	Induced abortion	
303	How would you rate the <u>ease of using</u> of each of the following contraceptive methods, on a scale of 1-5, 1 being least convenient, and 5 being most convenient <u>in terms of convenience</u> of use to the woman? <b>Please rate each method. If no response, write "0".</b>	<b>Write the score</b>
	Oral Pills	
	Condoms	
	IUDs	

	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
	Induced abortion	
<b>304</b>	How likely you are to recommend each of the following methods to your clients, on a scale of 1-5 ,1 being least likely and 5 being most likely. <b>Please rate each method.</b>	<b>Write the score</b>
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
	Induced abortion	
<b>305</b>	Do you think each of the following methods is financially affordable? Indicate on a scale of 1-5, 1 being least affordable and 5 being most affordable, considering the current socio-economic situation and current government policies with respect to provision of different FP methods. <b>If no response, write "0".</b>	<b>Write the score</b>
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Induced abortion	
<b>306</b>	Will you recommend a contraceptive method for a young (under 20 years of age) unmarried, sexually-active woman?	Yes
		No
		Don't know
<b>306a</b>	If "yes" to q306, what method(s) would you recommend? Circle all methods mentioned spontaneously.	Oral Pills
		Condom
		IUD
		Injectables
		Female sterilization
		Male sterilization
		Periodic Abstinence
<b>307</b>	Will you recommend a contraceptive method for a young (under 20 years in age), unmarried, sexually-active man?	Yes
		No
		Don't know
<b>307a</b>	If "yes" to q307, what method(s) would you recommend? Circle all methods mentioned spontaneously.	Oral Pills
		Condom
		IUD

		Injectables
		Female sterilization
		Male sterilization
		Periodic Abstinence
<b>Section 4: Perception of client's preferences for different methods.</b>		
<b>401</b>	How much do you think that your clients are likely to know about the following methods, on a scale of 1-5, 1 being least likely to know, and 5 being most likely to know? <b>Please rate each method. If no response, write "0".</b>	
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
	Induced abortion	
<b>402</b>	Do you think most of your clients would prefer the following methods? Indicate on a scale of 1-5, 1 being least likely to prefer, and 5 being most likely to prefer. <b>Please rate each method.</b>	
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
	Induced abortion	
<b>403</b>	How often do you think your clients approach you <i>after</i> making up their mind for the method they want to adopt? <b>Please circle one response.</b>	Almost all
		Majority
		Some
		Few
		None
<b>404</b>	How likely are you to inform your clients about the availability of other FP methods even when they request a specific method? <b>Please circle one response.</b>	Always
		Sometimes
		Occasionally
		Never
<b>405</b>	Do you inform clients about the side effects of their chosen contraceptive method and how to handle those side effects, even when the client has requested that particular method?	Yes
		No
		Depends

<b>Section 5: Knowledge about different contraceptive and family planning methods.</b>		
<b>501</b>	Please list at least two situations in which you would not recommend the following methods to your clients (i.e., list two <u>contraindications</u> for each method). List contraindications that you would mention spontaneously. If none mentioned, write "none".	
		<b>Contraindication 1</b>
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
Induced abortion		
<b>502</b>	Please list at least two <u>side effects</u> of each of the following methods that you consider to be the most important (i.e., list those you mention spontaneously. If none mentioned, write "none."	
		<b>Side-effect 1</b>
	Oral Pills	
	Condoms	
	IUDs	
	Injectables	
	Female sterilization	
	Male sterilization	
	Periodic Abstinence	
	Withdrawal	
Induced abortion		
<b>503</b>	What should a woman do if she forgets to take one pill? Please circle one response that you would mention spontaneously.	Continue with her regular schedule
		Take the missed pill with next scheduled pill
		Use another method of contraception
		Don't know
<b>504</b>	Which of the following method(s) are you most likely to recommend to a woman who recently had an induced abortion. <b>Circle all the responses mentioned.</b>  If you circled, "no method should be recommended," please skip to question 506.	No method should be recommended
		Oral Pills
		Condom
		IUD
		Injectables
		Female sterilization
		Male sterilization

		Periodic Abstinence
		Withdrawal
<b>505</b>	How soon will you prescribe contraceptives to a woman who has just had an induced abortion? Write down the exact number of days, weeks or months.	Immediately, as soon as possible.
		after __ days
		after ___ weeks
		after __ months
<b>506</b>	Do you think that the number of woman who chose abortion in Kazakhstan, or the <i>number of abortions women have on average</i> in Kazakhstan, is “high”, “ok” or “low”?	High
		Ok
		Low
<b>507</b>	Based on your experience, what are the main reasons women in your area seek abortions? (List the three most important reasons.)	1.
		2.
		3.
<b>508</b>	Do you know about newer methods of contraception to recommend to your patients? Write the names of the methods you would mention spontaneously.	
		No
<b>509</b>	Do you think you need training about contraception and abortion?	
		Yes
		No
<b>511</b>	Please list the topics/areas in which you need training.	1.
		2.
		3.

**Thank the health staff for his/her cooperation and answers to the questions on abortion and family planning methods.**

## ANNEX 3: ADDITIONAL DATA ON COSTING OF ABORTION SERVICES

**Table Annex 3a: Share of components in the direct cost of abortion, by health facility and region**

<i>Region/Health facility</i>	<i>Anesthesia</i>	<i>Antibiotics</i>	<i>Analgesics</i>	<i>Lab tests</i>	<i>Antiseptics</i>	<i>Disposable supplies</i>	<i>Total</i>
<b>South Kazakhstan</b>	<b>0.34</b>	<b>1.28</b>	<b>0.01</b>	<b>4.33</b>	<b>0.91</b>	<b>1.78</b>	<b>8.65</b>
City hospital	0.43	0.94	0.01	2.51	1	2.15	7.04
City hospital # 2	0.35	0.62	0.00	3.58	0.79	1.01	6.35
Central district hospital (rural)	0.08	3.18	0.00	10.46	0.81	1.84	16.37
<b>East Kazakhstan</b>	<b>1.37</b>	<b>3.28</b>	<b>0.01</b>	<b>3.03</b>	<b>2.21</b>	<b>2.90</b>	<b>12.80</b>
Oblast perinatal center	1.44	2.33	0.00	1.75	1.63	5.15	12.30
LP healthcare center	0.37	5.2	0.00	4.96	2.83	1.15	14.51
City hospital	2.72	2.76	0.00	3.01	3.02	1.15	12.66
Emergency hospital	1.56	2.40	0.00	2.66	0.49	2.21	9.32
Central district hospital (rural)	1.64	0.92	0.48	1.43	2.78	0.76	8.01
<b>Astana</b>	<b>4.37</b>	<b>0.64</b>	<b>0.00</b>	<b>1.96</b>	<b>0.26</b>	<b>1.70</b>	<b>8.94</b>
Perinatal institute	7.49	0.79	0.00	1.96	0.19	1.75	12.18
Maternity hospital	0.05	0.93	0.00	1.96	0.5	1.54	4.98
City hospital # 2	2.81	0.16	0.00	1.96	0.19	1.75	6.87
<b>Almaty</b>	<b>2.79</b>	<b>1.24</b>	<b>0.27</b>	<b>4.74</b>	<b>1.54</b>	<b>1.07</b>	<b>11.65</b>
Center for Human Reproduction	4.71	0.00	0.04	6.29	2.68	0.96	14.68
Maternity hospital # 1	0.82	3.04	1.89	8.55	0.89	0.51	15.70
Maternity hospital # 5 (nonpaying)	0.47	1.57	0.07	2.4	0.26	0.99	5.76
Maternity hospital # 5 (paying)	0.98	3.00	0.45	2.28	0.26	1.47	8.44
<b>West Kazakhstan</b>	<b>4.16</b>	<b>4.04</b>	<b>0.27</b>	<b>9.77</b>	<b>1.89</b>	<b>0.99</b>	<b>21.11</b>
Maternal hospital # 3	4.56	4.55	0.29	9.91	2.03	0.96	22.30
Central district hospital (rural)	1.65	0.86	0.13	8.9	1.03	1.14	13.71
<b>North Kazakhstan</b>	<b>3.51</b>	<b>0.61</b>	<b>0.07</b>	<b>5.88</b>	<b>2.00</b>	<b>1.06</b>	<b>13.13</b>
City hospital # 2	3.72	0.00	0.01	6.62	2.06	0.84	13.25
Oblast prenatal hospital	3.94	0.00	0.02	4.03	1.93	0.88	10.80
Central district hospital (rural)	0.14	8.83	0.89	2.43	1.51	3.97	17.77

**Table Annex 3b: Annual cost of support staff per bed**

	Total annual cost of the support staff (Tenge)	Total number of beds	Annual cost per bed	
			(Tenge)	(US \$)
<b>South Kazakhstan</b>				
City hospital	7,329,800	210	34,903.8	265.4
City hospital # 2	7,329,800	200	36,649.0	278.7
Central district hospital (rural)	11,628,792	70	166,125.6	1263.4
<b>East Kazakhstan</b>				
Oblast perinatal center	23,72,148	200	11,860.7	90.2
LP healthcare center	3,169,032	325	9,750.9	74.2
City hospital	10,922,820	670	16,302.7	124.0
Emergency hospital	3,161,340	15	210,756.0	1602.8
Central district hospital (rural)	2,372,148	60	39,535.8	300.7
<b>Astana</b>				
Perinatal institute	10,209,000	150	68,060.0	517.6
Maternity hospital	22,518,972	130	173,222.9	1317.4
City hospital # 2	32,146,700	465	69,132.7	525.8
<b>Almaty</b>				
Center for Human Reproduction	1,415,208	68	20,811.9	158.3
Maternity hospital # 1	5,116,128	140	36,543.8	277.9
Maternity hospital # 5 (nonpaying)	4,956,000	120	41,300.0	314.1
Maternity hospital # 5 (paying)	4,956,000	120	41,300.0	314.1
<b>West Kazakhstan</b>				
Maternal hospital # 3	10,668,000	195	54,707.7	416.1
Central district hospital (rural)	10,614,600	130	81,650.8	621.0
<b>North Kazakhstan</b>				
City hospital # 2	5,990,220	270	22,186.0	168.7
Oblast prenatal hospital	8,209,008	195	42,097.5	320.2
Central district hospital (rural)	5,754,000	98	58,714.3	446.5

**Table Annex 3c: Variation in indirect costs (utility, social insurance, tax, building repair and maintenance) per bed by health facility and region**

<b>Region/Health Facility</b>	<b>Total annual indirect cost (in Tenge)</b>	<b>Total number of beds</b>	<b>Annual expenditure per bed</b>	
			<b>(Tenge)</b>	<b>(US \$)</b>
<b>South Kazakhstan</b>				
City hospital	21,754,000	210	103,591	787.8
City hospital # 2	27,745,000	200	138,725	1055.0
Central district hospital (rural)	16,605,200	70	237,217	1804.1
<b>East Kazakhstan</b>				
Oblast perinatal center	22,089,800	200	110,449	840.0
LP healthcare center	17,644,500	325	54,291	412.9
City hospital	93,049,800	670	138,880	1056.2
Emergency hospital	3,736,300	15	249,087	1894.3
Central district hospital (rural)	7,467,632	60	124,461	946.5
<b>Astana</b>				
Perinatal institute	19,707,128	150	131,381	999.2
Maternity hospital	29,088,300	130	223,756	1701.7
City hospital # 2	41,368,310	465	88,964	676.6
<b>Almaty</b>				
Center for Human Reproduction	7,376,800	68	108,482	825.0
Maternity Hospital # 1	23,310,700	140	166,505	1266.3
Maternity hospital # 5 (nonpaying)	22,102,600	120	184,188	1400.8
Maternity hospital # 5 (paying)	22,102,600	120	184,188	1400.8
<b>West Kazakhstan</b>				
Maternal hospital # 3	23,993,000	195	123,041	935.7
Central district hospital (rural)	13,614,156	130	104,724	796.4
<b>North Kazakhstan</b>				
City hospital # 2	24,459,000	270	90,589	688.9
Oblast prenatal hospital	30,665,600	195	157,260	1196.0
Central district hospital (rural)	8,472,000	98	86,449	657.5

**Table Annex 3d: Variation in price (in Tenge) and type of laboratory tests requested for all women (one of the main components of direct costs) who seek abortion services, by health facility and region**

<b>Region/Health facility</b>	<i>Wasser- man test</i>	<i>Ultra sound investig ation</i>	<i>Vaginal smear</i>	<i>Blood Analysis</i>	<i>Analysis on HIV</i>	<i>Blood group</i>	<i>Blood group+rh</i>	<i>Photo- roentgeno graphy</i>	<i>Biochemical analysis of blood</i>	<i>Urinalysis</i>	<i>Coagulogram</i>
<b>South Kazakhstan</b>											
City hospital	60	400	150	200							
City hospital # 2	60	400	150	400					420		
Central district hospital (rural)	55	400	150	250				400		120	
<b>East Kazakhstan</b>											
Oblast perinatal center	55	400	150			180					420
LP healthcare center	180		275			200					
City hospital	120		150			180					
Emergency hospital	180		150								
Central district hospital (rural)	60		60	100				65		80	
<b>Astana</b>											
Perinatal institute	60		150								
Maternity hospital	60		150								
City hospital # 2	60		150								
<b>Almaty</b>											
Center for Human Reproduction	175	590	180								
Maternity hospital # 1	189		340		400		195				
Maternity hospital # 5 (nonpaying)	110		165		400						
Maternity hospital # 5 (paying)	110		165	170	400	70					
<b>West Kazakhstan</b>											
Maternal hospital # 3	178	400	213			171		700			
Central district hospital (rural)	157		313					700			
<b>North Kazakhstan</b>											
City hospital # 2	190	262	240				120	58			
Oblast prenatal hospital	180		230				120				
Central district hospital (rural)	55		100	70			60			34	



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