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Attachment G

"The Need and Unmet Need for Infertility Services
in the United States"

Research Note

The Need and Unmet Need for Infertility Services In the United States

By Stanley K. Henshaw and Margaret Terry Orr

This article estimates the number of women of reproductive age who need infertility services because they want to have children but suffer impairments of their own or their partners' fecundity; it also estimates the number who have obtained such services. The analysis is based on data from the 1982 National Survey of Family Growth (NSFG), which involved a nationally representative sample of 7,969 women aged 15–44 of all marital statuses. Standard errors have been calculated for all estimates presented below, using equations published by the National Center for Health Statistics.[1] T-tests have been used to test the significance of differences in proportions.

Classifications

Figure 1 represents all U.S. women aged 15–44 classified according to their fecundity status. Assignment has been made hierarchically, since some women fall into more than one category. Of the 54.1 million U.S. women of reproductive age, 19.4 million (36 percent) are subfecund or infecund. Nearly three-quarters of this group—13.7 million—are infecund because they or their partners have been surgically sterilized: Ten million have had tubal ligations or vasectomies and 3.7 million have had hysterectomies or ovariectomies. The latter procedures are irreversible, whereas tubal ligations and vasectomies can sometimes be reversed (although at great cost) by means of microsurgery.

Nearly 900,000 of the subfecund or infecund women state that it is impossible for them to have a baby because they are menopausal or because they or their partners have had an accident or an illness; these women are classified as nonsurgically sterile. Another 1.5 million are classified as "perceived subfecund" because they report that they or their partners have some problem related to becoming pregnant. Approximately 2.1 million women are not sterile or subfecund but report that it would be dangerous or difficult for them to carry a pregnancy to term, that it would be dangerous for the baby, or that they have been advised by a doctor not to become pregnant; these women are unable to have a baby but report no problems related to conception per se.

Just over one million women are not surgically sterile and do not report any problems in conceiving or carrying to term, but they do report that during at least the preceding 12 months of continuous marriage or cohabitation, they neither practiced contraception nor became pregnant.* Without further information, we have categorized couples in this "long-interval" group as subfecund/infecund, although some of them may be able to conceive in the future without treatment; indeed, some will conceive without treatment given a longer period of trying to become pregnant. However, we have equated 12 months with a long interval because many couples seek infertility services after a year of trying to become pregnant.

As a result of the underreporting of abortions in the NSFG, the number of women estimated to belong in the long-interval category may be too high.[2] The problem of underreporting is minimal among married white women but is substantial among married black women; however, since married blacks constitute only a small proportion of all subfecund and infecund women, correcting the error would have only a small effect on the estimate for the subfecund/infecund category. (Unmarried noncohabiting women who have not practiced contraception and have not become pregnant are excluded from the long-interval category because of uncertainty about their frequency of intercourse over the 12-month time period.)

All women who are not already classified as subfecund or infecund and who report having had a pregnancy within the three years prior to the interview are classified as fecund. The 10.6 million women (20 percent of all those aged 15–44) who make up this group constitute a minimum estimate because of the underreporting of abortions, particularly among unmarried women. Such underreporting could mean that the number of fecund women should be adjusted upward by as much as 18 percent, to 12.5 million (23 percent). This adjustment has not been made, however, because of uncertainty about the exact correction factor to use and the categories the women should be taken from.

The number of women whose fecundity status is unknown is estimated to be 24.2 million (45 percent of all women aged 15–44). However, this figure is undoubtedly inflated by the underreporting of abortions. Nearly one-half of the "fecundity unknown" group—11.7 million women—are currently using a reversible method of contraception. Another one-fifth—4.9 million women—are classified as not currently practicing contraception; they are not eligible to be put in the long-interval category because their period of contraceptive nonuse is shorter than one year, or because they are neither married nor cohabiting. Finally, nearly one-third of those whose fecundity is not known (7.5 million women) have

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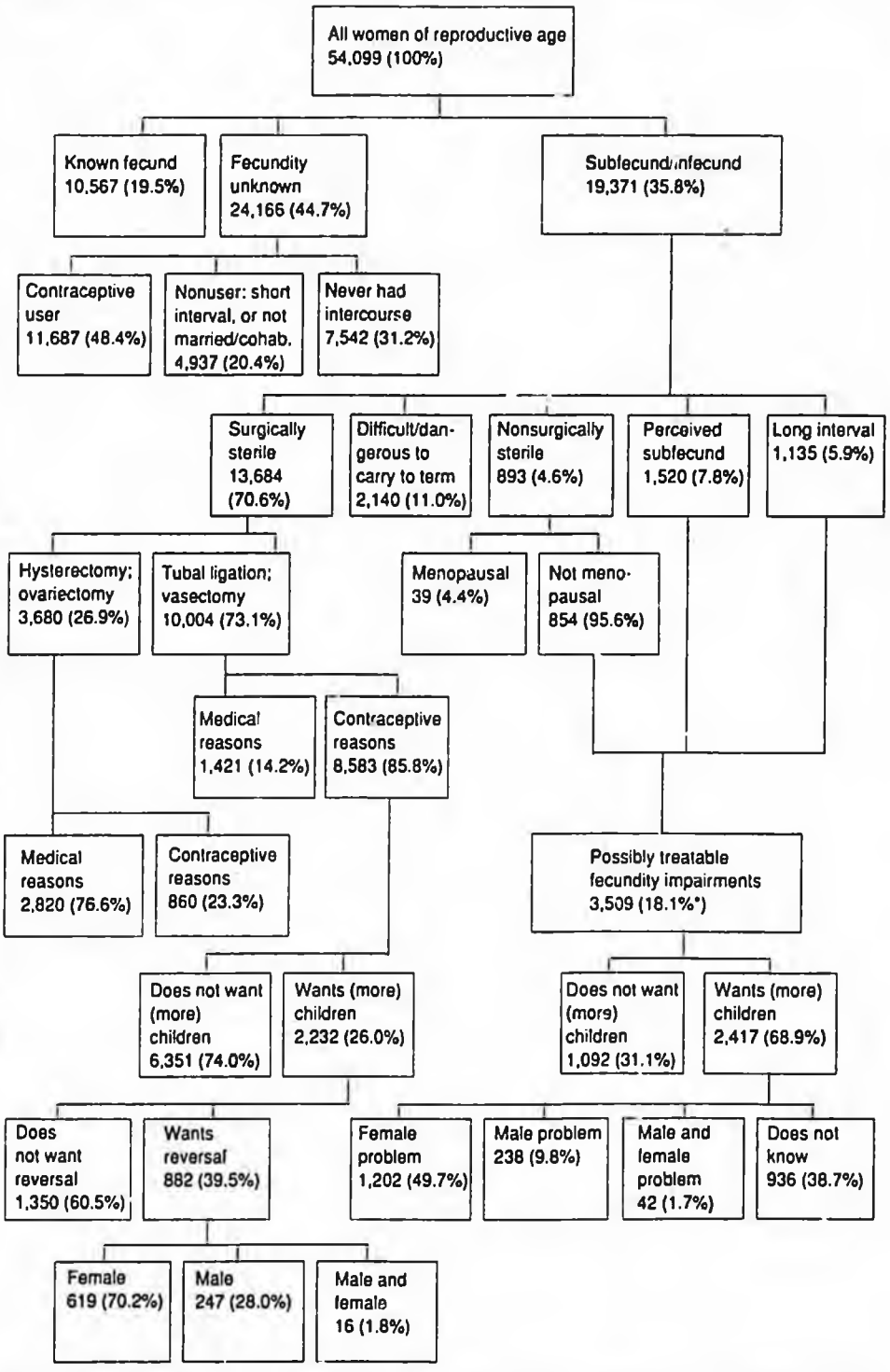
*Among women in this group, the period during which they did not conceive despite unprotected coitus was 12–23 months for 35 percent, 24–35 months for 14 percent, and 36 or more months for 52 percent.

never engaged in sexual intercourse.*

Figure 1. Classification of U.S. women aged 15–44, by fecundity status



*Percentage shown is of subfecund/infecund women. Note: Numbers are in thousands; except as noted in preceding footnote, percentages (in parentheses) are based on the next higher level subgroup.

Who Needs Services? Who Gets Them?

In estimating the need for infertility services, we are concerned with three of the categories presented in Figure 1: the nearly 900,000 women who report that they or their partners are nonsurgically sterile; the 1.5 million who perceive themselves or their partners to be subfecund; and the 1.1 million who make up the long-interval group. Except for the small proportion of women who are menopausal, all are considered to have potentially treatable fecundity impairments. (Excluded from the treatable category are couples who have had tubal ligations or vasectomies that they want to have reversed† and those who say it is difficult or dangerous for them to carry a pregnancy to term. The appropriate care for these groups differs from what is usually considered to be infertility treatment.)

In all, an estimated 3.5 million women have fecundity impairments that could possibly be treated. Sixty-nine percent, or 2.4 million, of these women say they would like to have children (or more children) and are therefore defined as needing infertility services. (The proportion who say they want more children is the same among those who believe they are subfecund as among those who are experiencing a long interval without conceiving [71 percent], but it is slightly lower among the nonsurgically sterile [62 percent], who are older, on average, than the other two groups.) The definition of need is thus based entirely on women's reports of their fertility aspirations and of their own and their partners' fecundity status; we assume that these reports accurately reflect their actual physical condition and desire for children. Among those considered to need services are women in the long-interval group, who may not yet suspect a possible infertility problem, and women who are not actively trying to become pregnant. Most such women would not seek infertility care. On the other hand, many women classified as being of unknown fecundity may have infertility problems that will become appar-

*This category includes women who had coitus before their first menstrual period but not since, and women who are under age 25 and have had coitus only once.

The classification of fecundity status presented in this article differs slightly from that used by the National Center for Health Statistics (NCHS), which conducted the NSFG. (See: W. D. Mosher and W. F. Pratt, "Fecundity and Infertility in the United States, 1965-82," *Advance Data from Vital and Health Statistics*, No. 104, 1985; and reference 2.) The NCHS includes in the subfecund category both women who have difficulty conceiving and those who have difficulty carrying to term; women who say that it would be dangerous for them to carry a pregnancy to term are classified as subfecund only if they also say either that they would have an abortion to terminate a pregnancy or that they are planning to be sterilized to prevent pregnancy. In contrast, this article classifies all women who say pregnancy would be dangerous as subfecund, without any qualifications; and it distinguishes the "difficult/dangerous to carry to term" category from the "perceived subfecund" group. In addition, the NCHS considers to be fecund those women who are classified in this analysis as being of unknown fecundity. Finally, the present analysis uses a 12-month rather than a 36-month interval of unprotected intercourse within marriage or cohabitation to define "long-interval" subfecundity. The differences in definition stem in part from differences in focus: The primary concern of this article is the need for infertility services, whereas the focus of the NSFG reports is the demographic impact of impaired fecundity.

†Some 882,000 couples want a reversal of a previously obtained tubal ligation or vasectomy. (See: S. K. Henshaw and S. Singh, "Sterilization Regret Among U.S. Couples," *Family Planning Perspectives*, 18:238, 1986.)

Table 1. Number of U.S. women who have possibly treatable infertility problems and want to have (more) children, and number and percentage distribution, by person needing treatment and type of infertility services received; according to subfecundity category

Characteristic	Treatable infertile		Nonsurgically sterile†		Perceived subfecund		Long interval	
	No. (000s)	%	No. (000s)	%	No. (000s)	%	No. (000s)	%
Want (more) children	2,417	100	530	100	1,082	100	806	100
Person needing treatment								
Female only	1,202	50	263	50	939	87	0	0
Male only	238	10	164	31	74‡	7‡	0	0
Both	42‡	2‡	10‡	2‡	31‡	3‡	0	0
Not known/not asked	936	39	92‡	17‡	38‡	4‡	806	100
Services received								
Advice	387	16	143‡	27‡	188‡	17‡	56‡	7‡
Treatment	787	33	219‡	41	401	37	168‡	21‡
None	1,242	51	168‡	32	493	46	581	72

†Excludes those who are menopausal. ‡Relative standard error >30 percent.

ent in the future. However, the need estimate we present here applies to one point in time; it does not indicate the number of new cases that occur each year or the number of women who seek treatment in a year. Finally, we must note that even with treatment, not all of the women defined as needing infertility services will ultimately succeed in having a child; nevertheless, it is reasonable for them to seek medical help for their infertility problem.

As Table 1 shows, a large share of the estimated need appears to be for services for women. For half the couples in need, it is the woman who is thought to have the fecundity impairment; in only 10 percent of couples is the male partner described as having the problem. However, whereas 31 percent of nonsurgically sterile women attribute the fecundity problem to their male partners, only seven percent in the "perceived subfecund" group do so. This difference may reflect more certainty about the cause of the problem among women who report themselves or their partners to be nonsurgically sterile. For 39 percent of those with potentially treatable impairments, there is no indication of which partner needs treatment; most of the 39 percent are in the long-interval group.

Forty-nine percent of couples in need of infertility care have received medical attention: Thirty-three percent have received treatment and 16 percent have been given advice only. Sixty-eight percent of those who say they are nonsurgically sterile have received services, as have 54 percent of the "perceived subfecund" group. Among women in the long-interval category, 28 percent have received medical attention for infertility, although by definition women in that category have not reported any infertility problem. For all the categories, however, the timing of such medical attention in relation to the onset of the current fecundity problem is unknown. Thus, it is possible that women in the long-interval group who report seeing a doctor may have done so years earlier, and may have been treated successfully (indeed, about 70 percent of the women with long intervals have had children).

Table 2 illustrates the demographic characteristics of the women estimated to be in need of infertility services. As the table shows, 54 percent are in their 20s and 36 percent are aged 30–39. Relatively few are teenagers or women 40 and older (five percent each). Eleven percent are black and 12 percent are Hispanic. The large majority (75 percent) are currently married, and a smaller majority (59 percent) have had no children. Just over 80 percent live in metropolitan areas. Regional differences reflect the population distribution of the country, with the largest proportion of those in need (32 percent) residing in the South and the smallest proportion (18 percent) residing in the Northeast.

Although 15 percent of women who need infertility care have family incomes below 150 percent of the federally defined poverty level,* only four percent are Medicaid recipients. One reason is that the Medicaid program was designed primarily to serve dependent children and their mothers and consequently covers relatively few childless women of childbearing age. It is possible that the NSFG underestimates the number of women with Medicaid coverage by about one-fifth.† But even if the proportion of Medicaid recipients among those in need is actually about five percent, the fact that Medicaid reimbursement is available for no more than one-third of poor women in need has important implications for the access of low-income women to infertility services.

The 2.4 million women in need of infertility care represent five percent of all U.S. women of reproductive age. The proportion varies somewhat by demographic characteristics, as is shown in the table. Women aged 20–34, and particularly those aged 25–29, are more likely than women in other age-groups to need services. Need is also relatively higher among those who are currently married and those who have had no births. It appears to be less prevalent among poor women than among women of higher income regardless of age. One reason is that poor women are more likely to be unmarried, and unmarried women are about one-third as likely as married women to be in need of services. Race, Hispanic ethnicity, metropolitan status and region have no statistically significant relation to the probability of being in need.

As noted previously, 49 percent of those in need of infertility care have already received some professional attention. Again, the proportion differs according to demographic characteristics. As might be expected, age is a strong predictor of which women will have obtained services: Only 10 percent of women aged 15–19 in need and 29 percent of those 20–24, as compared with 70 percent of women 40 and older, have consulted a professional about their infertility problem. Similarly, married women are more likely than unmarried women to have obtained services.

Among those in need, black women are less likely than nonblacks to have obtained services, and low-income women are less likely than higher income women to have done so. In the latter analysis, the difference between the income subgroups remains large even when age is controlled for, although the differential is no longer statistically significant because of the small number of respondents in the subgroups. Medicaid recipients appear to be less likely than other women to have obtained services, although the sample sizes are again too small to show statistical significance. Med-

*In 1985, the federally defined poverty-level income was $10,989 for a family of four.

†According to estimates from the 1984 Current Population Survey (CPS), the number of women covered by Medicaid is about five million. (See: R. B. Gold and A. M. Kenney, "Paying for Maternity Care," *Family Planning Perspectives*, 17:105, 1985, Table 1.) This figure compares with an estimate of about four million derived from the NSFG. The CPS estimate may include women who are eligible for Medicaid but have not actually received Medicaid-covered services.

Table 2. Number of U.S. women of reproductive age; number and percentage in need of infertility services;†and among those in need, percentage who have obtained services and number and percentage distribution of women who have not obtained services; by selected characteristics

Characteristic	No. of women 15–44 (000s)	In need of infertility services					
		% of women 15–44	No. (000s)	% distribution	% who have obtained services	Have not obtained services	
						No. (000s)	% distribution
Total	54,099	4.5	2,417	100	49	1,242	100
Age							
15–19	9,521	1.2*,‡	115‡	5‡	10*,‡	103‡	8‡
20–24	10,629	5.3	564	23	29‡	398	32
25–29	10,263	7.3	751	31	48	392	32
30–34	9,381	5.6	529	22	69	167‡	13‡
35–39	7,893	4.3	337	14‡	57	145‡	12‡
40–44	6,412	1.9‡	120‡	5‡	70	36‡	3‡
Race/ethnicity							
Black	6,985	3.8	268	11‡	30*	187‡	15
Nonblack	47,114	4.6	2,149	89	51	1,056	85
Hispanic	4,393	6.4	282	12‡	39‡	172‡	14‡
Non-Hispanic	49,706	4.3	2,134	88	50	1,070	86
Marital status							
Married	28,231	6.4*	1,803	75	57*	776	62
Unmarried	25,868	2.4	614	25	24	466	38
No. of births							
0	22,941	6.2*	1,422	59	54	647	52
≥1	31,158	3.2	995	41	40	595	48
Metropolitan status							
Metro	43,199	4.6	1,982	82	46	1,065	86
Nonmetro	10,900	4.0	435	18‡	59	177‡	14‡
Region							
Northeast	11,852	3.7	440	18‡	39	266	21‡
North Central	13,981	5.0	694	29	50	346	28
South	17,308	4.4	765	32	54	348	28
West	10,958	4.7	519	21	46	282	23‡
Income level, by age							
<150% of poverty	13,843	2.7*	374	15‡	26*,‡	277	22
≥150% of poverty	40,256	5.1	2,043	85	53	965	78
<30, <150%	9,503	3.1*	291	12‡	26‡	217‡	17‡
<30, ≥150%	20,910	5.5	1,140	47	41	677	55
≥30, <150%	4,340	1.9‡	83	3‡	27‡	60‡	5‡
≥30, ≥150%	19,346	4.7	903	37	68	288	23‡
Medicaid status							
On Medicaid	3,964	2.5‡	101‡	4‡	25‡	75‡	6‡
Not on Medicaid	50,135	4.6	2,316	96	50	1,167	94

*Difference between subgroups statistically significant ($p<0.05$). In the analysis by age, at least one of the differences is statistically significant. In the analysis of income level by age, difference between the first two subgroups is statistically significant.

†Those who have a possibly treatable fecundity impairment (other than surgical sterilization) and who want more children.

‡Relative standard error >30 percent.

icaid has not been successful in eliminating the income differential in access to services because a majority of the low-income women who need infertility care are ineligible for Medicaid, and even those who are Medicaid-eligible are less likely than higher income women to obtain services. There are no significant differences by Hispanic ethnicity, parity, metropolitan status or region in the proportions who have obtained care.

The 51 percent of those in need who have not obtained professional care number some 1.2 million women. This unmet need is concentrated among younger women: Seventy-two percent of those who have not obtained services are under age 30. Blacks and Hispanics each constitute about 15 percent of the unmet-need group, as do nonmetropolitan women. Twenty-two percent are poor, with incomes under 150 percent of the poverty level; six percent are Medicaid recipients.

In defining unmet need, we should add to the group of women who need infertility services but have not obtained them those who have received some care but who would benefit from further professional attention. The number of such women is unknown, however.

As the table below shows, a large majority of those who received infertility services during 1979–1982 obtained that care from private physicians:

Most recent source of care	%
Private physician	67.0
Private medical group	12.2
Hospital clinic	12.1
Community health center/clinic	3.7
Military clinic	2.3
Family planning clinic	2.1
Public health clinic	0.6
Total	100.0

After private physicians and medical groups, which were the most recent sources of care for 79 percent of NSFG respondents who obtained services, hospital clinics were the most frequent source, serving 12 percent. Only a small proportion of women evidently utilized specialized infertility centers, since hospital clinics and private medical groups—the categories that would include infertility centers—together served no more than 24 percent of infertility patients. Family planning clinics provided services to just two percent of respondents. However, since these figures indicate only the most recent source of care (which in many cases was the final source), they may understate the importance of family planning and other nonhospital clinics in providing initial evaluation, counseling and referral for couples with concerns about their fertility.

Demographers and medical specialists have suggested that the need for infertility services will expand in the coming years for several reasons.[3] The number of people of reproductive age will continue to grow, and the number with impaired fecundity will therefore rise. More women are postponing childbearing to their 30s, thus delaying their discovery of fertility problems as well as prolonging the period during which they are exposed to the risk of disease and other factors that might impair their fecundity. In addition, medical advances in the diagnosis and treatment of fertility problems are increasing the number of infertile women whose conditions can be treated.

References

1. C. A. Bachrach et al., "National Survey of Family Growth, Cycle III, Sample Design, Weighting, and Variance Estimation," *Vital and Health Statistics*, Series 2, No. 98, 1985.

2. W. D. Mosher, "Reproductive Impairments in the United States, 1965–1982," *Demography*, 22:415, 1985.

3. S. O. Aral and W. Cates, "The Increasing Concern with Infertility. Why Now?" *Journal of the American Medical Association*, 250:2327, 1983; and M. M. Adams, G. P. Oakley, Jr., and J. S. Marks, "Maternal Age and Births in the 1980's," *Journal of the American Medical Association*, 247:493, 1982.

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Attachment H

"Desperately Seeking Baby:
Ten Million Americans are Struggling to have Children"

US News + World Report, 5 Oct 87.

DESPERATELY

Ten million Americans are struggling to have children

■ The couples who visit Dr. Alan DeCherney at Yale-New Haven Hospital are much too modern to say what Jacob's wife Rachel said thousands of years ago—"Give me children or else I die"—but there's no mistaking their plight. In their minds, DeCherney says, they're suffering through a "life crisis as devastating as any disease known to man." They are struggling to have a baby, and perhaps half of them will never succeed. "Telling a couple they can never have children," the doctor has learned, "is worse than telling a 70-year-old he is dying of cancer."

Even though this is a decade of wonder cures for the barren, infertility is a serious problem that's getting worse. Amid the ballyhoo over science's breakthroughs, not to mention the controversy over surrogate motherhood and papal prohibitions, several cruel facts emerge. More and more women are waiting till age 35 or later to try to become pregnant, and a fourth of them are failing. "For many baby-boom women, there is a trend toward desperately seeking baby," says psychoanalyst Douglas LaBier, author of *The Fallout of Success*. "They're getting older, and it's constantly on their mind." Even women in their early 20s are having more difficulty becoming mothers. In all, 10 million Americans—1 couple in 6 of childbearing age—are defined as involuntarily infertile. That is, they have tried for a year or more to achieve a successful pregnancy and haven't.

High costs, few quick cures

Although specialists are seeing twice as many patients as they did a decade ago, help remains financially out of reach for many if not most would-be parents. Treatment costs average nearly $3,000 per couple, and insurance often contributes nothing. Some couples have sold their cars and homes to pay for surgery that occurs again and again, frequently at $5,000 a try.

People who get medical attention spend months or years wondering if it was worth it. Quick cures are rare. Tests that sacrifice privacy and dignity are common. Some procedures, with forbidding names like *laparotomy* and *hysterosalpingogram*, require painful invasions of the body. Sex is performed according to a doctor's timetable. At some point, after doing everything they're told, couples often are hit with a new sense of despair. "They can't believe that they haven't conceived," says Dr. Wayne Decker, director of New York's Fertility Research Foundation. "They have tremendous anger, anger toward the physician, anger toward the spouse, anger at themselves."

As the tests and treatments drag on, many couples finally concede failure and decide to adopt a baby—only to find that they're starting another frustrating and money-consuming venture. Adoption costs can exceed $10,000,

FROM ZERO TO FIVE

▶ You'd never know that Eileen and Dennis Alcardi of San Francisco spent four years enduring what she calls a "dehumanizing" bout with infertility. At about the time a specialist diagnosed and fixed their problem, they arranged to adopt Jonathan (in middle), now 3½. Since then, Eileen has given birth to Michael, 15 months, and Robert, 2½, plus James and Richard, both of whom arrived last June. "After all those years of putting your bottom up on a pillow for a half-hour, to think I had twins!" she marvels. "It proves it's totally out of control"

SEEKING BABY

and the wait may stretch up to eight years. By then, one or both would-be parents are likely to be over 40—too old, many agencies contend, for someone to become a mother or father.

Yet everything is worthwhile, every taxing fertility test, every nit-picking adoption question, if the eventual payoff is a baby. Barbara Brooks of Springfield, Va.—who spent seven years seeing seven specialists—describes her son, Dan'l, as "a joy beyond anything I ever experienced." Dan'l, 3, is a test-tube baby, one of nearly 1,000 American children conceived by in vitro ("in glass") fertilization—a process in which an egg from a woman's ovaries is mated in a dish with male sperm and replanted in her uterus. Even though Dan'l's mother is now 44, she and husband Dan are hoping that specialists can help them have a second child.

To be sure, a plethora of fertility therapies and drugs has given hope—and babies—to huge numbers of Americans troubled with conditions that a generation ago had few if any remedies. As recently as the 1960s, women who didn't ovulate got virtually no help. Now, two types of drugs will benefit a large majority of them. Nearly 10,000 couples a year turn to artificial insemination, a once rare treatment, and most of them are having babies.

Ironically, however, the miracle cures are indirectly prompting new cases of infertility. "Technology has given people unreasonably high expectations," explains Shulamit Reinharz, a Brandeis University sociologist. "Couples delay marriage and pregnancy, use contraceptives and stop, and then expect to conceive." If they encounter an infertility problem, they expect doctors to have the solution. New York's Decker has seen this happen time and again. "People think they can wait and have in vitro when all else fails," he says. "But in vitro is only about 20 percent effective. At age 24, a woman reaches the peak of fertility. The longer she waits after that, the more likely she is to develop a disease like endometriosis or suffer the effects of infections. The aging process takes its toll."

Many who wait are professionals on the fast track—so many, in fact, that infertility is dubbed "the curse of the career woman." Ten years ago, notes Williams College philosopher Rosemarie Tong, "the women's movement pushed career fulfillment, the idea you could be a real woman, full and complete, without having a child. Women talked a big game, but they didn't believe it. Now they're saying, 'Yes, I want a career, but it isn't the end-all and be-all.'" One new study shows that only 2 percent of women who wed want to be childless. "They are a rare population," says William Mosher, who conducted the survey for the National Center for Health Statistics.

THE FACTS ON FERTILITY

- Most couples want kids. Only 2 percent of married women actually prefer to be childless.
- 1 of every 6 couples of childbearing age has an infertility problem.
- The infertility rate among women age 20 to 24 has tripled to 11 percent since the 1960s. The rate among women age 35 to 39 has jumped to 25 percent.
- Among couples who get medical help, 2 out of 5 still cannot produce their own babies.
- For every healthy white infant who is up for adoption, there are 100 couples or singles seeking such a baby.

From chemicals to contraception

Despite its image as a yuppie woe, infertility occurs 1½ times more often among blacks than among whites and is most common among high-school dropouts. And it's on the rise not just among women in their late 30s, but also among those in their early 20s. At last count, in 1982, nearly 11 percent of married women age 20 to 24 were having trouble conceiving, compared with 3.6 percent in 1965. Researchers blame the surge on environmental factors like toxic chemicals and tobacco smoke. Increased sexual activity also plays a part: Sexually transmitted diseases can result in pelvic inflammatory disease (PID), which can damage the Fallopian tubes. And one recent study indicates that up to 88,000 women are infertile because of infections from intrauterine contraceptive devices.

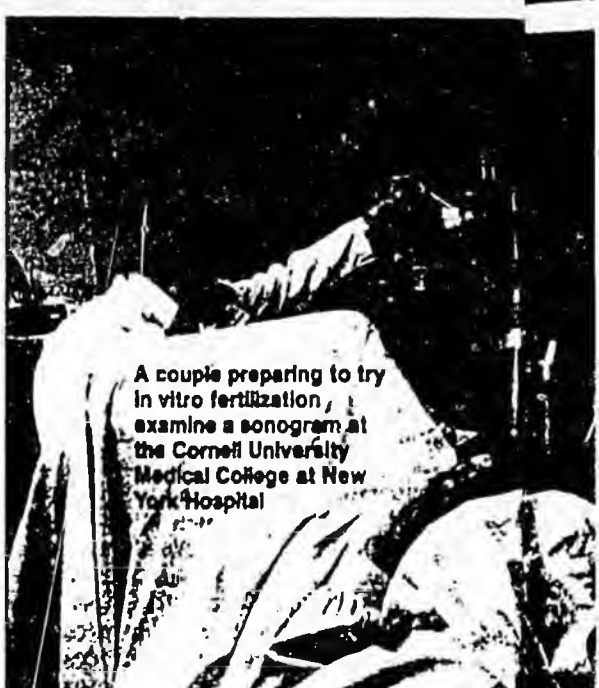
Many women in their 30s are only

now realizing that they're infertile—and probably have been for years—and thus have less time for doctors to work their wonders. Even those who are fertile run some risks. Hormone systems start to go askew, preventing ovulation. Women on the Pill for eight years or more may have trouble conceiving. Older women face a greater threat of developing diseases that wreck the reproductive organs. And there's a bigger risk of miscarriage or ectopic pregnancy, a potentially lethal condition in which the fertilized egg stays in the tube. Says Dr. Richard Blackwell, an infertility specialist at the University of Alabama at Birmingham: "Waiting to have children is clearly a gamble."

In some cases, doctors can tell quickly what ought to be done. A $50 test of the husband's semen may reveal a shortage of healthy sperm, a problem sometimes cured by antibiotics or just a cutback in alcohol consumption. Specialists occasionally encounter couples with a far simpler problem—they have sex barely two or three times a year and wonder why they're childless. Much more frequent, however, are visits from couples who've tried every pop cure they've ever heard of, from Robitussin cough syrup to baking-soda douches (both of which, some researchers say, may help certain people). What these couples and other victims of infertility too often face are tests, treatments and frustration that seem never to end.

An emotional ordeal

The ordeal endured by San Francisco pediatrician Eileen Aicardi went on for four years—a time, she says, of dehumanizing experiences like making love on cue and then "getting on a table and having sperm taken out and examined." Superstitions haunted her. She shunned routes where she had seen black cats. She came to hate holidays, a result of having miscarriages on Father's Day, Palm Sunday and New



A couple preparing to try in vitro fertilization examine a sonogram at the Cornell University Medical College at New York Hospital

CAUSES AND CURES

Why many couples can't conceive

TESTS AND TREATMENTS

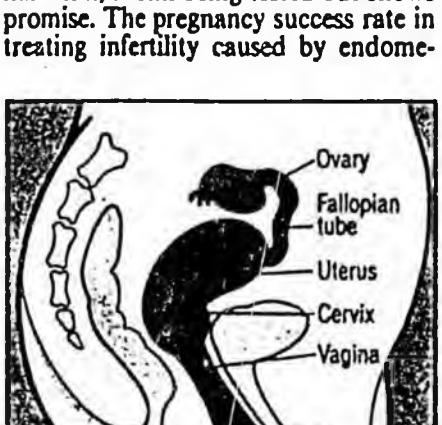
The most common definition of infertility is one year of frequent intercourse, with no contraception, that does not result in pregnancy. There are numerous possible causes for infertility in both men and women. Some correct themselves over time. Others require treatment, which can be long and costly. Among the causes and cures:

FEMALE INFERTILITY

• **Endometriosis:** In this disease, which is diagnosed in nearly one third of all women who have fertility problems, the tissue that lines the inside of the uterus begins to grow outside the womb. This tissue often prevents the sperm from meeting the woman's egg in the Fallopian tubes, thus preventing conception. Doctors do not know what causes endometriosis, but it is often called the working woman's disease because it tends to strike women in their late 20s or 30s who have not yet had children.

Symptoms of endometriosis include irregular periods, heavy bleeding and severe cramps, although about 1 in 3 victims suffers no telltale symptoms at all. The disease can be diagnosed by pelvic exam and laparoscopy. In the latter procedure, the patient is put under general anesthesia and a tube containing a tiny fiber-optics camera is inserted into the pelvic region through a nick near the navel.

Severe cases usually require surgery to remove the offending tissue—and the most serious require hysterectomy. Mild cases are usually treated with drug therapy. Two popular drugs are danazol, a male hormone, and progesterone. Both can cause unpleasant side effects and are expensive. A new drug, nafarelin, is still being tested but shows promise. The pregnancy success rate in treating infertility caused by endometriosis ranges from 73 percent in mild cases to 40 percent in severe ones.



• **Other tubal problems:** There are a host of other conditions that can cause Fallopian blockages. A common culprit is pelvic inflammatory disease, which leaves lots of scar tissue. Surgery in the pelvic region—for example, to remove an ovarian cyst or endometriosis tissue, can also cause serious scarring. Tubal problems are usually diagnosed through laparoscopy or a special X-ray procedure known as a hysterosalpingogram, in which a dye is injected into the uterus through the cervix.

Treatment involves surgery to clear the blocked tubes. If that fails, the next step is in vitro fertilization. The success rate in treating tubal disease caused by PID is only 20 to 30 percent. For other tubal problems, the success rate ranges from 30 to 60 percent.

• **Ovulatory anomalies:** Some women can't conceive because they don't ovulate—that is, release an egg—properly. Symptoms include irregular periods or no periods at all. Usually, the cause is a hormone imbalance, although a relatively rare type of pituitary tumor can also interfere. Ovulation problems sometimes can be pinpointed by charting the woman's body temperature every morning—it should rise significantly when ovulation occurs.

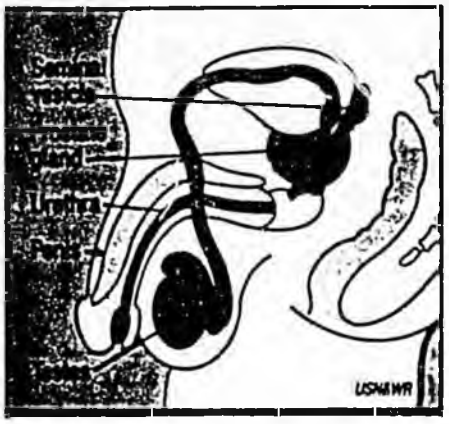
Ovulation can be induced by administering a fertility drug such as Clomid or Pergonal. Both—and particularly Pergonal—can cause multiple births. Women taking Pergonal should have sonograms daily at the time of ovula-

Year's Eve. She received little comfort from her doctor, who remarked: "All infertile women are depressed. See this box of Kleenex? I go through three boxes per day." When he prescribed a drug that can cause low blood pressure and dizziness, she looked for another specialist. This time, she got help. Her new doctor removed tissue that had been acting like an IUD on her uterus. Meanwhile, her office received a serendipitous phone call—from someone seeking an obstetrician for a pregnant teenager. Aicardi arranged to adopt the girl's baby. Within weeks Aicardi was pregnant, too. Now, at 38, she and her husband Dennis have five children, including twins who arrived in June.

Three out of 5 couples with serious infertility problems will eventually succeed in making a baby. That means, of course, that 2 of every 5 will fail. When should they quit trying? Wayne Decker keeps looking for a reason why a couple can't have a baby; until he finds it, he won't tell them to give up hope. One woman had 133 artificial inseminations and two operations before giving birth. "Should I have told her to stop trying?" Decker asks.

John and Joanne Smith in Maryland (Smith isn't their real name; the natural mother of their adopted baby knows only their first names) wish one of their three infertility specialists had told them to stop. Joanne, now 34, went through four operations in five years to remove ovarian cysts. "Each time, they'd take a piece of the ovary. So I was down to maybe a half of an ovary left. And I had endometriosis, which also causes infertility." Last year, one specialist suggested that Joanne undergo in vitro. But this doctor, John says, had never produced an in vitro birth, and their insurance wouldn't cover the $7,000 cost of an attempt. "That's when we finally said, 'Enough's enough. Let's try the adoption route.'"

Their specialists, Joanne is convinced,



tion to help reduce the risk of multiple births. A month's treatment with Pergonal typically costs at least $1,000.

The pregnancy rate for women being treated for ovulatory problems ranges from 30 to 60 percent, although their rate of miscarriage is somewhat higher than that of fertile women.

• **Cervical mucus:** In some women, cervical mucus may block sperm from reaching the egg. This problem can be diagnosed by examining the cervical mucus 2 to 4 hours after intercourse has taken place, and it is treated by administering the hormone estrogen. Vaginal infections can also cause the cervical mucus to hinder sperm; curing the infection may clear up the problem.

• **Sperm allergy:** Perhaps 10 percent of women can't conceive because their immune system kills their husbands' sperm. The problem can be diagnosed by postcoital pelvic exams, and is usually treated with drug therapy or intra-uterine insemination.

MALE INFERTILITY

• **Varicocele:** This problem is caused by a varicose or swollen vein in a testicle. The swelling can cause higher temperatures within the testicle, and the heat, in turn, can retard or even destroy sperm production. Varicocele is usually detected during a physical examination and can be treated surgically. The success rate ranges from 30 to 70 percent.

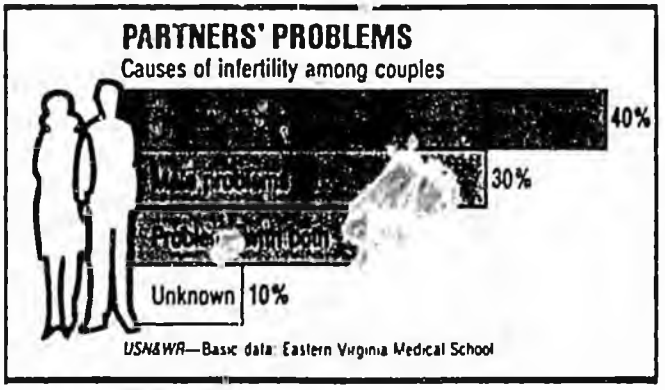
• **Low sperm count:** Some men fail to produce enough sperm because of hormone imbalances, a pituitary tumor or physical obstructions. Depending on the cause, treatments include hormone therapy—administration of testosterone, thyroid hormone or cortisone, for example—surgery, artificial insemination and in vitro fertilization. A viral or bacterial infection can also cause a temporary dip in sperm production. In such cases, diagnosing and treating the infection itself will usually restore the sperm count to normal levels.

• **Low motility:** Sometimes, male infertility is the result of sperm that don't swim very fast. Treatment of low motility includes hormone therapy and artificial insemination.

CAUSE UNKNOWN

Despite advances in fertility testing, for an unfortunate minority, doctors can find no known cause of the inability to conceive. This can be the most exasperating and frustrating determination of all. Before arriving at this point, couples are likely to undergo the full battery of infertility tests and treatments, including extensive treatment with potent fertility drugs and in vitro fertilization. A technique called gamete intra-fallopian transfer, or GIFT, is frequently recommended for infertile couples who have no known problem. This process involves collecting the woman's egg and the man's sperm and placing them together in the Fallopian tube. Then you wait for nature to do the rest.

The success rate for treating couples with unexplained infertility is 50 to 60 percent.



won't be hurting without their business. "They're already stretched out. They have speaking engagements. They book so many appointments they can never keep their schedule." After one operation, she says, she waited for two days for the doctor to come by and tell her how it went. He never showed up.

What bothered the Smiths is something that's causing more and more concern: A fear that the demand for treatment is so great that many couples will be exploited by the medical establishment. Critics make these points:

- Even though the first operation is the one with the best chance of fixing such problems as endometriosis and PID, doctors often urge patients to endure multiple surgeries. Repeated operations can cause more harm than good by creating scar tissue that thickens and blocks the tubes.
- Nearly 150 in vitro clinics are operating in the U.S. Half have yet to produce a pregnancy. Even fewer have produced babies. With profit-oriented hospitals moving into the field, there's concern that some in vitro clinics will push women into the procedure before other, less costly treatments are tried.
- Obstetricians and gynecologists are taking crash courses in laser surgery to treat women with blocked tubes, even though studies indicate that this technique, while more expensive, is no more effective than conventional operations in producing babies. Some doctors hang certificates on their walls after attending laser-surgery seminars that last a day—hardly enough, critics say, to make them experts.

Often the couples themselves can be blamed for their frustrations. Many keep shopping for new treatments, even after being told that little can be done. "There's no question that some couples are exploited," says Dr. Robert Rebar of Northwestern University School of Medicine. "But you have to ask, 'Are they intentionally exploited?' When the couple says they'll do anything to have a baby, it's very difficult for the doctor to say it's time to stop."

A boom in the business

Exploited or not, far more couples are seeking help than in the past. In the 1970s, doctors counted about 1 million visits per year from patients having trouble conceiving. Visits in this decade have exceeded 2 million per year. With huge numbers of baby-boomers approaching their mid-30s, the infertility industry is sure to surge even more in the next few years. The boom would be even bigger if more people could afford to get help. Most who go to fertility clinics are above average in income.

SNAPSHOTS OF SUCCESS

Howard and Georgeanna Jones grabbed headlines when they helped make the nation's first in vitro baby in 1981. Now, the husband-and-wife team collects photographs—of the more than 300 children conceived in vitro at their Jones Institute for Reproductive Medicine in Norfolk. The clinic's 30 percent conception rate is the highest in the United States

Treatment expenses vary sharply. A typical charge for one artificial insemination is $75. Usually, two or three are performed during each monthly cycle, and 4 of every 5 couples achieve a pregnancy within six months. Women who take Pergonal, a fertility drug, are on a $1,000-a-month regimen. In vitro costs even more—usually about $5,000 for the procedure and $1,000 for 10 days' food and lodging—and several tries are often required to achieve a pregnancy.

Insurance coverage is erratic. Some group-health plans cover drugs and treatments for the infertile. Many other policies don't. Although in vitro has produced nearly 5,000 babies around the world in the past 10 years, it's dismissed by many insurance firms as experimental. Representative Patricia Schroeder (D-Colo.) is urging Congress to add infertility coverage to health-insurance plans for federal employes. Under laws enacted in Texas and Hawaii this year, insurers must offer infertility coverage, including in vitro costs, in any group-health plan that provides maternity benefits.

Even when infertility's financial burden is eased, there's no letup in its emotional load. Insurance has picked up 80 percent of the nearly $25,000 in medical costs in Connie Ross's six-year struggle to have a baby, but the Orange County, Calif., housewife is still on "an emotional roller coaster, the worst thing I've ever gone through in my life." At 33, she's overwhelmed by guilt. "I think maybe if I hadn't tried so hard not to get pregnant when I was 21 that this wouldn't be happening. I resent seeing a pregnant woman. I go through immense depression and anger. I prefer anger to depression; at least, when you're angry, you can throw a Tupperware bowl."

Part of Connie Ross's ordeal is that no one can figure out why she can't get pregnant. Mary Martin Mason of Minneapolis, who wrote a book about herself and other infertile people called *The Miracle Seekers,* doesn't have that problem. After four years of tests, doctors found that her Fallopian tubes were permanently closed. Without that diagnosis, she and husband Dave might

still be trying to conceive and would never have started the three-year adoption wait that rewarded them with the toddler they know as Joshua.

Until the Masons' door of hope shut, they were tortured even when they ambled beside Minneapolis's city lakes. They'd see children in strollers and Mary would cry. They began shunning family get-togethers where little nieces and nephews were constant reminders of their elusive goal. When Doug learned that his closest friend—the best man in their wedding—was expecting a second child, he hid the news. Mary heard about it only when the couple called to say that they'd just had a new son. "I went to the hospital and looked down at the little guy," Doug recalls. "I thought, 'This isn't fair. They can have two children and we can't even have one.' " He wept all the way home.

Now, even with Joshua playing pat-a-cake on the living-room floor, the Masons are still troubled. "You know you are going to have to explain the adoptive process to him," says Mary, who herself was adopted. Nor does society relent in its pressures. "People say things like, 'Oh, you're not his real mother? Who is his real mother?' "

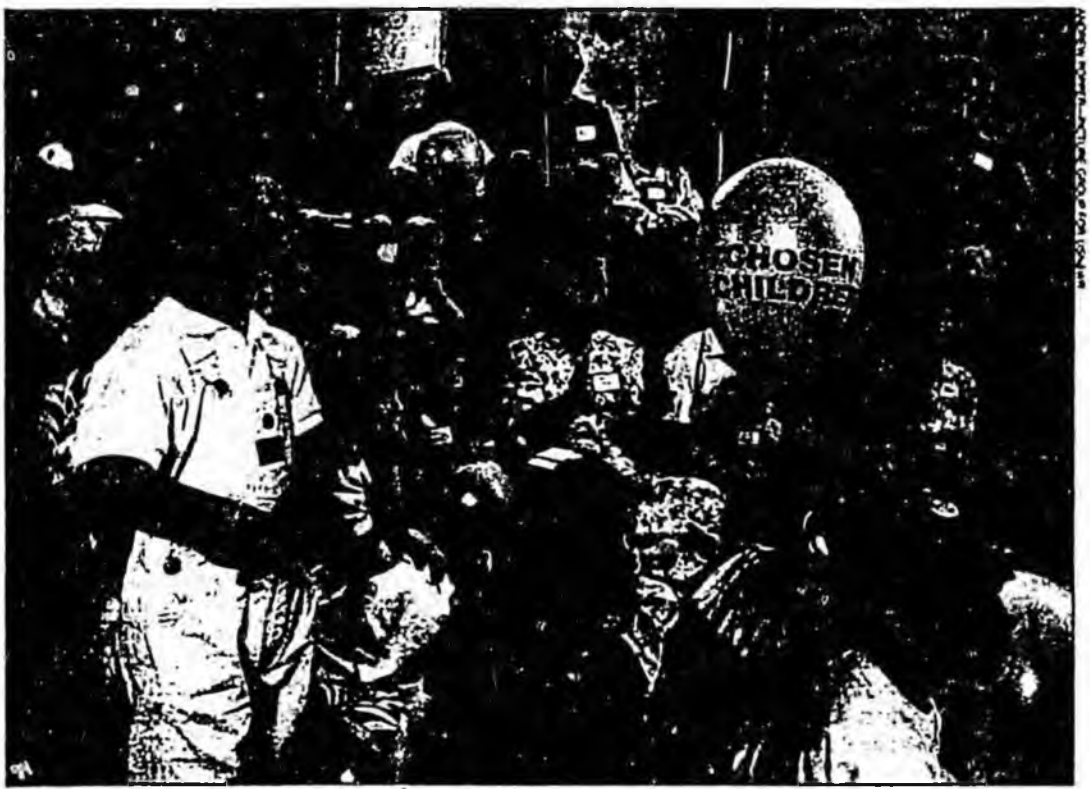
The Masons, plus thousands of other people like them, have coped by joining a support group for infertile couples called Resolve, a national organization with chapters across America. Many members are still trying to conceive. Others are looking for help in adopting a child.

Couples who opt for adoption often face new kinds of heartache. Many hang around the phone yearning to hear that somewhere there's a baby they can have. But, with an estimated 100 couples or singles in quest of every available healthy white infant, it's usually a long wait. Georgia's public-adoption agency is just now studying requests made in 1979. Wisconsin's waiting list for adoptive children became so unrealistic that the state agency scrapped it for a lottery.

The baby shortage—a result of the Pill and the rise in abortions—is prompting more and more couples to look beyond traditional sources. There are plenty of "special-needs children," babies with handicaps or older children from poor families. Foreign children also are relatively easy to adopt; nearly 15 percent of current adoptions involve babies from other countries.

Many couples are turning to small, privately run agencies, like Louisville's Chosen Children Adoption Services, Inc. It has a small maternity home with space for seven unmarried pregnant women (average age: 17½) and matches their newborns with couples, who pay fees based on their income plus legal costs, maternity-home care and hospital bills. Average total: $9,000 to $10,000. The normal wait for an adoptive baby is three years. "By the time they get that kid," says owner Raymond Kalef, "they're ready to lick it up one side and down the other."

The biggest shift is toward individual adoptions, arranged not by agencies but by couples and birth mothers, usually with a lawyer's help. Some experts believe, in fact, that private deals now account for more than half of the adoptions of healthy infants. Agency workers bemoan the lack of screening rules, but desperate couples regard these private arrangements as their one hope for getting a healthy American-born infant in less than a year.



The Chosen Children Adoption Agency holds a reunion of adoptive families in Queens, N.Y.

Falling through, trying again

It's not always a sure way, as the Smiths in Maryland can attest. After writing dozens of letters to agencies—and getting dozens of discouraging responses—Joanne happened to hear about a pregnant woman who was spending the winter in a shelter with two children and who wanted to put her baby up for adoption. They met, and the woman agreed to give them her infant. "We went to the hospital, and she has the baby, a little boy," Joanne recalls. "She says, 'I just want to take him home with me for a day or two and then I'll let you have my baby.' We're all in tears. We knew then that we had a fall-through, that there would be no adoption." And there wasn't.

But they kept trying. They ran ads in five Maryland newspapers: "Loving couple wishes to adopt infant. Will help on medical expenses and legal fees. Call collect." They told friends and relatives of their decision. Soon came a call from a friend, an infertile woman who, after placing dozens of ads herself, had lined up two birth mothers. Joanne gladly contacted one, a teenager in a distant state. This summer, after months of fears of another fall-through, the baby arrived—and came to a new home in Maryland. "He's an angel," Joanne beams. "What else could he be? We're on top of the world. Our dreams have come true." ■

by Lewis J. Lord with Patricia M. Scherschel, Jeannye Thornton, Lisa J. Moore, Barbara E. Quick and domestic-bureau reports

MARK J. ZIMMERMAN, M.D., F.A.C.O.G.
DIPLOMATE OF THE AMERICAN BOARD
OF OBSTETRICS AND GYNECOLOGY
JOY E. ROSSTON-ZIMMERMAN, R.N.C., A.N.P.
ADVANCED NURSE PRACTITIONER

February 29, 1988

Representative Curt Menard
P.O. Box V
Juneau, Alaska 99811

Dear Representative Menard:

I am writing in support of House Bill Number 440.

I strongly feel that women or men who have problems with fertility have been discriminated against by the insurance companies. It is understandable if these companies do not wish to pay the fees involved with the reversal of voluntary sterilization procedures.

However, I cannot understand why they will not provide benefits for people who are deserving of evaluation and care due to problems that are either natural (congenital) in nature, or due to complications of infections and other problems.

Any medical insurance policy that provides coverage for obstetrical care and/or termination of pregnancy should not discriminate against the infertile patients.

Sincerely,

Joy Zimmerman, A.N.P.

JZ:ces

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RECEIVED

HC 34 Box 2026
Wasilla, AK 99687-9601
February 29, 1988

Honorable Dr. Maynard
P.O. Box V
Juneau
Alaska 99811

Dear Dr. Maynard,

I think its a crime for insurance companies to cover bills for the murder of American babies ("abortion") while excluding medical coverage for the infertile man and woman. America needs to help those who want to add to our country rather than take away.

It took me five years before I was able to get pregnant. It was slow paying as I went for one test then another. And, sadly my little Grace will not get to be a sister because now I'm too old to have more genuine babies.

So count me as a supporter of legislation to require insurance companies to treat fairly the infertile. I'm sure our faithful Lord will bless your every effort.

Sincerely,
Brenda Valley

Anchorage Obstetrics & Gynecology

Richard T. Nist, M.D.
Diplomate of the American Board,
Fellow, American College
of Obstetrics and Gynecology

Robert G. Thompson, M.D.
Diplomate of the American Board
of Obstetrics & Gynecology

March 16, 1988

The Honorable Niilo Koponen
P.O. Box V
Juneau AK 99811

RE: House Bill No. 440

Dear Representative Koponen:

I am sending this letter as a physician's statement in support of House Bill No. 440 entitled "An Act Relating to Insurance Company Coverage for the Treatment of Infertility", which is currently before the Alaska State Legislature.

WHEREAS one out of every six couples of childbearing age in the State of Alaska, consistent with elsewhere in the United States, is currently unable to conceive for one year of regular sexual relations, defined as infertility or having an infertility problem, and

WHEREAS 15% of couples of usual childbearing age from 22-40 are currently unable to conceive after one year of effort, and

WHEREAS over 90% of single mothers today are retaining their babies instead of considering adoption, making less babies available for adoption as an option for the fertility or completion of families in these particular couples, and

WHEREAS most of these couples are currently employed and paying for insurance with pregnancy-related coverage which they may never be able to utilize, and

WHEREAS the diagnosis and treatment of infertility is no longer considered experimental in any way, shape, or form in modern medical practice with overall success rates of 70-80% in treatment of some medical problems related to fertility including a 50% success rate after three attempts of in-vitro fertilization, indicating a significant resolution of a large number of fertility cases, and

WHEREAS involuntary childlessness creates a tremendous social impact on society, pervading every waking moment, making the couples' decisions for the future nearly impossible, and creating stressful events that significantly threaten their well-being and psychosocial health, and

WHEREAS most problems related to infertility or inability to conceive are related to specific medical treatments that may otherwise be covered in most circumstances or specific medical instances, e.g. endometriosis; however, in the case of the patient trying to conceive where her chart reveals that the treatment of this condition is related to fertility, insurance companies may

have the right or the option to deny payment or reimbursement for such treatment, and

WHEREAS the insurance companies' current ability to discriminate against the patients with a diagnosis of infertility in selective payment of their medical costs represents an outright injustice in their fair treatment of medical problems which may normally be covered and may have come to light only with the onset of evaluation for fertility reasons in many cases, in addition to the fact mentioned above that these patients are paying for coverage which they are not able to utilize, i.e. pregnancy-related coverage.

BE IT RESOLVED THEREFORE, that it is my opinion that the legislators of the State of Alaska should strongly consider support of House Bill No. 440, which is receiving the same overwhelming support in other states as it originally received in the State of Massachusetts where a similar bill was passed in 1987. This bill states that infertility is defined, and correctly so, that basically the individual who is unable to conceive and has been attempting to do so for at least one year and is now under medical treatment, which may in some cases be required to achieve a successful conception, must be covered by her insurance company to the same extent that she would be covered for the cost of medical care that she would be receiving if she were pregnant and under a physician's care.

LET IT BE FURTHER RESOLVED that these patients, as stated above, are currently paying for pregnancy-related coverage which they may not be able to utilize in many cases. Medical insurance companies' ability to discriminate against these people in regards to receiving medical care for the diagnosis and treatment of their fertility-related condition is an outright injustice and implies discrimination, specifically against these couples.

LET IT BE FURTHER RESOLVED that it is quite clear that any choice but to support this legislation would be considered supporting the discrimination of selective reimbursement by insurance companies against one-sixth of couples in the State of Alaska whose mere problem is that they want to have a baby.

FINALLY, LET IT BE RESOLVED that the diagnosis and treatment of infertility or fertility problems does not imply specifically that there is a serious or life threatening problem for this particular couple but merely a problem with which medical therapy or specific treatment, and in some cases surgery, may help them to successfully enjoy the blessings of completing their Alaskan family. I encourage you to consider this bill carefully and hope that you will arrive at the same conclusion that I have outlined above, that this bill needs to be supported and passed.

Sincerely,

Robert G. Thompson, M.D.

DIST: Editor, Anchorage Times
Editor, Daily News

RGT:smc

The American College of Obstetricians and Gynecologists

LEGIS-LETTER

EDITOR: KATHRYN GLOVIER MOORE

Vol. 7, No. 1
WINTER 1988

Editor's Note: *This issue of LEGIS-LETTER provides an overview of legislative activity which is of interest to obstetrician-gynecologists occurring during the 1987 state legislative sessions. The focus is on maternal health laws and trends. Please note that tort reform, AIDS, and surrogate motherhood were the subjects of special issues of LEGIS-LETTER last year and will not be revisited here. (see, in particular, Vol. 6, Nos. 1, 2, and 4)*

Turning our attention to the 1988 sessions, what can we expect? 1988 is an election year in many states. This means that sessions will be shorter as a rule and, in a few states, only budget bills may be introduced. It also means that rhetoric and political maneuvering will be more in evidence as legislators position themselves for the November elections. Forced roll call votes on politically sensitive bills or amendments can be expected in many states. In others, controversial issues will be avoided altogether this year as legislators attempt to gain the political edge in the election.

Seasoned observers speculate that AIDS will again be the number one legislative issue for the states in 1988, with indigent and long-term health care the second and third most important. Health care for poor pregnant women and children is expected to be the major focus of indigent care initiatives, as more and more state legislators recognize the cost savings potential of early and uninterrupted health care services for this population and as lack of access to obstetric care rises and reaches crisis proportions in many areas of the country.

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MATERNAL AND NEWBORN SERVICES

Testing and Screening - Several states enacted legislation in 1987 requiring specific testing and screening of maternity and newborn patients. **Colorado** became the first state to mandate newborn testing for cystic fibrosis. Data suggests that cystic fibrosis is more common than other conditions typically covered under newborn screening programs. **Hawaii** now requires hepatitis B screening of pregnant women. **Indiana** established a centralized system for newborn testing, with designated state laboratories, a quality assurance mechanism, centralized coordination, tracking and follow-up, and a $12 surcharge for tests. **Indiana** legislators also approved legislation addressing the problems of children born with a drug dependency and additionally, repealed a law denying marriage licenses to persons with venereal disease, instead voting to impose a third trimester pregnancy testing requirement for syphilis. **Michigan** also expanded newborn screening requirements last year. **New Jersey** legislators approved legislation

requiring testing during pregnancy for rhesus hemolytic disease. Oklahoma now requires reporting of newborns with a drug dependency. Legislators in that state also established a statewide birth defects surveillance program. Rhode Island amended its Crippled Children's Services Act to require statewide testing of newborns for metabolic disorders and sickle cell disease. Funding for the statewide testing program will come from an assessment on hospitals and other health care facilities in the state. The universal testing mandate was presented as a cost effective approach to preventing mental retardation.

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Fetal Alcohol Syndrome - Fetal alcohol syndrome legislation has been introduced in the states with increasing frequency since the harmful effects of alcohol ingestion during pregnancy were first documented in the early 1970's. The legislation has taken a variety of forms, but primarily addresses the need for public education, either through media campaigns, warning labels on alcoholic beverage containers or retail warning signs. Alaska, California, Delaware and Illinois were a few of the states that considered legislation on this subject last year. Initiatives considered in these states are representative of state legislative activity overall. In Alaska, legislators approved a Senate Resolution establishing a Fetal Alcohol Awareness Week. California voters approved a clean drinking water proposition that also included a requirement for fetal alcohol syndrome retail warning signs. Legislation requiring retail liquor establishments to post warning signs failed to be enacted in Delaware. Illinois' Governor vetoed legislation requiring information on Fetal Alcohol Syndrome to be distributed to marriage license applicants in that state.

* * * * * *

Prenatal Care - The Maryland legislature failed last year to impose strict requirements on physicians and health care facilities providing prenatal care services. Under the proposed bill, providers would have been required to notify pregnant women of each scheduled visit for prenatal care not more than one week in advance, and to state the time and place of the visit. The bill would have subjected providers to misdemeanor penalties. Pregnant women failing to appear for their appointments or failing to cancel and reschedule appointments would have been subjected to a $500 fine, 30 days imprisonment, or both. Additionally, the bill would have authorized the courts to create "any remedy to assure that a woman gets prenatal care."

* * * * * *

Fetal Abuse - The controversial and widely publicized Pamela Rae Stewart case may have been the impetus for legislation introduced in two states last year making crimes against the fetus a misdemeanor. This case involved an indigent California woman who delivered a brain damaged baby which subsequently died. Amphetamines were detected in the baby's blood. The mother was charged with child endangerment under California's penal code for her alleged failure to follow medical advice. At issue was the mother's alleged record of drug abuse and sexual activity during her pregnancy. (California Penal Code Section 270 was enacted in 1926 to force fathers to pay for prenatal and pediatric care for illegitimate children. In 1974 the code was amended to establish misdemeanor penalties for women who fail to provide necessary medical care to a child or a fetus.)

In California, legislation introduced on this subject in 1987 was carried over to the 1988 session where it is pending. The bill would create a new mandatory reporting category for fetal abuse under the state's child abuse reporting statute.

Two bills were introduced in Oregon last year, but both failed to get a hearing. One of the bills would have created a misdemeanor for "knowingly or recklessly" causing physical injury to the fetus, including the mother's ingestion of controlled substances. Abortion was specifically excluded from the bill's definition of injury to the fetus. The other bill was similar to California's and would have codified fetal abuse under the state's child abuse statute.

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Informed Consent - A hysterectomy informed consent bill imposing strict requirements on gynecologists before a hysterectomy may be performed was enacted in California last year. Attempts to derail the bill were largely unsuccessful; however, the final bill was modified to delete a 30-day mandatory waiting period in response to the concerns of the state's obstetrician-gynecologists. The bill sponsor's intent reportedly was the promotion of alternatives to hysterectomy, specifically, "pelvic reconstruction surgery." Under the new law, physicians must obtain the verbal and written consent of the patient prior to performing a hysterectomy. This involves a discussion of the medical justification for the procedure, alternatives, and risks and benefits. The patient also must be informed that the procedure is considered irreversible and that infertility will result. The law provides an exception for a "life-threatening emergency situation" as determined by the physician. Failure to comply with these informed consent requirements constitutes unprofessional conduct.

* * * * * *

FINANCING MATERNITY CARE

In the state capitols, the Congress, and corporate boardrooms, financing maternity care has become central to policy debates on the problems of indigent or so-called uncompensated health care. This is not surprising as pregnancy-related care represents the largest, single source of uncompensated care in this country. Data show that women of childbearing age (15-44) are disproportionately represented in the ranks of the poor, the uninsured, and the unemployed.[1] More than one-fourth of all births occur among poor women. Nearly 15 million women of childbearing age lack coverage under private or public insurance programs for maternity care; births to these 15 million women account for 15 percent of all births.

But data also show that comprehensive services provided during pregnancy are cost-effective.[2] Indeed, early, regular and uninterrupted prenatal care can save the public money in the long run. Savings can be achieved through improved birth outcomes, specifically, the prevention of low birthweight and and related conditions that can require costly medical care.[3]

The need for new initiatives to improve access to and the availability of maternity care for all pregnant women is particularly compelling today, in view of a recent study by the Children's Defense Fund (CDF) which shows that after 25 years of progress, efforts to reduce infant mortality in this country came to a standstill in 1984. The CDF study shows neonatal mortality rates increasing for blacks and nonwhites; an increase in the number of low birthweight babies

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[1] All data is from the recently published Alan Guttmacher Institute report. Blessed Events and the Bottom Line: Financing Maternity Care in The United States, 1987.

[2] Institute of Medicine, Preventing Low Birthweight, 1985.

[3] The Institute of Medicine (IOM), in its 1985 landmark report, Preventing Low Birthweight, examined the implications of low birthweight for the health of the Nation. IOM emphasized the relatedness of prenatal care to infant mortality and low birthweight. Low birthweight is strongly correlated with several of the leading causes of infant mortality, including prematurity and malnutrition. Higher infant mortality rates generally are found in low-income populations and particularly among those women receiving little or no prenatal care. The IOM concluded that for every dollar spent for prenatal care among a targeted high-risk population, $3.38 could be saved in the total cost of caring for low birthweight babies requiring expensive medical care.

and babies born to women who received little or no prenatal care; and an increase in maternal deaths among minority women. This latter figure has been attributed to lack of access to basic health care services for this population.

State policymakers and legislators have been exploring a variety of initiatives to improve access to and financing of maternity care for poor women, ranging from an expansion of publicly funded programs for maternity care, to employer insurance coverage mandates, third party mandated benefits, universal health insurance, and state-funded and managed universal systems of health care. Initiatives of note that were legislated in 1987 are recounted below. In all of these, we are seeing a growing recognition of the wisdom of providing comprehensive services during pregnancy and a corresponding willingness to finance improvements in maternity care services for poor women.

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Expansion of Public Insurance Programs (Medicaid) - Expansion of public insurance programs for maternity care, and specifically the Medicaid program, has become an increasingly attractive initiative for the states, in part because Congress has provided financial incentives to the states to promote this expansion. Beginning in 1984, Congress has sought to ameliorate the infant mortality problem by encouraging states to expand their Medicaid programs to more low-income pregnant women.

Medicaid is an entitlement program which is financed jointly by the federal government and the states and administered individually by each state. The federal government reimburses the states through matching payments which cover at least 50 percent (and as much as 80 percent) of program costs. The matching rate is calculated individually by state, based on per capita income and population in poverty. The states administer the Medicaid program within minimum standards established by federal law and are free to set income ceilings for eligibility. Eligibility varies across the states, with 21 states setting eligibility levels at or below 50 percent of the poverty level (annual income of $4,650 for a family of three). For example, Alabama sets Medicaid eligibility below 16 percent of the federal poverty level ($1,416 for a family of three). In consequence, many poor pregnant women are denied needed services. Incidentally, despite the fact that many poor women do not qualify for the Medicaid program because of eligibility restrictions, Medicaid remains the major insurer of health care services for poor women and therefore it plays a critical role in providing access to maternity care.

Twenty-six states approved legislation last year (commonly referred to as the SOBRA Medicaid options) to cover additional poor pregnant women under their Medicaid programs; a lesser number also voted to improve the timing and scope of maternity services. (In many states, initial prenatal care services may be delayed or denied altogether due to the time-consuming application process. Additionally, some states limit the number of visits per beneficiary to fewer than the number usually recommended for optimal prenatal care.) These 26 states are: **Arizona, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Kentucky, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Washington, and West Virginia.**

It should also be noted that three of these 26 states — **Michigan, Minnesota, and Rhode Island** — plus **New York** approved state funding for new or existing prenatal or maternity care programs for so-called near poor women (those with incomes above the federal poverty level but below a state set level and without health insurance coverage for maternity care). In **Michigan**, the Prenatal/Postpartum Care Program (PPC), which has provided comprehensive prenatal care to poor women who do not qualify for Medicaid but have incomes less than 185 percent of poverty, received additional funding in 1987 to reimburse physician fees for labor and delivery services for the first time. In **Minnesota** and **Rhode Island**, new programs were funded, called Right Start and Rite Start respectively. **Rhode Island's** is the more comprehensive

of the two, as it will provide delivery services as well as prenatal and postpartum care for pregnant women with incomes up to 185 percent of poverty. **New York's** Prenatal Care and Nutrition Program (PCNP), which provides prenatal care to poor women ineligible for Medicaid, was made a permanent program and received additional funding in 1987, a portion of which will support an increase in provider fees.

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Universal Health Insurance - Other state legislative initiatives designed to improve access to and availability of maternity care services for poor women target employers by attempting to improve coverage for maternity care under employer-based insurance plans. Although a 1978 federal law, the Pregnancy Discrimination Act, was designed to do just that, its impact has been somewhat limited. The Act does not cover policies that are not employer-based, nor does it apply to small employers (those with 15 or fewer employees). Moreover, the Act does not extend to non-spouse dependents, specifically teenage daughters. Added to these inherent shortcomings, is the bias of private insurance policies generally which, since their inception, have emphasized treatment for episodic illnesses or injuries rather than preventive, predictable or long-term health care needs. The Alan Guttmacher Institute (AGI) reports that ten years after enactment of the Pregnancy Discrimination Act, many women age 15-44 have private health insurance coverage that does not cover maternity care. AGI also reports that some existing insurance plans that do cover maternity care, nevertheless do not pay the full cost of services nor do they pay for newborn hospitalization.

Massachusetts' Governor proposed a universal health insurance initiative last fall which would ensure health care for all **Massachusetts** residents by requiring employers in the state to provide health benefits for their workers. At the same time, the unemployed would continue to be covered under an existing free-care program funded by a surcharge on hospital bills. The state's senior senator in the Congress, Senator Kennedy, has introduced a similar measure. Both proposals are expected to trigger lively debate in the coming months.

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Mandated Benefits Laws (Maternity and Newborn Services, IVF, Mammography and Cytologic Screening) - Mandated benefits laws are another strategy states are exploring to address the health care needs of poor pregnant women. **Rhode Island** lawmakers last year enacted broad legislation providing insurance coverage for maternity care and pediatric preventive care. Under the new law, which was introduced at the request of the Lieutenant Governor, all health insurance plans and HMOs must provide pediatric preventive care and maternity care without deductible or co-pay requirements. Maternity care is defined under the law to encompass all services recommended by a physician. **Rhode Island** is the only state of which we are aware that enacted a mandated benefit law in 1987 specifically related to maternity care.

Other mandated benefits laws of interest to obstetrician-gynecologists were enacted last year in **Arkansas, California, Florida, Hawaii, Illinois, Massachusetts** and **Texas.** The legislatures in **Arkansas, Hawaii,** and **Texas** voted to require insurance coverage for in vitro fertilization procedures. The **Arkansas** law applies to disability insurers in that state. **Hawaii's** law applies to all individual and group health insurance policies providing pregnancy-related benefits and is limited to a one-time only benefit for out-patient expenses. In **Texas,** all insurance companies and HMOs providing pregnancy benefits must also provide benefits for outpatient in vitro fertilization procedures. It should be noted here that **Maryland** was the first state to mandate insurance coverage for in vitro fertilization. The mandate was approved in 1985.

Legislation approved in **Massachusetts** last year requires all insurers providing pregnancy-related benefits to also provide benefits for medically necessary expenses of diagnosis and treatment of infertility. Infertility is defined under the law as the "condition of the presumably healthy individual who is unable to conceive or produce conception during a period of one year."

Emergency regulations were promulgated by the state's Division of Insurance soon after the law's enactment which identified the required infertility benefits and established permissible limitations on coverage.

Under legislation enacted in **California**, insurers that provide benefits for mastectomy, prosthetic and reconstructive surgery must also cover mammography screening. A new **Florida** law requires insurers in that state to cover breast reconstruction. And in **Massachusetts**, all insurance policies and all employer health and welfare funds which provide hospital and surgical benefits must now provide benefits for both mammographic exams and cytologic screening of the uterine cervix.

In **Illinois**, legislation was enacted which prohibits insurance policies from excluding coverage of hospital and medical services for newborns.

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Universal Managed Health Care Systems - Perhaps the least tested among the many and varied state initiatives to improve access to and availability of health care services for the poor, is that of state funded and managed universal health care systems. This initiative is presently being tested on a limited, pilot basis in the state of **Washington**. Washington's Health Care Access Act was signed by the Governor in June 1987. Developed from the recommendations of a state commission, the Act is designed to meet the health care needs of 160,000 of the estimated 400,000 **Washington** state citizens who are without health insurance through a managed care system. In 1986, **Washington** legislators and policymakers debated the merits of basic health care for all citizens. Once consensus was reached on the desirability of such a concept and on a definition of basic health care — no easy task — the debate centered on potential funding mechanisms during the following year. The original plan called for both a payroll tax and a tax on all professional services, including physician services. The tax funding mechanism was deleted, however, in the final version of the bill. Instead, funding is to come solely from general revenues. $19.1 million was earmarked through general appropriations for start-up of five pilot, managed care projects serving no more than 30,000 uninsured citizens. An emergency clause made the law effective upon enactment; however, the actual start-up of services will occur July 1, 1988. Emphasis is on primary and preventive health care services, with special attention given to the needs of pregnant women and children. Eligible citizens must have incomes at or below 200 percent of poverty and must be under the age of 65. Coinsurance rates will be levied based on individual income. Recent reports from **Washington** indicate that start-up of the pilot projects may be jeopardized due to an increasing fiscal crisis.

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ADOLESCENT PREGNANCY

Laws enacted by the states last year on adolescent pregnancy were many and various. The issue is of increasing interest to state legislators and policymakers as the social and economic consequences of unintended pregnancy have become more visible and widespread. Estimates show that adolescent pregnancy represents a $16 billion drain on the nation's social welfare resources, not to mention the loss of human potential and productivity. Adolescent pregnancy and the related issue of sex education also received renewed attention last year as a result of the AIDS crisis. Newly enacted laws of interest to obstetrician-gynecologists are recounted below.

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Financing Prevention Programs and Services - **Connecticut, Maine, Maryland, Massachusetts, Ohio, Tennessee,** and **Wisconsin** allocated general revenues last year for start-up or expansion

of prevention programs. In **Connecticut**, the governor's budget request of $1.06 million to fund competitive grants to local governments to prevent teen pregnancy was approved by the legislature. This is the first time such funding has been earmarked in **Connecticut**. A pilot program for New Britain, **Connecticut** was also approved last year and will provide training in parenting skills for teen mothers and fathers. The **Maine** legislature appropriated $700,000 over two years to fund nonschool prevention, parenting, and teacher sex education training programs. In **Maryland**, a Baltimore-based pilot Peer Companionship Project, that pairs older teens with younger ones to tell them about motherhood and pregnancy, was financed through the state's Health Services Cost Review Commission. The pilot project is based on two, six-month studies conducted in 1983 and 1985. In **Massachusetts**, the governor's Challenge Fund, a teen pregnancy prevention initiative, received a $1.2 million budget allocation last year. **Ohio**'s State Health Department received a $400,000 budget allocation for prevention and services programs. An original proviso in the allocation that would have required 75 percent of all funds to be directed to programs encouraging abstinence, was line item vetoed by the governor. The **Tennessee** legislature, continuing a voting pattern of recent years, voted for new and expanded programs in 1987. Taken together, these programs are comprehensive, addressing not only prevention but prenatal care, parenting skills, and family life curricula. **Wisconsin** continued funding of the Adolescent Pregnancy Prevention and Services Board, established in 1985 to stimulate and support local pregnancy prevention efforts through competitive grants. The first summary report of the Board's activities was released in November 1987 and documents a mixed success rate of initial grants funded in 1986.

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School-Based Health Clinics and Sex Education - Unarguably, one of the most controversial aspects of teen pregnancy is sex education. Controversy about the content of sex education and even its legitimacy has been rampant since the subject was first taught in the schools. The Alan Guttmacher Institute reports that prior to 1987, three states required sex education in the schools (**Maryland, New Jersey,** and the **District of Columbia**). Three more states mandated sex education last year; these were **Kansas, Nevada,** and **Rhode Island**. A fourth state, **Virginia**, approved a sex education mandate in principle last year and the mandate's supporters, which include the governor, are seeking funding to implement the mandate this year. All four states allow parents to withdraw their children from sex education classes and two of the states, **Rhode Island** and **Virginia**, require instruction on abstinence to be included in the curricula.

Separate legislative initiatives addressing the health needs of adolescent students were approved in **California, Connecticut, Massachusetts, Michigan, Mississippi, Rhode Island** and **Wisconsin. California, Connecticut, Michigan** and **Wisconsin** appropriated money for school-based health clinics. However, the **Michigan** appropriation includes a restrictive clause prohibiting abortion counseling, referrals, and services and further, prohibits the distribution of contraceptives on school grounds; **Wisconsin**'s appropriation was vetoed by the governor. **Mississippi** established a public health school nurse intervention program which includes reproductive health education and referrals for pregnancy prevention. **Rhode Island** established a pilot program for school-based health services as well as support services for adolescents. Like **Michigan, Illinois**' governor and the **South Carolina** legislature took action to prohibit the distribution of contraceptives on school grounds.

In what is certainly a new trend, several states have begun to reexamine the merits of sex education in the context of a growing recognition of the need for public education on sexually transmitted diseases and AIDS in particular. We are aware that at least seven states tackled this aspect of the issue last year; these were **Illinois, Indiana, Maryland, Nevada, North Carolina, Oklahoma,** and **Rhode Island**. While the new laws vary in intent, they generally require health education classes to include instruction on AIDS transmission and prevention and the majority proclaim abstinence as the best method of prevention.

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FAMILY PLANNING

The Alan Guttmacher Institute reports that nearly three-quarters of the states currently provide state funding for family planning services. Notable funding allocations were approved in several states in 1987, among them, **California, Connecticut, Illinois, New Hampshire, New Jersey** and **New York. California** has the largest budget for family planning, with $34.2 million allocated last year. **Connecticut** appropriated $455,000, and an additional $106,000 for free and confidential pregnancy testing for poor women. **New Hampshire** legislators voted for the first time to fund family planning services with a $325,000 appropriation. In **New Jersey**, the Campaign to Prevent Unintended Pregnancy was instrumental in securing a sizeable increase over last year's budget. $1.2 million was allocated for family planning services in that state. Lastly, the **New York** legislature increased family planning monies by $1 million, bringing the total allocation to $11 million. The increase was largely the result of the efforts of the Campaign To Make **New York** First in Family Planning, which has been operating in the state since 1985.

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ABORTION

Legislation is rarely a fait accompli when the subject is abortion. Relatively few bills are enacted as compared to the vast number that are introduced each year in the state legislatures. Moreover, enactment is no guarantee of implementation or enforcement. In fact, these laws, in most instances, are subject to gubernatorial vetoes, court restraining orders, or temporary or permanent injunctions.

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Parental Consent - Of the four states (**Alabama, Arizona, California,** and **Georgia**) approving mandatory parental consent or notification laws for abortion last year, only **Alabama**'s consent law is in effect at this writing. **Arizona**'s parental consent law and **Georgia**'s parental notification law have both been enjoined from enforcement. These laws were found by the courts to be unduly burdensome, and to violate the minor's right to a "timely" abortion and right to privacy respectively. **California**'s parental consent law has been temporarily enjoined. ACOG District IX is one of several plaintiffs in a court action seeking to block implementation of the 1987 law. The new law, reportedly, was a major setback for proponents of choice in the state which, for many years, have been successful in defeating or thwarting abortion restrictive measures.

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Public Funding - The **California** and **Michigan** legislatures voted last year to discontinue public funding of abortion services for poor women. In **California**, laws of this type are not new and few have survived the scrutiny of the courts. However, the new conservative makeup of the state's highest court makes such an outcome uncertain with this newest law. In **Michigan**, too, the political landscape has been altered. With uncanny regularity, a public funding prohibition has been approved by the legislature and vetoed by the governor each year for most of this decade. Last year, however, the legislature succeeded in circumventing a sure gubernatorial veto with approval of a citizen-sponsored initiative not subject to the governor's action. This initiative does not take effect until April of this year and may be suspended pending qualification of a pro-choice ballot initiative for the 1988 general election in November.

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Other - **Pennsylvania** was the only state of which we are aware approving an omnibus antiabortion measure last year. The measure was vetoed by the governor, however. Among

its many provisions was a requirement for the woman to notify her sexual partner prior to obtaining an abortion.

Texas lawmakers approved the first abortion regulation law in that state since the 1973 landmark U.S. Supreme Court decision legalizing abortion. The 1987 law imposes strict requirements for third trimester abortions, prohibiting them except in cases of life endangerment or fetal abnormality.

Lastly, an unusual abortion measure was debated in the Illinois legislature last year which would have amended the state's Right of Conscience Act to allow pregnant women to refuse diagnostic testing to detect fetal abnormalities where such testing may result in an abortion. The proposed amendment to the Right of Conscience Act would have permitted physicians to refuse to perform diagnostic tests to detect fetal abnormalities. The measure was passed by the legislature, but vetoed by the governor. The legislature subsequently attempted, unsuccessfully, to override the governor's veto. A "total veto" was sustained.

Attachment F

"Infertility Services in the United States:
Need, Accessibility and Utilization"

Infertility Services in the United States: Need, Accessibility and Utilization

The Alan Guttmacher Institute
New York

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Executive Summary

Purpose and Data Sources

The purpose of this study was to describe the number and characteristics of American women and couples who need infertility services and the availability of medical infertility services from private physicians, family planning clinics and specialized infertility centers. Special attention was given to the needs and service access problems of low-income women. Need for infertility services was estimated from the National Survey of Family Growth, (NSFG), Cycle III, conducted by the National Center for Health Statistics, DHHS, in which almost 8,000 women aged 15-44 were interviewed in 1982 about their reproductive histories. The availability of infertility services provided by private physicians was assessed from data collected from some 2,200 office-based physicians of four specialties (general/family practice, obstetrics/gynecology, general surgery and urology) surveyed by The Alan Guttmacher Institute in 1983. Other data on infertility services were obtained from a national stratified sample survey of 508 hospitals, health departments, Planned Parenthood affiliates, and other agencies which have family planning clinics, and from a survey of 19 specialized infertility treatment centers.

Findings

Fecundity status and need for services

- 35.9% of women (couples) of childbearing age have fecundity impairments: 17.5% are surgically sterilized for contraceptive reasons, 7.8% are surgically sterile for other reasons, 1.7% are nonsurgically sterile, 2.8% are subfecund, 4.0% say it would be difficult or dangerous to carry a pregnancy to term, and 2.1% are classified as "long-interval" (married for 12 months or more without practicing contraception and without becoming pregnant).

- Blacks and Hispanics differ little from other women in fecundity impairment except that they employ contraceptive sterilization (their own or their partner's) less than do other women.

- Because they are younger, low-income women are less likely than other women to have fecundity impairments. Medicaid recipients are similar to other women in the percentage with fecundity impairments.

- Regional and metropolitan/nonmetropolitan differences in fecundity status are minor.

- Of women who want to have children (or want more children), 25% have fecundity impairments, including 14% who are surgically sterile (half for contraceptive reasons).

- 6.5% of women (couples) have fecundity impairments which are possibly treatable; 4.5% also want (more) children and are therefore considered to be in need of infertility services. A total of 2,417,000 women (couples) need services, including 1,082,000 who perceive themselves to be subfecund, 530,000 who are non-surgically sterile, 806,000 who are "long-interval."

- It is the woman who needs treatment in 50% of the couples needing infertility services and the man in 10%; in 39%, it is not known which partner needs treatment.

- 15% of those needing services have low income (under 150% of the federal poverty level). At most one-third of these are Medicaid-eligible. Race and Hispanic background have no association with needing services, although low-income women are less likely than wealthier ones to be in need.

- About half (49%) of those in need of infertility care have already received some professional attention - 33 percent have been treated and 16 percent have received advice only. The remaining 51% represent unmet need for infertility services.

- Among those needing services, black women and low-income women are less likely than others to have received services. These results suggest that low income is a significant barrier to obtaining infertility services.

- Of those who have received infertility services, 78% did so most recently from private physicians or medical groups, 12% from hospitals, 2% from family planning clinics, and 7% from other types of clinic.

- Aside from the couples who need infertility care as described above, there are 882,000 in which one or both partners have been sterilized but would like the sterilization to be reversed.

- About 10 percent of women (couples) who have been contraceptively sterilized would like the operation to be reversed; the proportion is especially high among blacks, Hispanics, poor women, and Medicaid recipients.

Infertility services provided by private physicians

- Nationally there are 45,500 private physicians in the four specialties surveyed who provide at least some infertility services: 17,500 general/family practitioners, 20,600 ob/gyns, 1,400 general surgeons, and 6,100 urologists.

- 80% of these provide at least one specialized infertility test or treatment, most commonly clomiphene administration or hysterosalpingograms. Of the tests and treatments asked about, the least commonly provided were male and female microsurgery and artificial insemination by donor, provided by 3,000-8,000 physicians.

- According to the physicians' reports, they see a projected national total of 1,550,000 infertility patients a year; estimates from the NSFG indicate that 950,000 women (couples) received infertility care in 1981, the most recent source of care being a private physician. Most physicians serve only a few patients a year. (The median number is 12.)

- Almost all physicians refer patients they cannot serve; however, 9% of physicians who treat infertility problems sometimes do not refer because the cost is prohibitive to their patients, laboratory facilities are inadequate, or needed treatment is unavailable.

- Although 45% of physicians in the specialties surveyed provide infertility services, only 21% accept Medicaid patients and only 6% are willing to vary their fees for low-income patients.

Infertility services provided by family planning agencies

- 70% of all family planning agencies provide at least some preliminary infertility services other than counseling. Such services are most likely to be provided by hospitals and least likely to be provided by health departments.

- Only a minority (37%) provide any specialized tests or treatments. The ones most commonly provided are genetic counseling and screening (31%), clomiphene drug therapy (15%) and sonography (15%).

- 92% of agencies refer patients for whom they are unable to provide needed services, usually to private physicians, next most often to hospitals, and next to infertility centers.

- 39% of all family planning agencies use Title X funds to provide infertility services, and 51% accept Medicaid for those services. Of the agencies which treat infertility, 83% serve a majority of infertility patients at a reduced fee, at no charge, or under Medicaid.

Infertility services provided by specialized centers

- Most infertility treatment centers provide a full range of procedures and treatments, although a few serve only women or only men.

- Over three-fourths of the centers charge full fee to a majority of patients. About half accept Medicaid reimbursement, and smaller proportions use various public sources such as state and local funds and Title X to subsidize their services. Only 16% will reduce their fees to low-income patients.

Availability of services - conclusions

- For couples with adequate financial resources, infertility services are relatively available from private physicians, supplemented by hospitals, infertility centers and other sources of medical care.

- Infertility services are less available to low-income couples, as evidenced by the finding that a smaller proportion of low-income than of other women needing services have received medical attention for their infertility problem.

- Family planning agencies and presumably public hospitals as well as a minority of physicians who accept Medicaid or reduce their fees are important in providing preliminary infertility services to low-income women. Because of the intrinsic cost and the lack of reduced-fee services, low-income women face serious financial obstacles to obtaining specialized or complex infertility services.

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Infertility Services Project Final Report

(FPR-000037-01-0)

I. Introduction

The purpose of this study is to describe the extent to which medical services are available to those in need of infertility services, especially to low-income and Medicaid-eligible women. The study has three components: (1) estimation of the need for infertility services (defined as the number of women of reproductive age who are infertile because of impairments in their own or in their partner's fecundity, whose infertility problem is medically treatable and who wish to have a baby); (2) estimation of the extent to which women with fecundity impairments have received infertility services and differences by poverty status and other demographic characteristics, and (3) a description of national, regional and metropolitan area availability of infertility services from private physicians and family planning agencies, and of national availability from specialized infertility treatment centers. This information will be used to identify the additional services, if any, necessary to reduce the unmet need for infertility services.

Several national data sets were analyzed to determine the need for and availability of infertility services. Estimates of the need and unmet need for infertility services among poor and nonpoor women of reproductive age were prepared from Cycle III of the National Survey of Family Growth (NSFG) conducted in late 1982 by the National Center for Health Statistics. Information about service providers comes from three Alan Guttmacher Institute (AGI) surveys: 1983 AGI Survey of Private Physicians, 1984 AGI Survey of Family Planning Agencies about Infertility Services, and the 1984 AGI Survey of Infertility Treatment Centers.

The first section of the report describes the methodology of data collection and analysis for each data set used. Next are the study results and tables, which describe the fecundity status of women 15-44 years of age and the need for and use of infertility services by all women. The availability of infertility services from three types of medical providers is examined. The providers studied include private physicians, organized family planning agencies, and specialized infertility treatment centers. The report concludes with a summary discussion of the availability and accessibility of infertility services and the implications of the findings.

The tables are numbered separately for each section of the report. The prefix "M" in the table number refers to the methodology section, "W" to data on women from the National Survey of Family Growth, "P" to the survey of physicians, "A" to the survey of family planning agencies, "C" to infertility centers, and "N" to a comparison of the need for services with the availability of providers.

II. Methodology

The Alan Guttmacher Institute (AGI) conducted three surveys of public and private health care providers to ascertain their infertility service policies and practices. This information was used to complement the findings from a special analysis of selected questions about fecundity, infertility, and use of infertility services abstracted from the 1982 National Survey of Family Growth. Below is a discussion of each data set, the analysis conducted and cautions for interpreting the findings for each data set.

A. Private Physician Survey

The information on the provision of infertility services by private physicians comes from data collected in the 1983 AGI Survey of Private Physicians. During the summer of 1983, the AGI conducted a national survey of private physicians to collect information on the provision of reproductive health care services, including infertility services, through the private medical sector. A random, stratified probability sample of 571 general/family practitioners, 686 general surgeons, 1,290 obstetrician/gynecologists and 662 urologists was selected from the American Medical Association (AMA) master file. 1/ The AMA's master file includes all U.S. physicians, regardless of their AMA member status, and is updated continuously. The sample selected included only physicians not employed by the federal government and with office-based practices in any of the 50 states or the District of Columbia in December 1982.

The questionnaire was designed to ascertain whether physicians provided specific services, their referral and fee policies (including acceptance of

Medicaid reimbursements), the number of patients served and general characteristics of the physicians' practices. The questions were modified for each group of physicians to cover only those services pertinent to their speciality (see questionnaire in Appendix A).

Questionnaires were initially mailed to the general/family practitioners, general surgeons and obstetrician/gynecologists during the summer of 1983. Numerous efforts were made to contact nonrespondents. First, questionnaires were sent two more times during a four-week period, after which random samples of remaining nonrespondents were interviewed by telephone. A fourth questionnaire was mailed to all nonresponding general/family practitioners and obstetrician/gynecologists and to 40 percent of nonresponding general surgeons. Finally, during the fall, all remaining nonrespondents were contacted by interviewers using an abbreviated telephone protocol; physicians were asked only if they were still in private practice in their respective specialities, if they provided the services under review, and if they were, whether they accepted Medicaid reimbursement for those services. Urologists were surveyed initially in the fall of 1983. All nonrespondents were followed up with two additional mailings; telephone calls were made to all those who did not respond to either follow-up mailing.

Of the 3,209 physicians initially surveyed, 515 were subsequently excluded from the study because it was found that they had retired or died or were listed under incorrect addresses or specialties (see Table M-1). Eighty-three percent (2,247) of the remaining 2,694 eligible physicians responded to the survey. The response rate was highest among urologists (89 percent) and lowest among general/family practitioners (79 percent); 83 percent of general surgeons and obstetrician/gynecologists responded as well. The proportion of physicians who responded differed little across the four regions.

No pattern of difference was found between respondents and nonrespondents in age, region or metropolitan status of practice, board certification or type of practice (solo, group or partnership). Similarly, few differences were found between physicians who answered the full questionnaire by mail or phone and those who answered the abbreviated telephone survey in the above characteristics, in whether they provided specific services or in whether they accepted Medicaid.

Responses were weighted to approximate the national distribution of physicians in the four specialities by region of the country and metropolitan areas. The AGI used the distribution of the sampled physicians to estimate the regional and metropolitan distributions, because the AMA provided estimates of the number of private physicians in office-based practices nationwide only. Table M-1 shows the estimated universe, by specialization and region, that the sample represents.

The analysis consists of two steps. In the first, estimates are made of the number and proportion of physicians who provide no infertility services, preliminary infertility tests and procedures, and specialized services, by specialty within the four regions and metropolitan and nonmetropolitan areas. The second step is to describe the policies of physicians who provide infertility services: their fee policies for low-income patients, whether they accept Medicaid reimbursements, their referral policies, and the number of infertility patients served annually.

Confidence intervals for the proportion of physicians providing a specific service or having a certain policy have been calculated as illustrated in text Table A below for each specialty. The confidence intervals are largest

when the proportion is around 0.5, so this proportion is used in the illustration. Tha formula for standard deviation takes into account the proportion of the universe of physicians that the respondents constitutes; these proportions differ widely for each physician specialty surveyed. The chances are 95 out of 100 that a sample estimate of 50 percent would fall within 10 percentage points of the actual percentage for general/family practitioners and general surgeons, and six and eight percentage points, respectively, for obstetrician/gynecologists and urologists.

Table A: Estimated Standard Deviations and Confidence Intervals for Each Physician Specialization

Specialization	Universe (N)	Respondents (n)	Standard deviation* (p=.5)	95% Confidence intervals** (p=.5)
• General/family practioners	49,879	355	.026	.45-.55
• General surgeons	23,100	448	.023	.45-.55
• Obstetrician/ gynecologists	21,422	931	.016	.47-.53
• Urologists	6,675	513	.021	.46-.54

* Standard deviation = $\frac{(1-p)}{n} \times 1 - \frac{n}{N}$

** Confidence intervals = $\pm$ 2 standard deviations.

B. **Family Planning Agency Survey**

The information describing family planning agencies' provision of infertility services is from data collected in a survey designed and fielded

for this study. During the fall of 1984, a questionnaire on infertility services provided by family planning agencies was designed, using questions similar to those asked of private physicians and adding more detailed questions about sources of funding, restrictions on the provision of services, and preliminary infertility care. The questionnaire was pretested with 19 agencies, and five provider specialists were consulted about the scope of the survey. The pretest results and other comments were reviewed and the questionnaire was finalized and printed in January 1985. (See Appendix B for a copy of the survey).

From the original universe of 2,454 family planning agencies in the United States, a minimum of 400 responses was needed for adequate description of the provision of infertility services by agency type and by region (see text Table B below, columns one and two).

Table B: **Family Planning Agency Survey Sample Estimates**

Agency Type	Universe	Proposed Minimum Responses	Final Sample	Estimated Mail Response	Actual Mail Responses
• Total agencies	2,454	400	768	426	508
• Health departments agencies	1,419	100	157	90	130
• Hospital family planning agencies	272	100	272	98	108
• Planned Parenthood affiliates	181	100	145	129	135
• "Other" type agencies	582	100	194	109	135

A recent AGI survey illustrated that the response rate to survey requests differs by agency type. 2/ Using these estimated response rates to identify the sample needed to obtain the goal of 100 responses from three mail requests, a sample of 768 agencies was estimated to be necessary, an increase from the 600 agencies estimated in the proposal (see column three). This sample was estimated to yield a minimim of 426 survey responses from three mailings (as shown in column four). The sample was planned to provide at least 100 respondents from each region.

Sampled agencies were sent questionnaires in January 1985. Three weeks later, all nonrespondents were sent a second request and, within three weeks, remaining nonrespondents received a third survey request. By April, the minimum number of responding agencies for each agency type and region had been received. The telephone follow-up planned for nonresponding agencies proved unnecessary; allotted staff time was used for obtaining information from agencies which had returned incomplete surveys. At the close of data collection in May of 1985, 508 agencies had responded (see Table M-2), 25 percent more than the minimum number needed for the analysis (see column five, text Table B).

As a result of the three mail requests to 768 agencies, nine agencies were found to be ineligible; these agencies had closed, merged, were no longer providing medical family planning services or had no forwarding address (see Table M-2). The ineligible agencies were deleted from the sample and from the universe. Of the remainder, 508 agencies responded and 251 agencies refused to participate or never responded to the mail requests.

Forty-five percent of the responses came from the first mail request (see

Table M-3); 37 percent came after the second request, while the third request yielded only half as many responses. Of the four types of agencies surveyed, Planned Parenthood affiliates were most likely to respond to the first request. Hospital and health department family planning agencies were more likely to respond to the second request than to the first, which may reflect the additional time such agencies might need to complete survey requests.

Overall, 67 percent of the eligible agencies responded, but the response rate differed widely by type of agency and less so by region, as shown in Table M-4. Planned Parenthood affiliates had the highest response rate, 94 percent, while hospital agencies were the lowest at 48 percent. The agencies in the four regions differed by no more than 11 percentage points in their response rates (61 to 72 percent). The percentage of agencies responding among the four regions overall and for each agency type did not differ significantly, except for the 'other' type of agencies, where those in the Northeast and Northcentral were more likely to respond than were those in the South and West (88 and 74 percent, vs. 62 and 66 percent, respectively). No statistically significant differences existed in the response rates of metropolitan and nonmetropolitan agencies. Finally, nonresponding agencies averaged smaller annual patient caseloads than did responding agencies. It was concluded that little response bias existed that might affect the planned analyses other than differences related to agency size.

Table M-5 shows the number and percentage distribution of responding agencies by agency type and region. In the analysis, agencies were weighted by agency type and region to represent the 2,445 eligible family planning agencies operating nationwide in 1983. Table M-6 shows the number and

percentage distribution of all agencies in the U.S. across the four regions. The weights are listed in text Table C, below.

Table C: Numbers Used to Weight Responding Family Planning Agencies to Represent the Universe of Agencies, within Four Regions

	Agency Type			
Region	Hospitals	Health departments	Planned Parenthood	Other types
Northeast	1.83	13.00	1.34	3.51
Northcentral	2.15	9.94	1.29	4.11
South	2.40	14.75	1.42	4.96
West	2.45	9.56	1.29	4.69

(Universe/ respondents = weight within region by agency type)

The analyses consist of two steps: the first step is to describe nationally, by region and by agency type the number and proportion of agencies, that provide no infertility services, counseling and referral services only, preliminary infertility tests and procedures, and specialized infertility services. These classifications reflect the Title X definition of levels of infertility services. 3/ The second step is an analysis of the agencies that provide infertility tests and procedures, to describe nationally: the kinds of services provided, restrictions on the provision of these services, the average fees charged for selected procedures, sources of income for infertility services, fee policies for serving low-income and Medicaid patients, acceptance insurance reimbursement, and the number of male and female infertility patients served annually.

Confidence intervals for proportion of agencies providing a specific service or having a certain policy have been calculated, as illustrated in text Table D below:

Table D: Estimated Standard Deviations and Confidence Intervals for Each Agency Type

Agency type	Universe (N)	Number of Responses (n)	Standard Deviation* (for p=.5)	95% Confidence Interval** (for p=.5)
Health department	1,419	108	.046	.41 - .59
Hospital	270	130	.032	.44 - .56
Planned Parenthood affiliate	180	135	.022	.46 - .54
Other type	576	135	.038	.42 - .58

* Standard deviation = $\sqrt{\frac{p(1-p)}{n}} \times \sqrt{1-\frac{n}{N}}$

**Confidence interval = $\pm$ two standard deviations

The confidence intervals are largest when the proportion is around 0.5, so this proportion is used in the illustration. The formula used takes into account the proportion of the universe of agencies that the respondents constitute.

C. Infertility Treatment Center Survey

Twenty-one infertility treatment centers were selected to be surveyed, having been identified in the AGI Private Physician Survey as sites where physicians referred patients. The infertility services questionnaire sent to

family planning agencies was revised to be used for infertility treatment centers. More detailed questions about specialized services were added to the center survey, and questions specific to the family planning agencies were deleted (see questionnaire enclosed as Appendix C). Three infertility provider specialists were consulted about the revised questions, and the survey was finalized and printed in-house.

In Winter, 1985, all 21 facilities were mailed a questionnaire, a stamped, return-mail envelope and a brochure describing the Institute. Three weeks later, nonrespondents received a second request; a third request was sent three weeks later. The eight remaining nonresponding facilities were interviewed by telephone. Two refused to participate, and none were found to be closed or otherwise inappropriate for this survey. The 19 respondents represent 91 percent of the selected sample.

For the analysis, the survey findings were tallied to provide descriptive information on the range of services provided, the number of patients provided with various services, the cost to patients for selected procedures, the centers' financial policies and sources of income, their restrictions and their referral policies. No estimates are available to weight the sample to the universe of treatment centers in the United States.

D. Estimation of the Need and Unmet Need for Infertility Services

Estimates of the fecundity status of American women, the need for infertility services and the number of women who have received services were based on the National Survey of Family Growth, Cycle III (NSFG), conducted in 1982 by the National Center for Health Statistics, DHHS. In this survey,

women 15-44 years of age were interviewed, regardless of their marital status. Between August of 1982 and February of 1983, interviews were completed with a multistage area probability sample of 7,969 women 15-44 years of age in the noninstitutional population of the conterminous United States, obtaining a 79 percent response rate. Written parental consent was required to interview minors, which means that two people - the respondent herself and her parent or guardian - could refuse the interview. The response rate for ever-married women in Cycle III was 81 percent, while the rate for never-married women was 75 percent. Black women were oversampled, as in previous cycles of the NSFG, and teenage women were also oversampled. In all, about 4,600 white and 3,200 black women were interviewed. Sample sizes by marital status were about 3,300 never married, 3,600 currently married, and 1,100 previously married. This survey asked women about their birth and pregnancy history, family planning practices, sources of family planning advice and services and utilization of various methods of family planning.

The NSFG staff has carefully checked the data and computed many of the variables which are based on several different questions. Where possible, the variables computed by the NSFG staff were used in the present analysis. The amount of missing information on most individuals items is low, and the NSFG staff has imputed values where information is missing. The imputed values are based on other correlated items with available data. The imputed values were used in this study to facilitate projection to national totals.

According to the NSFG manual, the major limitation of the data is the underreporting of abortions. 4/ Since about 18 percent of all pregnancies were unreported due to the underreporting of abortions, the number of women

known to be fecund may be underestimated by as much as 18 percent. Other fecundity statuses were therefore overestimated, especially the "fecundity unknown" categories. The number of women classified as "long-interval" subfecund may also have been overestimated. The problem would be minimal among white women, however, since little or no underreporting of abortions was observed among white married women. Some underreporting of abortions occurred among black married women, but since only a small proportion of women are "long-interval," the error would have only a small effect on the analysis.

Standard errors were calculated for all estimates and proportions used in the analysis. Equations published by the NSFG were used to calculate the standard errors (see Table M-7). Estimates with relative standard errors (the standard error divided by the estimated value) of 30 percent or more are marked in the tables with an asterisk (*). T-tests used to test the significance of differences in proportions, calculated as suggested in the NSFG manual. (See Table M-7 for the formulas used.)

Table M-1: Number of Physicians in the United States Sampled for the 1983 AGI Doctor Survey: Responding, Nonresponding and Ineligible Physicians and Percentage Responding to the Survey, by Specialization and Region

		Specialization				Region			
Response Status	Total	Obstetricians/ Gynecologists	General/Family Practitioners	General Surgeons	Urologists	Northeast	Northcentral	South	West
Universe	101,100	21,400	49,900	23,100	6,700	20,900	24,900	33,200	22,100
Total Sample	3,209	1,290	571	686	662	708	747	1,095	659
Respondent Physicians	2,247	931	355	448	513	465	543	784	455
Nonrespondent Physicians	447	195	96	94	62	100	95	164	88
Ineligible Physicians	515	164	120	144	87	143	109	147	116
Percent respondents are of eligible physicians	83%	83%	79%	83%	89%	82%	85%	83%	84%

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Table M-2: Number of Family Planning Agencies in the United States, Number Sampled for the Survey, and Response, by Agency Type and Region

Response Status	Agency Type					Region			
	Total	Hospital	Health Depart.	Planned Parenthood	Other	North-east	North-central	South	West
Universe	2,454	272	1,419	181	582	323	413	1,285	433
Total sample	768	272	157	145	194	202	163	245	158
Respondent agencies	508	130	108	135	135	138	116	149	105
Nonrespondent agencies	251	140	49	9	53	61	46	94	50
Ineligible agencies*	9	2	0	1	6	3	1	2	3
Percent respondents are of eligible agencies	67%	48%	69%	94%	72%	69%	72%	61%	68%

* Ineligible agencies include agencies that had closed, merged, or had no forwarding address, or are no longer providing medical family planning services.

Table M-3: Percentage Distribution of Responding Family Planning Agencies by Mailing, According to Agency Type and Region

Mail Request	Total	Agency Type*				Region			
		Hospital	Health Department	Planned Parenthood	Other	Northeast	Northcentral	South	West
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
First Mailing	45	36	34	61	47	49	53	37	46
Second Mailing	37	37	44	32	35	33	31	44	37
Third Mailing	18	25	22	7	18	18	16	20	17
n=	508	130	108	135	135	138	116	149	105

Note: The distribution of agencies is of eligible responding agencies; all agencies found, when surveyed, to be merged, closed, or no longer providing medical services were counted as ineligible and deleted from the sample.

* Statistically significant difference in percentage of agencies by mailing ($p < .05$).

Table M-4: Percentage of Agencies Located in Metropolitan Areas and in Each of Four Regions That Responded to the Survey and Comparison of Average Annual Patient Caseload for Responding and Nonresponding Agencies, by Agency Type

Characteristics	Agency Type				
	Total	Hospital	Health Department	Planned Parenthood	Other
Total*	67%	48%	69%	94%	72%
Metropolitan Status					
Metropolitan	66	47	70	94	71
Nonmetropolitan	69	57	68	93	73
Region					
Northeast	69	55	100	92	88**
Northcentral	72	46	89	97	74
South	61	42	61	89	62
West	68	41	95	97	66
Average Patient Caseload					
Respondents	3,571*	2,031	2,108	7,864	1,932
Nonrespondents	1,721	1,974	826	4,430	1,421

* Statistically significant difference between the agency types ($p < .05$)
** Statistically significant difference between the subgroups within this agency type ($p < .05$)

Table M-5: Number and Percentage Distribution of Family Planning Agencies Responding to the 1984 AGI Family Planning Agency Infertility Services Survey, by Type of Agency

Region	Number					Percentage				
	Total	Hospital	Health Department	Planned Parenthood	Other	Total	Hospital	Health Department	Planned Parenthood	Other
	N	N	N	N	N	%	%	%	%	%
Total	508	130	108	135	135	100	100	100	100	100
Northeast	138	64	2	35	37	27	49	2	26	27
Northcentral	116	26	16	38	36	23	20	15	28	27
South	149	20	72	31	26	29	15	67	23	19
West	105	20	18	31	36	21	15	17	23	27

Table II-6: Number and Percentage Distribution of Agencies in the Universe for the 1984 AGI Family Planning Agency Infertility Services, by Type of Agency

Region	Number					Percentage				
	Total	Hospital	Health Department	Planned Parenthood	Other	Total	Hospital	Health Department	Planned Parenthood	Other
	N	N	N	N	N	%	%	%	%	%
Total	2,445	270	1,419	180	576	100	100	100	100	100
Northeast	320	117	26	47	130	13	43	2	26	23
Northcentral	412	56	159	49	148	17	21	11	27	26
South	1,283	48	1,062	44	129	53	18	75	24	22
West	430	49	172	40	169	18	18	12	22	29

Note: The universe has been adjusted, eliminating those agencies found, when surveyed, to be merged, closed or no longer providing medical services.

Table M-7: Formulas Used to Estimate Standard Errors, Relative Standard Errors, and Statistically Significant Differences Between Two Estimates, Prepared Using Weighted NSFG Data

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1. The standard error of an estimated percentage is calculated as follows:

$$SE(P') = \left[\frac{B^* P'(1-P')}{X'}\right]^{1/2}$$

P' = the percent

X' = the number of women in the denominator of the percent

B = 21,306.4134 for women of all marital statuses, all races and white

39,809.1677 for ever-married women

17,608.8833 for never-married women

6,346.0487 for black women

13,862.1044 women aged 15-19

The chances are about 95 in 100 that a sample estimate would fall within two standard errors of the actual proportion.

2. The relative standard errors of a statistic is the ratio of the standard error to the statistic and is expressed as a percent of the estimate, as follow:

$$RSE\ (P') = SE(P') \div (P')$$

Statistics with relative standard error of 30 percent or larger are viewed to be unreliable and are so indicated in this report with an asterisk (*).

3. The t - statistic used in this analysis approximates the students' t distribution under the null hypothesis of no difference between the parameters estimated by P1 and P2 against a two-sided alternative. The formula is as follow:

$$t = \frac{P1 - P2}{\sqrt{(SE\ (P1))^2 + (SE\ (P2))^2}}$$

With large sample sizes as in the NSFG, a + value >1.96 is statistically significant at the .05 level, two-tailed.

III. Women by Their Fecundity Status and Need for Infertility Services

This section describes the fecundity status of U.S. women according to demographic characteristics of the women. The proportion with possibly treatable fertility problems is estimated according to the type of problem, as are the proportions who need services and who have received them. Finally, the proportions of those surgically sterilized who would like more children and who would like to have the sterilization reversed are shown.

A. Classification by Fecundity Status

The fecundity status of U.S. women and their need for infertility services were estimated from the National Survey of Family Growth, Cycle III, 1982. (See Section II. D. above for methodological details.) All women aged 15-44 years of age were classified into one of nine categories of fecundity status: (1) known fecund; (2) fecundity unknown, contraceptive user; (3) fecundity unknown, nonuser of contraceptives; (4) fecundity unknown, not sexually active; (5) surgically sterile for contraceptive reasons; (6) surgically sterile for noncontraceptive reasons; (7) nonsurgically sterile; (8) perceived subfecund (difficult to become pregnant); (9) difficult or dangerous to carry to term; and (10) long interval. The classification of women's fecundity status was done hierarchically in the order given below, since some women have characteristics applicable to more than one category. The complete classification, with numbers in each category, is shown in Chart 1.1.

1. Subfecund or Infecund

a. Surgically Sterile

This category includes 13,684,000 women who have had sterilization operations or whose current husband/partner (hereafter referred to as husband) has had one. This was ascertained from the answers to three questions:

1. Is it possible or impossible for you (and your husband) to conceive a(another) baby?

2. Have you (or your husband) had an operation, or more than one operation, that makes it impossible for you to conceive a(another) baby (together)?

3. What kind of operation, or operations, did you (or your husband) have that makes it impossible to have a(another) baby?

This surgically sterilized category is subdivided into whether or not the sterilization surgery was for contraceptive reasons. This division is based on the women's response to an additional question:

4. Was one reason for having (an operation) because you (had all the children you wanted/did not want to have any children)?

Of the surgically sterile, 9,443,000 (69 percent) were for contraceptive reasons.

The surgically sterile are further divided into those who had tubal ligations or vasectomies (10,004,000) and those who had hysterectomies or ovariectomies. The latter are irreversible, while tubals and vasectomies can sometimes be reversed by microsurgery.

b. Nonsurgically Sterile

This category covers (893,000) women who stated in the first question above that it was impossible for them (or their husbands) to have a baby, but the reason was menopause, an accident, or illness, and not sterilization surgery.

c. Perceived Subfecund

Women were classified as perceived subfecund (1,299,000) if they answered affirmatively to the question:

> Is there any problem or difficulty for you (and your husband) to conceive or deliver a(another) baby (after this pregnancy)?

and gave one of the following as the reason it would be difficult:
(a) respondent has physical difficulty getting pregnant,
(b) difficult for the husband to father child, or
(c) other reason difficult.

d. Difficult/Dangerous to Carry to Term

This category includes (2,140,000) women who did not say they were sterile or subfecund but said it would be difficult to carry a pregnancy to term, dangerous to become pregnant or to carry a pregnancy to term, or had been advised by a doctor not to become pregnant. These women said:

.. It would be difficult for them to conceive or deliver a baby, and the reason it would be difficult is that (a) it would be difficult to carry pregnancy a full 9 months, (b) it is dangerous for the respondent to become pregnant again, or (c) it would be dangerous for the baby, or,

2. A medical doctor has advised respondent never to become pregnant (again), and the reasons are that it would be dangerous for the respondent, the baby, both, or some other reason.

These women are unable to have a baby but are not infertile, that is, report no problems related to conception. Therefore they do not need infertility care as usually defined. However, treatment other than infertility care might be appropriate for some of these women who wish to have more children.

e. Long Interval

This category includes (1,135,000) currently (formally or informally) married women who are not surgically sterile, do not report problems related to conceiving or carrying to term, and who during 12 or more months of continuous marriage before the interview, neither practiced contraception nor reported a pregnancy. Without further information, these couples were presumed to be infertile but may be able to conceive in the future. Various periods of time of exposure to the chance of pregnancy with no pregnancy occurring have been used in past analyses, ranging from 12 to 36 months. A longer period is a more appropriate indicator of true infecundity, but many couples seek services after as short a time as 12 months. Therefore, the shorter period was used in this analysis. Not included in this category are unmarried women who have not practiced contraception and have not become pregnant. These women are excluded because of uncertainty about their exposure to intercourse over the time period.

2. Fecund, Known

Most women (34,728,000) of reproductive age have none of the above characteristics and were classified as known fecund (10,562,000) or fecundity unknown (24,166,000). All women who were not already classified as subfecund or infecund and who had experienced a pregnancy within the three years prior

to the interview were classified as fecund. Because they did not report any problems in conceiving or carrying to term, and because they were recently pregnant, they are presumed to be capable of having another baby. This is a minimum estimate of the number of known fecund women because of underreporting of pregnancies ending in abortion, particularly among unmarried women. The underreporting of abortions could mean that the number of fecund women should be adjusted upward by as much as 18 percent. This adjustment was not made because of uncertainty about the exact correction factor to use for the "known fecund" category and the other categories affected.

3. Fecundity Unknown

a. Fecundity Unknown, Contraceptive User

This category includes (11,687,000) women who are not classified as having impaired fecundity, did not report having been pregnant during the three years prior to the interview and are currently using reversible contraception. Their use of contraceptives indicates that they consider themselves to be capable of conceiving, but in fact their fecundity status is not known.

b. Fecundity Unknown, Noncontraceptive User

This category includes (4,937,000) women who are not classified as having impaired fecundity, did not report having been pregnant during three years prior to the interview and are sexually active but not currently practicing contraception. Their period of nonuse of contraceptives was less than one year ("short interval"), or they were neither formally nor informally married and are therefore not eligible to be classified as "long interval."

c. Fecundity Unknown, Not Sexually Active

All women who have never had sexual intercourse and who do not report problems that affect conceiving or carrying to term and are not nonsurgically sterile are classified as fecundity unknown, not sexually active (7,542,000). In addition to those who have never had intercourse, this category includes women who had intercourse before their first menstrual period but not since, and those who are under age 25 and have had intercourse only once.

4. Comparison to Other Fecundity Status Classifications

Various definitions of fecundity status have been used over the years to describe the population and to make best use of what data were available. The classification of fecundity status presented here is more detailed and differs slightly from that used by the NCHS, which groups women as surgically sterile (contraceptive and noncontraceptive), impaired fecundity (nonsurgically sterile, subfecund, and long interval), and fecund. 5/ The NCHS includes in its subfecund category both women who have difficulty conceiving and those who have difficulty carrying to term. All women who said they had been told it would be dangerous to carry a pregnancy to term were included in this report as subfecund, while William Mosher, of the NCHS, considered them to have impaired fecundity only if they also said either that they would have an abortion to terminate a pregnancy or that they were planning to use sterilization to prevent pregnancy. The AGI classification separates these into two groups, subfecund and difficult/dangerous to carry to term. The AGI classifies as "fecundity unknown" many women considered fecund by the NSFG staff (contraceptive users, nonusers, not sexually active). Finally, a

12-month rather than a 36-month interval of unprotected intercourse within marriage was used to define "long-interval" subfecundity. The differences in definition stem in part from differences in focus: the primary concern of the present research is the need for infertility services, while that of Mosher is the demographic impact of impaired fecundity.

B. Definition of Need for Infertility Care

In this analysis, women are considered to be in need of infertility care if they have a possibly treatable infertility problem (3,509,000) and want more children (2,417,000). Those with a possibly treatable problem are defined as those who are non-surgically sterile (excluding those who have experienced menopause), perceived subfecund, and long interval. Excluded are women for whom carrying a pregnancy to term would be difficult or dangerous, because the appropriate care for these women, such as treatment for diabetes or heart disease, is different from what is usually considered to be infertility treatment. Also excluded are couples who are surgically sterile because they have had a tubal ligation or vasectomy who now desire sterilization reversal; the number and characteristics of such couples are shown separately in Table W-6.

This definition of "need" for services has certain limitations and does not directly indicate the number of couples seeking care during the year. It is based entirely on women's reports of their own and their husbands' or partners' status, and it is assumed that these reports accurately reflect their actual physical condition and desire for children. First, it includes "long-interval" women who may not yet be aware of their possible infertility

problem, and women who have no desire to become pregnant at this time. Most such women would not now seek care. Second, many women classified as "fecundity unknown" may have infertility problems that will become apparent in the future. The estimate applies to one point in time; it does not indicate the number of new cases that occur each year or the number who seek treatment in a year.

C. Results

1. Fecundity Characteristics

Table W-1 shows the distribution of all women 15-44 years of age in 1982, by their fecundity status and selected characteristics. Twenty percent were known to be fecund, 36 percent were subfecund or infecund, and fecundity could not be determined for the remaining 44 percent. Half of the subfecund and infecund had been sterilized for contraceptive reasons. Some 18 percent of all women aged 15-44 had involuntary fecundity impairments. Almost half of these (eight percent of all women) were surgically sterile, usually as a result of hysterectomy. Four percent of all women said it would be difficult or dangerous for them to carry a pregnancy to term. Of special relevance for assessing need for infertility services are the seven percent who are classified as "long interval" because they had been (formally or informally) married without using contraceptives or becoming pregnant for at least 12 months, who reported that they have difficulty becoming pregnant (perceived subfecund), and who are nonsurgically sterile.

a. Age, Race, Ethnicity

As seen in Table W-1, the prevalence of sub- and infecundity -- surgically

sterile, nonsurgically sterile, subfecund, difficult or dangerous to have a baby and long-interval categories -- increased with each 5-years of age, from 2.8 percent at 15-19 years of age to 73.6 at 40-44 years of age. This difference by age was sharpest in the surgically sterile category, which increased from near zero at 15-19 years of age to 61.2 percent at 40-44 years. The increase in the surgically sterile accounts for 86 percent of the increase in the percentage of all women who are not fecund. The proportion nonsurgically sterile also increases with age to three percent of women age 35 and over. The proportion who perceive themselves to be subfecund increases to a peak of four percent at ages 25-34 and then declines with age. One can hypothesize that past age 34, most women are no longer seeking to become pregnant, so subfecundity would be masked by contraceptive use and sterilization. The proportion of women classified as difficult/dangerous to carry to term is four to five percent among all age groups except teenagers, in part because fecundity status is unknown for most teens. The proportion categorized as long interval is similarly stable among women 20-45, although there is a shift of the length of the interval from 12-35 months to 36 months or more with age. It should be noted that the pool of women available to be classified as perceived subfecund, difficult/dangerous and long interval increases with age as women move out of the "fecundity unknown" category but decreases as more women become surgically sterile.

There are slight differences in the fecundity status of the racial and ethnic groups shown in Table W-1. Black women are more likely than other women to be nonusers of contraceptives with fecundity unknown and to be sexually active, and less likely to be using surgical sterilization as their

contraceptive method. (Other analyses have shown this difference to reflect less use of vasectomy by black men. 6/) Hispanic women are more likely than non-Hispanic women to be known to be fecund because of a recent pregnancy and less likely to be contraceptive users with unknown fecundity or to depend on sterilization.

b. Marital Status, Parity and Desire for Children

In part because they are older and have had more children, married women (or their partners) are more likely than unmarried ones to be surgically sterilized both for contraceptive and other reasons. However, women who are not currently married are almost as likely as married women to perceive themselves to be subfecund and to be nonsurgically sterile. (While fewer unmarried than married women are in these categories, the differences are not statistically significant.) Few unmarried women were classified as "long-interval" because they were excluded from this category by definition unless they were "informally married." (The "informally married" are classified as unmarried in Table W-1.) However, a substantial proportion of unmarried women - 17 percent - were classified as nonusers with fecundity unknown; some of these women are undoubtedly subfecund. It is not possible to estimate the exact number because of uncertainty about their degree of exposure to risk of pregnancy.

Women who have had one or more births are more likely than others to be classified as long-interval but less likely to perceive themselves as subfecund. They are also less likely to be nonsurgically sterile. Overall, there is little difference between the two groups in their rate of nonsurgical fecundity impairments. As might be expected, women with children are more

likely to be surgically sterile for both contraceptive and noncontraceptive reasons.

Nonsurgical fecundity impairment is about equally common among women who want (more) children and those who do not. Contraceptive sterilization is much more common among those who want no more children, although seven percent of those who would like (more) children are contraceptively sterilized. Women who want (more) children are more often nonusers of contraceptives; some of these are seeking pregnancy. However, even among those who do not want more children, six percent are not practicing contraception. Some of these women may not currently be in a sexual relationship, but studies consistently show that some U.S. women who are exposed to the risk of unintended pregnancy do not use contraceptives. 7/.

c. Geographic Location

The percentage of women who are subfecund or infecund is higher in nonmetropolitan areas than in metropolitan areas (40 and 35 percent, respectively). The difference is attributable to the fact that nonmetropolitan-area women are more likely to be surgically sterile for both contraceptive and noncontraceptive reasons, although individually these differences are not statistically significant.

The percentage of women 15-44 years of age who are sub- or infecund is lower in the Northeast than in the other three regions (29 vs. 36 to 40 percent, respectively). Much of this difference occurs because the percentage surgically sterile is lower in the Northeast than elsewhere (19 vs. 25 to 28 percent). Women in the Northeast are more likely than those in the other three regions to be classified as fecundity unknown: contraceptive users or

not sexually active. The greater proportion of women in the Northeast with fecundity status unknown accounts for most of the difference in proportion surgically sterilized between the Northeast and the West but not the lower level in the Northeast than in the Northcentral region and the South.

d. Poverty and Medicaid Status

Women were classified according to the ratio of their family incomes to the federally-defined poverty level. While there are statistically significant differences in the fecundity status of women in the different poverty status groups, caution is appropriate in interpreting small differences because income data were imputed for many respondents.

Women whose family income is under 150 percent of the poverty level are less likely than wealthier women to be classified as subfecund or infecund. The largest difference is in the proportion contraceptively sterile, 14 percent of the low-income group vs. 19 percent of those with higher income. The low-income women are also less likely to be nonsurgically sterile, perceived subfecund, or long interval. The low-income women are more likely to be classified as "known fecund" (more of them have been pregnant recently), less likely to be contraceptive users, and more likely to be nonusers.

Since many of these differences may be due to age differences, the low-income women being younger than the wealthier women, the poverty status differences are shown separately for women under age 30 and those 30 and over in Table W-1. Within the age groups, the poverty status groups are similar in rate of surgical sterilization, both contraceptive and noncontraceptive.

Among the younger women, those who are poor are much more likely to be known fecund and less likely to say they are subfecund. They are also less likely to be contraceptive users or to be not sexually active. Among women age 30 and over, the only statistically significant differences between the poverty status groups are that fewer of the low-income group are contraceptive users and more are nonusers.

Medicaid* recipients (who are poor and usually either unmarried mothers or a child of an unmarried poor women) may be slightly less likely than non-recipients to be contraceptively sterilized, perceived subfecund and long-interval, but none of the differences are statistically significant. One would expect lower rates of infecundity and subfecundity among Medicaid recipients because most of them have had children. Medicaid recipients are more likely to be known fecund and less likely to be contraceptive users or not sexually active than non-recipients. Compared to all women below 150 percent of the poverty level, more Medicaid recipients are known fecund and fewer are contraceptive users or not sexually active.

In summary, low-income women and Medicaid recipients do not appear to differ greatly from other women in fecundity impairment except in ways that

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* Medicaid, a joint federal and state program to reimburse medical services for certain poor women and men, is a major source of public funding for infertility services. States are required to make Medicaid Coverage available to all recipients of Aid to Families with Dependent Children (AFDC or welfare) and to most Supplemental Security Income recipients, groups defined as categorically needy, but the states determine the income levels which individuals are eligible for these programs. In addition, in some states persons with incomes below a specified level or whose resources have been exhausted by medical expenses may be eligible. Generally, poor women must be unmarried and mother of dependent children to be eligible for AFDC and, therefore, for Medicaid. Poor married women are eligible only if they live in states which have made Medicaid available to poor families with unemployed fathers.

can be explained by differences in age and parity. However, even controlling for age, low-income women are less likely to use contraception and more likely to have had sexual intercourse.

2. Number of Women with Fecundity Impairments

Of the 54.1 million women of reproductive age in the United States in 1982, 19.4 million or 36 percent, were known to be subfecund or infecund (see Table W-2). The large majority of those with fecundity impairments, 71 percent, are surgically sterile: of these, 73 percent have had tubal ligations or vasectomies.

Surgical sterilization could occur as a result of treatment for medical conditions or as an elective procedure to prevent future childbearing. In all, 3.7 million women of childbearing age have had hystarectomies or ovariectomies. Although these procedures are seldom chosen for the sole purpose of terminating childbearing, 23 percent were reported by the women to have been at least partly for contraceptive purposes. Since there is no way to restore the fecundity of these women, they are not considered to be in need of infertility services even if they would like to have the sterilization reversed.

Of the 10.0 million couples who have had tubals or vasectomies, 1.4 million (14 percent) reported the reason to be that childbearing would be dangerous and that not wanting more children was not a reason. Even if these couples regret their decision, they are not considered to be in need of sterilization reversal because of the evident danger that would be posed by childbearing. There is neverthless a possibility that reversal would be safe for some of these women if their medical condition has changed or if the danger

the danger had been exaggerated in order to justify sterilization that was desired for contraceptive reasons.

There are 0.9 million nonsurgically sterile couples, about four percent of whom have experienced menopause and are therefore not considered to be candidates for infertility treatment. Some of the remaining 96 percent may have similarly untreatable conditions. Fertility impairments that are possibly treatable were reported by 1.5 million women who reported that they would have difficulty becoming pregnant, and an additional 1.1 million are "long-interval," having been married and gone without using contraception for at least 12 months without becoming pregnant. About half of the long-interval group have been unprotected for 36 months or more.

3. Infertility Services Need and Utilization

As shown in Table W-3, an estimated total of 3.5 million women have possibly treatable fertility impairments (excluding those who desire contraceptive sterilization reversals, which will be discussed separately). Almost half of these (43 percent) reported that they would have difficulty becoming pregnant, a third (32 percent) appear to have a problem based on their failure to become pregnant after 12 or more months of unprotected intercourse, and the remainder reported that they are nonsurgically sterile.

Women are defined in this analysis as being in need of infertility services if they have a condition that might be treatable and they want a child (or more children) either now or at some time in the future. All the women would not, of course, be expected to be able to have a child, but it is reasonable for them to seek consultation about their infertility.

Sixty-nine percent of the women or couples with possibly treatable fertility impairments, or 2.4 million women, say they would like to have (more) children, and are therefore defined as being in need of infertility services. The percentage wanting (more) children is similar for the perceived subfecund and long-interval (71 percent) but slightly lower for the nonsurgically sterile (62 percent), who are older on average than the other two groups.

For half the couples needing services, it is the woman who is thought to have the fertility impairment. In only ten percent was the male partner the one described as having the problem. In 39 percent of the cases, mainly long-interval, there is no indication which partner needs treatment. Thus, it appears that a large majority of the need is for services for females.

The male partner has been identified as having the infertility problem in 31 percent of the non-surgically sterile couples but in only seven percent of the perceived subfecund. This difference may reflect more certainty in the diagnosis obtained by those who report themselves to be sterile. After more treatment, many of the "perceived subfecund" will consider themselves to be sterile, and some will probably learn that it is the male who is infertile.

About half (49 percent) of those in need of infertility services have already received some professional attention. Sixteen percent have received advice only, while 33 percent have received some treatment.

Fifty-one percent of those needing services -- some 1.2 million women -- have received no professional advice or treatment for their infertility problem. This represents the unmet need for infertility services. In addition, an unknown proportion of those who have received services would benefit from further professional attention.

4. Characteristics of Women Needing and Obtaining Services

As may be seen in Table W-4, the majority (54 percent) of women needing infertility services are in their 20's, and most of the rest (36 percent) are aged 30-39. Relatively few are teenagers or are age 40 and over (five percent each). About 11 percent are black and 12 percent Hispanic. Most are currently married (75 percent), most have had no children (59 percent), and most live in metropolitan areas (82 percent). Regional differences reflect the population distribution in the country, with most women needing services in the South (32 percent) and in the Northcentral states (29 percent).

Although 15 percent of those needing services have family incomes that put them at under 150 percent of the poverty level, only four percent are Medicaid recipients. In fact, the number of Medicaid recipients needing services equals only about one-fourth of the number of poor women needing services. It is possible that the NSFG underestimates the number of women with Medicaid coverage by about one-fourth.* Even taking this into account, Medicaid coverage is available for at most one-third of poor women in need of infertility services. This has important implications for the accessibility of infertility services for low-income women.

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* The number of Medicaid recipients estimated from the 1984 Current Population Survey is about five million 8/, compared with about four million from the NSFG. The Current Population Survey estimate may include women who are Medicaid-eligible but do not have Medicaid cards.

The 2.4 million women in need of infertility services represent 4.5 percent of all U.S. women of reproductive age. The probability that a woman is identified as in need of infertility services varies somewhat by demographic characteristics, as shown in Table W-5. Need is most likely among those aged 25-29 and in nearby age groups. Need is also greatest among those are currently married and those who have had no births. Race and Hispanic ethnicity have no statistically significant relation to the probability of need. Similarly, geographic location -- metropolitan status, region -- has no significant relation to need.

Need for services appears to be less prevalent among poor women than among women of higher income. This is true for women under age 30 as well as those aged 30 and over. Medicaid status has no statistically significant relationship to need, although those on Medicaid appear to be less likely than others to need services. Small differences cannot be detected because of small sample sizes of the subgroups.

Among women who need infertility services, the proportion who have received professional advice or treatment differs according to demographic characteristic (see Table W-5). Age is the best predictor of having received services: only 10 percent of teenagers as compared to 70 percent of women 40 and over have consulted a professional about their infertility problem. As might be expected, married women are more likely than unmarried ones to have received services. There are no significant differences by matropolitan status or region.

Among those needing services, black women are less likely than others to have obtained services. Hispanic women also appear less likely to have obtained services, but the difference is not statistically significant due to

the sample size limitations. Low-income women are less likely than higher income women to have received services. When age is controlled by looking separately at women under 30 and those 30 and over, the difference remains but is no longer statistically significant because of small sample sizes in the subgroups. Those on Medicaid appear to be less likely than those not on Medicaid to receive services, although again the sample sizes are too small to show statistical significance.

The above results provide strong evidence that infertility services are less accessible to socially deprived groups - those with low income and blacks. Medicaid does not appear to have been successful in eliminating the differential access to services.

As may be seen in Table W-5, there are 1,242,000 women or couples who have "unmet need," that is, need infertility services but have not received any medical attention for their infertility problem. As explained above, this figure may differ from the number who are seeking services or would utilize them if readily available. The definition of unmet need used in this analysis excludes women or couples who have received infertility services but would benefit from additional medical care, and it includes some who are not yet aware of their fertility problem, some who would not want to become pregnant at this time, and possibly some who know that their condition is untreatable or who choose not to undergo the necessary treatment.

The unmet need is concentrated among younger women: almost 72 percent are under age 30. Many are black and Hispanic, with 14-15 in each group, and an equal proportion live in nonmetropolitan areas. About 22 percent of those who have not received services are poor, with incomes under 150% of the poverty level, but only six percent are Medicaid recipients.

A large majority of those who have received infertility services obtained this care from private physicians. Following is the percentage distribution of the most recent source of infertility services, for those who received such care between the beginning of 1979 and the NSFG interview in 1982:

Source of Care	Percent
Private physician	67.0
Private medical group	12.2
Hospital clinic	12.1
Community health center/clinic	3.7
Military clinic	2.3
Family planning clinic	2.1
Public health clinic	0.6
	100.0

Besides private physicians and group practices, which were the most recent source of care for 79 percent of respondents, hospital clinics provided the most services, serving 12 percent. Since most specialized infertility centers would be counted as hospital clinics, it is clear that infertility centers serve only a small proportion of all infertility patients. Family planning clinics were the most recent source of care for 2.1 percent of respondents. Since these figures indicate the most recent source of care -- in many cases, the final source -- they may understate the importance of family planning and other nonhospital clinics in providing initial evaluation, counseling and referral for couples with concerns about their fertility.

There is no justification for assuming that women who obtain infertility services from private physicians receive higher quality care than those who use hospital clinics or other sources. Therefore it is impossible from these data to ascertain whether the care received by low-income and Medicaid-eligible women is inferior to that received by other women.

5. Desire for Contraceptive Sterilization Reversal

Of the 8.6 million women or their partners who have been surgically sterilized for contraceptive reasons, 26 percent say they would now like to have a child (or more children)* (see Table W-6). This percentage may be inflated somewhat by women who would like ideally to have more children but who as a practical matter would not choose to do so under present circumstances, even if they were fecund. Nevertheless, the number who say they would like to have a child is approximately 2.2 million.

These couples have a chance of restoring their fecundity only if they undergo microsurgery to reverse the sterilization, and respondents were asked if they or their partners wished to have the surgery. Not all of those who would like more children are willing to undergo the surgery, and some of the respondents indicated that their wishes are different from those of their husband. Thirty-nine percent of those who would like more children (or 10 percent of all sterilized couples, some 880,000) indicated that both they and their husband want the sterilization reversed (or, for unmarried women, she wants a reversal). For an additional nine percent of the couples, the sterilized partner would like a reversal but the other partner would not.

Table W-6 shows the percentage and number of women using contraceptive sterilization (either hers or her partner's) who would like more children and would like reversal of the sterilization. In this table, desire for reversal was assumed for married women only if the sterilized partner "definitely"

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* The question was worded as follows: "If it were possible for you to have a(nother) baby, would you, yourself, like to have one?" (Yes, No). No question was asked about the husband's or partner's desire for more children.

wanted a reversal and the non-sterilized partner wanted reversal "definitely" or "maybe." For unmarried women, only those "definitely" wanting reversal were counted as wanting reversal.*

It should be noted that responses to the question about reversal may be inaccurate in predicting the actual behavior of couples offered an opportunity for a reversal operation. In making the decision, couples would take into account several factors probably not considered in answering the question: the operation is not completely safe, contrary to the presumption of the question; it involves the inconvenience and discomfort of major surgery; and it is far from 100 percent effective. Thus, the question is more useful as a measure of sterilization regret, probably its purpose, than as a measure of need for reversal services.

The percentage who expressed a desire for reversal is highest for women aged 25-29 (22 percent) and declines sharply with age to only six percent of those 40-44, reflecting a steady decrease with age in the percentage of women who want more children. (It is possible that some of the older women would have wanted reversal when they were younger.) The percentage is also lower, 11 percent, at age 20-24. This may reflect the shorter interval since sterilization during which the women could change their minds about wanting more

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* The questions were worded as follows: "As things look to you just now, if the operation could be safely reversed, that is, changed back, would you want to have it reversed? Would you say definitely yes, maybe yes, or definitely not?" and "Would your husband like to have it reversed? Would you say definitely yes, maybe yes, or definitely not?". By this definition, there are approximately 880,000 women or couples who desire sterilization reversal. As may be seen at the bottom of Table W-6, about 620,000 of these would require reversal of female sterilization, 250,000 male reversal, and 16,000 reversal surgery for both partners.

children. Of all women who would like reversal, the majority are age 25-29 (30 percent) or 30-34 (32 percent).

Sterilized black women are no more likely than non-black women to desire more children, but of those who do want more children, a higher proportion of the blacks say they are willing to undergo reversal surgery in order to have the children. Thus, 17 percent of black women compared to nine percent of non-black women would like reversals, and blacks make up 18 percent of the women who would choose reversal.

Almost half (49 percent) of the sterilized Hispanic women would like more children, and a majority of these (61 percent) would choose reversal. In all, 30 percent of the sterilized Hispanics say they would like reversal, compared to nine percent of non-Hispanic women. This is a striking cultural difference that requires further research before one can be confident of the correct interpretation. For example, it has been suggested that some Hispanic women may express sterilization regret in order to satisfy the dictates of their religion, but would not in fact seek to have the sterilization reversed.

Women who are not currently married are more likely than married women to express a desire for reversal (21 vs. eight percent), possibly reflecting changes in plans of those who are separated, divorced or widowed. Nevertheless, because most sterilized women are married, two-thirds of the women desiring reversal are married. Some may have married or remarried after being sterilized.

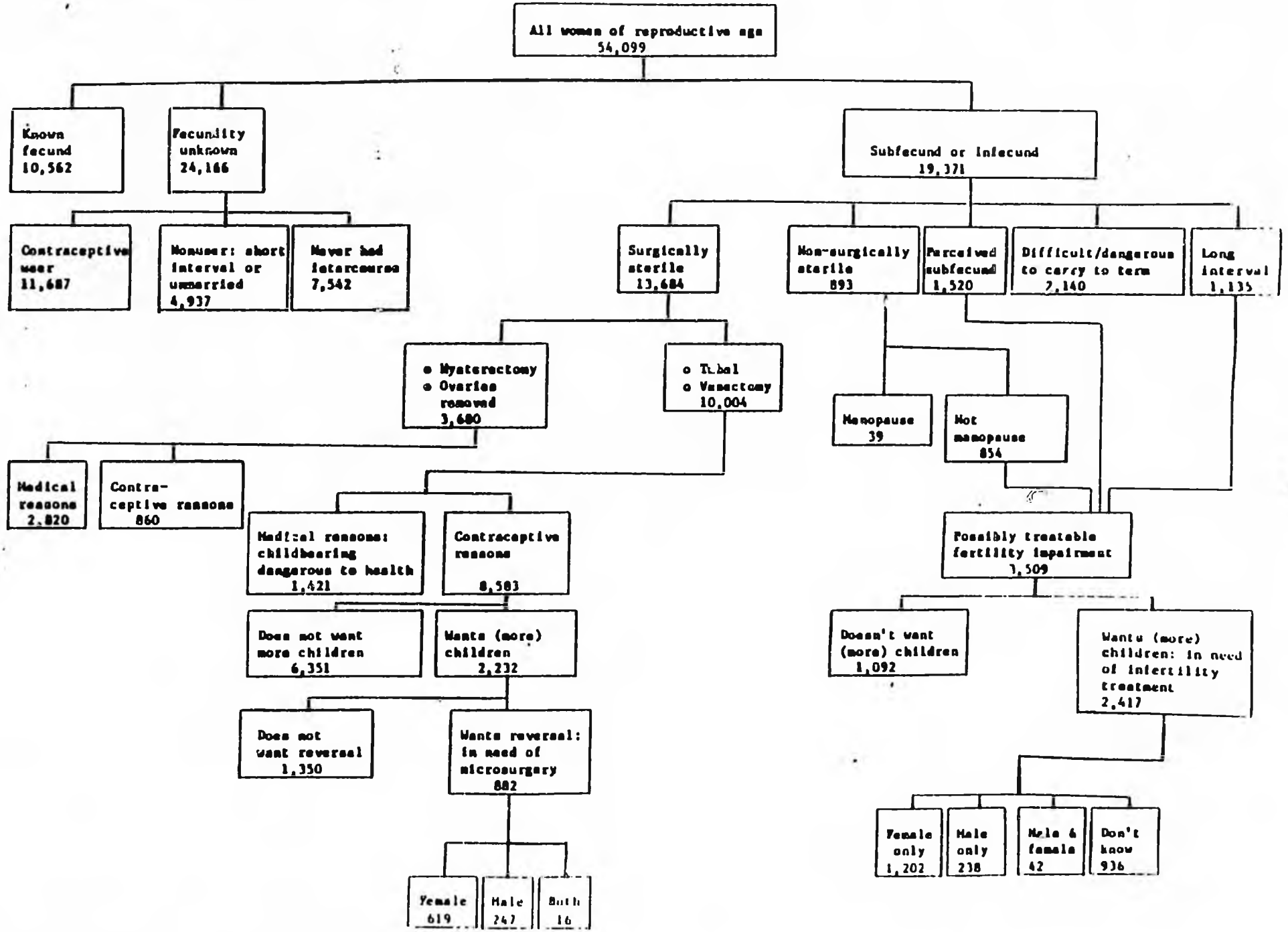
It appears that couples where the woman is nulliparous are more likely than those with children to desire reversal, but the difference is not statistically significant because there are so few nulliparous women who are sterilized themselves or whose husband has had a vasectomy.

Geographic location has no statistically significant relation to desire for reversal, although the Northeast appears to be lower than the other regions on this variable.

Poor women are more likely than other women to say they would like to have their sterilizations reversed (17 vs. 8 percent), both because they are more likely to want more children and to want a reversal, and 35 percent of those desiring reversal are under 150 percent of the poverty level. When age is controlled, the difference in the proportion wanting more children disappears but, among those who want more children, the poor are more likely to want reversal, although the difference is no longer statistically significant. Since poverty is correlated with race and Hispanic ethnicity, it is possible that some of the poverty status difference is caused by cultural differences rather than economic factors.

Twenty-eight percent of sterilized Medicaid recipients desire reversals, as compared to nine percent of other women, reflecting a higher proportion of Medicaid recipients desiring more children and, among those wanting more children, a much higher proportion wanting reversal. About 130,000 women, 15 percent of the total, are Medicaid recipients who desire reversal.

Chart 1: Classification of all Women Aged 15-44 by Their Fecundity Status and Need for Infertility Services



Note. Numbers in boxes are numbers of women in thousands

Table W 1: Number of Women 15-44 Years of Age and Percentage Distribution by Fecundity Status, According to Various Characteristics, United States, 1982

Characteristics	Total Women (000's)	Total	Fecundity Unknown: Known Fecund	Fecundity Unknown: Contraceptive User	Fecundity Unknown: Non-User	Fecundity Unknown: Not Sexually Active	Subfecund or Infecund: Total	Surgically Sterile: Contraceptive	Surgically Sterile: Non-contraceptive	Non-surgically Sterile	Perceived Subfecund	Difficult/Dangerous to Carry to Term	Long Interval: Total	Long Interval: 36+ Mos.	Long Interval: 24-35 Mos.	Long Interval: 12-23 Mos.
All Women	54,099	100	19.5	21.4	9.1	13.9	35.9	17.5	7.8	1.7	2.8	4.0	2.1	1.1	0.3	0.7
Years of Age																
• 15-19	9,521	100	15.0◆	15.9◆	11.5◆	54.7◆	2.8◆	+◆	0.0◆	*0.5◆	*0.9◆	*1.3◆	*0.1◆	+◆	+	*0.1
• 20-24	10,629	100	29.9	20.1	12.0	14.7	14.3	3.7	*0.6	*0.9	2.7	4.0	2.4	*0.2	*0.5	*1.7
• 25-29	10,263	100	32.5	26.0	8.4	3.1	29.0	12.1	3.7	*1.5	4.1	5.1	2.5	*1.0	*0.6	*0.9
• 30-34	9,381	100	21.0	21.3	7.6	*2.0	48.2	26.8	10.1	*1.7	4.0	3.6	*2.0	*1.0	*0.2	*0.8
• 35-39	7,893	100	7.0	16.6	6.7	*1.8	68.1	35.2	18.4	3.1	3.1	5.5	*2.8	*2.4	+	*0.4
• 40-44	6,412	100	*1.4	15.8	7.4	*1.0	73.6	39.4	21.8	*3.0	*1.7	4.5	*3.2	*2.9	0.3	+
Race																
• Black	6,985	100	21.0	22.3	13.1◆	10.3◆	33.1	14.8◆	7.3	1.5	2.4	4.5	2.7	1.4	*0.5	*0.8
• Non-black	47,114	100	19.3	21.5	8.5	14.5	36.2	17.8	7.9	1.7	2.9	3.9	2.0	1.0	*0.3	0.7
Ethnicity																
• Hispanic	4,393	100	27.0◆	16.1◆	9.1	15.0	32.9	12.1◆	6.1	*2.1	3.6	6.0	*3.0	*1.8	*0.1	*1.1
• Non-Hispanic	49,706	100	18.9	22.1	9.1	13.8	36.0	17.9	8.0	1.6	2.7	3.8	2.0	1.0	*0.3	0.7
Marital Status																
• Currently married	28,231	100	25.9◆	19.3◆	2.0◆	0.0	52.6◆	27.8◆	11.0◆	2.0	3.3	4.7	3.8◆	2.0◆	*0.8	*1.1◆
• Not currently married	25,868	100	12.8	24.1	16.9	29.2	17.3	6.1	4.4	1.2	2.2	3.1	*0.3	*0.1	*0.1	*0.1
Parity																
• 0 births	22,941	100	8.9◆	30.0◆	15.2◆	32.9	13.2◆	1.4◆	1.7◆	2.5◆	3.7◆	2.4◆	1.5◆	*0.7	*0.2	*0.6
• 1 or more births	31,158	100	27.4	15.5	4.6	0.0	52.7	29.3	12.4	1.1	2.2	5.1	2.6	1.4	*0.4	0.8
Want (More) Children																
• No	20,781	100	17.1◆	20.4	6.2◆	3.3◆	52.9◆	33.8◆	8.9	1.7	2.1	4.8	1.6	1.4	*0.1	*0.1◆
• Yes	33,318	100	21.0	22.4	11.0	20.6	25.0	7.2	7.2	1.6	3.2	3.4	2.4	0.9	*0.4	1.1

(cont.)

Table W 1 (cont.): Number of Women 15-44 Years of Age and Percentage Distribution by Fecundity Status, According to Various Characteristics, United States, 1982

Characteristics	Total Women (000's)	Fecundity Unknown				Subfecund or Infecund								
						Surgically Sterile					Difficult/ Dangerous to Carry to Term	Long Interval		
		Total	Known Fecund	Contraceptive User	Non-User	Not Sexually Active	Total	Contraceptive	Non-contraceptive	Non-surgically Sterile	Perceived Subfecund		Total	36+ Mos.	24-35 Mos.	12-23 Mos
Metro Status																
o Metrop.	43,199	100	19.4	21.9	9.5	14.4	34.8◊	17.0	7.4	1.7	2.9	3.6	2.2	1.1	*0.3	0.8
o Nonmetrop.	10,900	100	20.2	20.3	7.6	12.2	39.6	19.3	9.6	*1.4	2.5	5.2	*1.6	*0.9	*0.2	*0.5
Region																
o Northeast	11,852	100	18.1	25.8◊	10.8	16.9◊	28.5◊	14.2◊	5.1◊	*0.9◊	2.0	3.5	2.8	*1.6	*0.3	*0.9
o Northcentral	13,981	100	18.9	20.6	8.3	14.4	37.8	19.2	8.5	1.7	3.3	3.6	*1.5	*0.6	*0.3	*0.6
o South	17,308	100	19.7	20.7	7.9	12.2	39.6	18.2	9.7	1.6	2.6	5.1	2.4	*1.3	*0.4	*0.7
o West	10,958	100	21.5	19.7	10.4	12.9	35.5	17.5	7.1	2.5	3.5	3.1	*1.8	*0.9	*0.2	*0.7
Poverty Status																
o <150% of poverty	13,843	100	26.4◊	16.5◊	12.3◊	14.1	30.5◊	13.9◊	7.4	*0.8◊	1.7◊	5.0	1.7◊	0.8	*0.2	*0.7
o >150% of poverty	40,256	100	17.1	23.4	8.0	13.9	37.6	18.7	8.0	1.9	3.2	3.6	2.2	1.2	*0.3	0.7
Poverty by Age																
<30, <150%	9,503	100	33.7§	17.9§	12.4	20.1§	16.0	5.8	*1.9	*0.7	*1.5§	4.4	*1.7	*0.4	*0.3	*1.0
<30, ≥150%	20,910	100	32.7	27.1	9.8	24.8	15.5	5.2	1.3	*1.1	3.1	3.1	1.7	*0.4	*0.4	*0.9
≥30, <150%	4,340	100	10.6	13.3§	12.2§	*0.9	63.1	31.7	19.6	*1.1	*2.3	6.4	*2.0	*1.8		*0.2
≥30, ≥150%	19,346	100	11.1	19.4	6.1	2.1	61.4	33.3	15.2	2.8	3.3	4.1	2.7	2.0	*0.2	*0.5
Medicaid Status																
o on Medicaid	3,964	100	36.8◊	12.3◊	11.3	6.8◊	32.9	13.4	10.2	*1.1	*1.6	*5.4	*1.1	*0.1◊	*0.1	*0.9
o not on Medicaid	50,135	100	18.2	22.3	9.0	14.5	36.1	17.8	7.7	1.7	2.9	3.8	2.2	1.2	*0.3	0.7

* Relative standard error is 30 percent or greater

◊ Difference between demographic subgroups is statistically significant ($p < .05$, 2-tailed t-test). For age and region, at least one of the differences is statistically significant.

§ The difference between this percentage and the one immediately below it is statistically significant ($p < .05$, 2-tailed t-test).

Note: + = Less than 0.1 percent

Table W-2: Number and Percentage Distribution of Women 15-44 by Fecundity Status, 1982

	Women (000's)	Percent			
Total	54,099	100.0%			
Known fecund	10,562	19.5			
Fecundity unknown	24,166	44.7	100%		
Contraceptive user	11,687		48		
Non-user (short interval or unmarried)	4,937		21		
Never had intercourse	7,542		31		
Subfecund or infecund	19,371	35.8	100%		
Surgically sterile	13,684		71	100%	
Hysterectomy, ovaries removed	3,680			27	
Tubal, vasectomy	10,004			73	100%
Medical reasons (childbearing dangerous)	1,421				14
Contraceptive reasons	8,583				86
Nonsurgically sterile	893		5	100%	
Menopause	*39			*4	
Not menopause+	854			96	
Perceived subfecund+	1,520		8		
Difficult/dangerous to carry to term	2,140		11		
Long interval+	1,135		16	100%	
36 months or more	586			52	
24-35 months	*154			*14	
12-23 months	395			35	

* Relative standard error is 30 percent or greater

+ Possibly treatable fertility impairment

Table W-3: Number and Percentage of Women with Possibly Treatable Infertility Problems Who Want (More) Children, by Type of Problem, Sex of Person Needing Treatment and Infertility Services Received, United States, 1982

	Total Treatable, Infertile		Non-surgically Sterile+		Perceived Subfecund		Long Interval	
	#(000's)	%	#(000's)	%	#(000's)	%	#(000's)	%
Total	3,509	100	854	100	1,520	100	1,135	100
Want (more) children	2,417	69	530	62	1,082	71	806	71
Of those who want more children, person needing treatment								
Total	2,417	100%	530	100%	1,082	100%	806	100%
Female only	1,202	50	263	50	939	87	0	0
Male only	238	10	164	31	*74	*7	0	0
Both	*42	*2	*10	*2	*31	*3	0	0
Not known/Not asked	936	39	*92	*17	*38	*4	806	100
Among those who want more children, services received	2,417	100%	1,082	100%	530	100%	806	100%
Advice	387	16	*143	*27	*188	*17	*56	*7
Treatment	787	33	*219	41	401	37	*168	*21
None	1,242	51	*168	32	493	46	581	72

* Relative standard error is 30 percent or greater

+ Excludes menopause

Table W-4: Number and Percentage Distribution of Women in Need of Infertility Services, by Selected Characteristics, United States, 1982

Characteristic	In Need of Infertility Services+	
	#(000's)	%
All Women	2,417	100
Years of Age		
o 15-19	*115	*5
o 20-24	564	23
o 25-29	751	31
o 30-34	529	22
o 35-39	337	14
o 40-44	*120	*5
Race		
o Black	268	11
o Non-black	2,149	89
Ethnicity		
o Hispanic	282	12
o Non-Hispanic	2,134	88
Marital Status		
o Currently married	1,803	75
o Not currently married	614	25
Parity		
o 0 births	1,422	59
o 1 or more births	995	41
Metro Status		
o Metropolitan	1,982	82
o Nonmetropolitan	435	18
Region		
o Northeast	440	18
o Northcentral	694	29
o South	765	32
o West	519	21
Poverty Status		
o <150% of poverty	374	15
o >150% of poverty	2,043	85
Medicaid Status		
o on Medicaid	*101	*4
o not on Medicaid	2,316	96

* Relative standard error is 30 percent or more

+ Those who have possibly treatable fertility impairment (other than surgical sterilization) and want more children

Table W-5: Percentage of Women in Need of Infertility Services, Percent Who Have Received Services, and Number in Need Who Have Not Received Services, by Various Characteristics, United States, 1982

Characteristics	Total Women	Percent in Need of Infertility Services+	Of Those in Need of Services, Percent Who Have Received Services	Women in Need Who Have not Received Servic
	#(000's)	%	%	#(000's)
All Women	54,099	4.5	4[illegible]	1,242
Years of Age				
o 15-19	9,521	*1.2♦	*10♦	103
o 20-24	10,629	5.3	*29	398
o 25-29	10,263	7.3	48	392
o 30-34	9,381	5.6	69	167
o 35-39	7,893	4.3	57	145
o 40-44	6,412	*1.9	70	36
Race				
o Black	6,985	3.8	30♦	187
o Non-black	47,114	4.6	51	1,056
Ethnicity				
o Hispanic	4,393	6.4	*39	172
o Non-Hispanic	49,706	4.3	50	1,070
Marital Status				
o Currently married	28,231	6.4♦	57♦	776
o Not currently married	25,868	2.4	24	466
Parity				
o 0 births	22,941	6.2♦	54	647
o 1 or more births	31,158	3.2	40	595
Want (More) Children				
o Yes	33,318	7.3	49	1,242
o No	20,781	-	-	
Metro Status				
o Metropolitan	43,199	4.6	46	1,065
o Nonmetropolitan	10,900	4.0	59	177
Region				
o Northeast	11,852	3.7	39	266
o Northcentral	13,981	5.0	50	346
o South	17,308	4.3	54	348
o West	10,958	4.7	46	282

(cont.)

Table W-5 (cont.): Percentage of Women in Need of Infertility Services, Percent Who Have Received Services, and Number in Need Who Have Not Received Services, b Various Characteristics, United States, 1982

Characteristics	Total Women	Percent in Need of Infertility Services+	Of Those in Need of Services, Percent Who Have Received Services	Women in Need Who Have not Received Servic
	#(000's)	%	%	#(000's)
Poverty Status				
o <150% of poverty	13,843	2.7#	*26#	277
o ≥150% of poverty	40,256	5.1	53	965
Poverty by Age				
o <30, <150% poverty	9,503	3.1§	*26	217
o <30, ≥150% poverty	20,910	5.5	41	677
o ≥30, <150% poverty	4,340	*1.9	*27	60
o ≥30, ≥150% poverty	19,346	4.7	68	288
Medicaid Status				
o on Medicaid	3,964	*2.5	*25	75
o not on Medicaid	50,135	4.6	50	1,167

+ Those with a possibly treatable fertility impairment other than surgical sterilization) who want more children.

* Relative standard error is 30 percent or more.

Difference between subgroups is statistically significant ($p < .05$). For age, at least one of the differences is statistically significant.

§ The difference between this percentage and its one immediately below it is statistically significant ($p < .05$).

Table W-6: Of Couples Who Are Contraceptively Sterilized (Tubal or Vasectomy), Percent Who Want More Children, and Percent, Number and Percentage Distribution of Those who Want Reversal, by Various Characteristics, United States, 1982

Characteristics	Women Contracep. Sterilized #(000's)	Percent Who Want More Children	Want Reversal and Went More		
			%	Number	% Distrib.
All Women	8,583	26	10.3	882	100
Years of Age					
o 15-19	0	-	-	-	-
o 20-24	388	42◆	*11◆	*42	*5
o 25-29	1,221	41	22	269	30
o 30-34	2,351	32	12	285	32
o 35-39	2,441	21	*7	*163	*18
o 40-44	2,183	13	*6	*123	*14
Race					
o Black	916	28	17◆	160	*18
o Non-black	7,667	25	9	722	82
Ethnicity					
o Hispanic	511	49◆	*30◆	151	*17
o Non-Hispanic	8,072	24	9	731	83
Marital Status					
o Currently married	7,177	25	8◆	587	67
o Not currently married	1,406	31	21	295	33
Parity					
o 0 births	318	*39	*22	*70	*8
o 1 or more births	8,265	25	10	812	92
Metro Status					
o Metropolitan	6,639	25	9	625	71
o Nonmetropolitan	1,944	26	13	257	29
Region					
o Northeast	1,599	26	*6	*91	*10
o Northcentral	2,502	23	9	*213	24
o South	2,772	27	14	389	44
o West	1,709	26	*11	*189	*21

(cont.)

Table W-6 (cont.): Of Couples Who Are Contraceptively Sterilized (Tubal or Vasectomy), Percent Who Want More Children, and Percent, Number and Percentage Distribution of Those Who Want Reversal, by Various Characteristics, United States, 1982

Characteristics	Women Contracep. Sterilized #(000's)	Percent Who Want More Children	Want Reversal and Want More		
			%	Number	% Distrib.
Poverty Status					
o <150% of poverty	1,757	30	17#	305	35
o >150% of poverty	6,826	25	8	577	65
Poverty by Age					
o <30, <150% poverty	543	41	*22	*121	*14
o <30, >150% poverty	1,066	41	18	*190	22
o >30, <150% poverty	1,214	25	*15	*184	*21
o >30, >150% poverty	5,760	22	7	387	44
Medicaid Status					
o On Medicaid	466	40	*28#	*132	*15
o Not on Medicaid	8,117	25	9	750	85
Sterilized Person					
Female	5,535	26	11	619	70
Male	2,979	25	8	247	28
Both	*69	*24	*24	*16	*2

* Relative standard error is 30 percent or greater

Difference between demographic subgroups is statistically significant ($p < .05$). For age, at least one of the differences is statistically significant.

IV. Infertility Services: Comparison of Providers

A. Introduction

The resolution of an infertility problem can be a long ordeal, involving tests, drug therapy or surgery to aid couples in conceiving. In cases not resulting from surgical procedures, the infertility problems which are female-related are usually caused by infections and resulting damage or blockage of the fallopian tubes, hormone or ovulation disorders, and endometriosis. Male infertility is most often caused by poor sperm quantity and quality due to blockage of sperm ducts or disorders in sperm production. In some cases, both partners may have problems which result in their infertility. 9/

To determine the scope of infertility services available, physicians and other health care providers were asked which of a range of services they provided, from preliminary screening tests to microsurgery. The procedures cover the more common ones used to diagnose and treat patients whose infertility problems are ovulatory, semen-related or result from tubal or uterine obstruction.

Infertility care often begins with an investigation of a women's ovulation, starting with basal body temperature instruction, for which a woman records information about her ovulation by systematically taking her temperature. If a physician concludes that the woman needs hormonal stimulation to ovulate, Clomid (clomiphene citrate) may be prescribed. If this drug treatment fails, a more potent treatment, prescription of Pergonal (gonadotropins) is necessary; this expensive treatment requires daily monitoring by evaluating urine or blood estrogen levels.

If a physician suspects that the woman is infertile because of blocked or damaged fallopian tubes or other uterine problems, he or she might try to ascertain if the couple has had any general infection or currently has an infection, possibly asymptomatic, gonorrhea or chlamydia. The physician may also use several procedures to examine the uterus and fallopian tubes, including: hysterosalpingogram (which involves injecting a dye into the uterus to detect through x-rays existing blockage of the fallopian tubes), sonography (to get a picture of the uterus), and laparoscopy (the insertion of a thin tube through a small incision to identify visually or through specimens inflamatory disease, endometriosis, ovarian growths, or other damage to the fallopian tubes). Surgery, such as female tubel reconstructive surgery, may be required to repair existing damage. Surgery is also needed to reverse female or male surgical sterilization.

Often, a couple's fertility problems are semen-related and can be diagnosed through a series of tests: a semen analysis (to determine the quantity and quality of sperm in the male's semen); a postcoital test (to determine if the women's cervical mucus is sufficiently fluid and if the man's sperm are healthy enough for ovum penetration); and a sperm antibody test (to determine whether the woman is producing antibodies which prevent the sperm from reaching the site of fertilization). If the husband's/partner's infertility is the result of tubel damage, male microsurgery can be performed. If the problem cannot be resolved, the couple may elect to undergo artificial insemination by a donor. Although this is a simple medical procedure, it requires access to a sperm bank or donor services and may have to be repeated a number of times.

According to the guidelines to Title X of the Public Health Service Act, which provides funding for family planning services, family planning service grantees are required to make basic infertility services available to clients requesting such services. The services that may be supported by Federal funds are categorized into three levels of service. These are:

- Level I (initial infertility interview, education, physical examination, lab tests, counseling, and referral),
- Level II (semen analysis, basal body temperature instruction, endometrial biopsy, postcoital testing), and
- Level III (more sophisticated and complex services).

Title X grantees must provide at least the services included at Level I. Only grantees with infertility programs supervised by physicians with special infertility training can offer Level II or Level III services. The guidelines caution providers about the expense of such procedures and the medical and legal risks involved, implicitly discouraging the use of Title X funds to provide Level II and Level III services.

For purposes of the analysis, family planning agencies and other medical providers that provide none of these services or only infertility counseling were categorized as nonproviders of infertility services. Providers were classified according to the highest level of any infertility service they provide. However, basal body temperature instruction was regrouped with Level I, since almost all of those who provide Level I procedures also provide basal body temperature instruction but often none of the Level II or Level III procedures or services.

The allocation of the procedures about which medical providers were queried to specific levels for this analysis is as follows:

Level I
- Counseling, education, information
- Physical exam, women
- Physical exam, men
- Basal body temperature instruction
- Infection investigation

Level II
- Semen analysis
- Postcoital test
- Endometrial biopsy

Level III
- Sperm antibody test
- Clomiphene (medical drug therapy)
- Gonodotropin (hormone treatment)
- Hysterosalpingogram
- Laparoscopy
- Sonography
- Varicocelectomy
- Female microsurgery
- Male tubal reconstructive surgery
- Artificial insemination, by donor
- Genetic counseling, screening
- In vitro fertilization

Not all of the tests and procedures were included in the survey of physicians and the survey of family planning agencies.

While infertility treatment can entail just the minimal cost of education and counseling, patients often need more extensive tests or surgery costing thousands of dollars. 10/ One infertility specialist estimates that his patients average four weeks of diagnosis and 18 weeks of therapy, costing an average of $2,650. 11/ Such medical care is beyond the financial means of many poor couples unless offered at a reduced fee.

Medicaid is a major source of public funding to medical providers for this service. Many providers are unwilling or unable to accept Medicaid for infertility services because of state-defined limits on the services covered, low reimbursement rate schedules and inconvenient reimbursement procedures.

An additional problem is that some patients may need more than one provider who accepts Medicaid. A complete understanding of a couple's infertility may not be apparent until each partner has undergone a series of tests and treatments to resolve the problem. Such treatment may require visits to several physicians, since many physicians provide only preliminary male and female tests, while few perform more specialized tests and procedures.

Medicaid eligibility requirements make it unlikely that many poor men and women can receive infertility care. Having at least one dependent child and being unmarried is the main way in which poor women of reproductive age qualify for Medicaid coverage; as was shown in Table W-5 of the previous section, they probably need infertility services less than other women of this age. Among women needing infertility care, the number eligible for Medicaid-reimbursed infertility services is equal to only 27 percent of the number of low-income women (Table W-4). Those who are eligible and need services have an additional difficulty obtaining care because it is unclear which tests or procedures are reimbursable under Medicaid. Thus, many poor women who need infertility services are unable to receive free care through their state Medicaid program and must rely on other public funds or forgo services.

B. Private Physicians

Often, the physicians couples consult first if they perceive a fertility problem are obstetrician/gynecologists or general/family practitioners. They may then be referred to urologists or general surgeons, or they may go to these specialists directly if they suspect that the problem is with the male partner. The AGI survey shows (in Table P-1) that a substantial number of physicians in these four groups provide infertility care, although, as will be seen below, many provide only preliminary tests and procedures. Ninety-six percent of obstetrician/gynecologists and 92 percent of urologists provide at least some infertility tests and services as part of their private office practice, while just 35 percent of general/family practitioners and only six percent of the general surgeons do so. There are approximately 45,500 physicians nationally (45 percent of all physicians in the four specialties) who perform some infertility therapy (see Table P-1).

Nonmetropolitan-area physicians are slightly more likely than metropolitan-areas ones to offer infertility services, particularly among general/family practitioners and general surgeons. About 27 percent of the physicians who provide infertility care practice in nonmetropolitan areas (not shown), somewhat more than the 18 percent of women in need of infertility services who live in nonmetropolitan areas (Table W-4). Nevertheless, if a rural woman lives in a community with only one general practitioner, she has only a 47 percent chance of being able to obtain infertility services within her community, while almost all metropolitan areas undoubtedly have at least one obstetrician/gynecologist who provides these services.

Physicians who practice in the Northcentral and Western regions (see Table P-1) and younger physicians (data not shown) are slightly more likely than others to treat infertility problems.

1. Procedures and Tests.

Table P-2 shows the percentage of all physicians, by specialization, region and metropolitan status who provide specific infertility tests and procedures, grouped according to the categorization described above. Thirty-seven percent of physicians in the specialties surveyed provide at least one of the preliminary, Level I procedures (basal body temperature instruction and infection investigation) and 29 percent provide both. Most obstetrician/gynecologists (82 percent) provide both services, while no more than 22 percent of the other two specialties provide both. Physicians practicing in the Northcentral and Western Regions are more likely to provide these services than are those practicing elsewhere. Nonmetropolitan-area physicians are slightly more likely than those in metropolitan areas to provide basal body temperature instruction.

Physicians were asked about two Level II diagnostic tests - semen analysis and postcoital tests. Physicians in the specialties surveyed were more likely to perform at least one Level II test (42 percent) than a Level I test, mainly because 83 percent of urologists do semen anlysis, while the Level I procedures fall outside this specialty. Semen analysis, although classified as a Level II service, is performed by as many physicians as provide the Level I services, including 32 percent of general/family practitioners and 71 percent of ob/gyn's, as well as by 83 percent of the urologists. However, relatively few physicians other than ob/gyn's perform postcoital tests. The regional differences in the percentage of physicians performing Level II tests are similar for those of Level I tests, but the differences by metropolitan status are not statistically significant.

Physicians were asked about nine more specialized Level III tests and procedures for diagnosing and treating fertility problems. Except for male tubal reconstructive surgery, these procedures are provided predominantly by ob/gyn's. Two-thirds or more of physicians in this specialty provide clomiphene therapy, hysterosalpingograms, laparoscopy, and sonography. About half provide treatment with gonadotropin, and a third do female microsurgery and artificial insemination by donor.

Sixty-two percent of the urologists, but almost none of the other specialties, perform male tubal reconstructive surgery. Consequently, almost no physicians provide all the Level III procedures asked about.

Only 21 percent of the general/family practitioners provide even one of the Level III procedures. Clomiphene is provided most often by this group (14 percent). Overall, the general/family practitioners appear not to be an important source of specialized infertility care.

Regional differences in the percentage of physicians offering Level III services are minor. However, metropolitan physicians are more likely than those in nonmetropolitan areas to provide all the services except clomiphene therapy.

2. Number of Patients Served Annually.

In the survey of private physicians, respondents were asked to state the approximate number of infertility patients they served in 1982. Projecting the number nationally gives an estimate of 1,550,000 patients served (see Table P-3). The number of unduplicated couples who received services would have been lower than this, since many patients were undoubtedly seen by more than one physician, and both partners may have received services. There may

also be some tendency on the part of physicians to overestimate the number of patients served. Some may have responded in terms of patient visits rather than patients. Data from the National Survey of Family Growth produce an estimate of 1,200,000 couples who consulted a physician about infertility problems in 1981. About 21 percent of these patients received services from a hospital or clinic physician not included in the AGI survey of private physicians, leaving an estimated 950,000 couples who consulted private physicians. When the differences in data sources are taken into account, the results from the NSFG and the AGI survey are not necessarily contradictory.

The number of infertility patients seen varies widely among physicians. The large majority (84 percent) of the general/family practitioners and general surgeons who provide these services reported that they see no more than one infertility patient a month (Table P-3). The average number of patients they saw in 1982 was only nine. Obstetrician/gynecologists and urologists tend to see more, the average being 50 and 56, respectively. Eleven percent of the ob/gyn's and 17 percent of the urologists reported having seen 96 or more infertility patients in 1982. Some of these may specialize in infertility services. The number of patients seen in 1982 ranged as high as 960 for ob/gyn's and 1,200 for urologists.

Based on estimates from this survey, 66 percent of infertility patients receiving services through private physicians are served by obstetrician/gynecologists. Urologists, who represent 13 percent of the four groups who provide infertility services, serve 22 percent; the remainder of the infertility patients are served by general/family practitioners and general surgeons.

Non-metropolitan physicians see fewer patients on average than do physicians in metropolitan areas. Physicians who offer a greater number of infertility tests and procedures tend to serve more infertility patients than do those who have a more limited treatment practice (not shown).

3. Referral Policies.

Given that most physicians who provide infertility care perform only the more preliminary tests and procedures, access to more specialized care depends in part upon the referrals physicians make. Most physicians who provide infertility services will refer patients elsewhere when necessary, usually to another physician. Only three percent say they do not refer female patients for infertility services, and an additional five percent say they have never been asked (see Table P-4). Most of those who have not been asked are urologists, who have little contact with female patients. Most physicians (68 percent) refer female patients to another physician, while some (23 percent) refer to a hospital or infertility clinic which presumably provides specialized infertility services.

Obstetician/gynecologists are more likely than general practitioners to refer female patients to infertility centers or clinics. Since many obstetrician/gynecologists provide relatively complex services for females, when referral is necessary it is often to a facility which specializes in infertility services. Obstetrician/gynecologists, physicians who practice in the South, and those who serve more than 12 infertility patients a year are more likely than others to refer their female infertility patients to a center or hospital rather than to another physician. Forty-two percent of urologists who provide infertility services report they have never been asked to refer female patients, so far fewer of these specialists refer elsewhere.

Almost all physicians who provide infertility services refer their male as well as female patients elsewhere, if necessary: 73 percent to a private physician and 21 percent to a center or hospital (see Table P-5). Three percent do not refer and three percent reported never having been asked to do so. Urologists tend to refer to specialized centers, while the other specialties refer male patients to other physicians, presumably often urologists. Urologists, nonmetropolitan-area physicians and those who serve more than 12 infertility patients annually are more likely than others to refer patients to a center or hospital, rather than to another physician. Sixteen percent of the urologists do not refer male infertility patients elsewhere, which may reflect either the range of services they provide or the requests they have received.

Physicians may not always have the option of referring their infertility patients elsewhere. Nine percent of the physicians who treat infertility problems explained that they sometimes do not refer because the cost of further treatment is prohibitive to their patients, that laboratory facilities are inadequate or that needed treatment is unavailable. Nonmetropolitan-area physicians, general/family practitioners and general surgeons and those who practice in the West are more likely than others to cite these referral problems (data not shown).

4. Financial Access.

Due to the potentially high cost of infertility care, most low-income patients can gain access to services only in facilities which use a sliding fee schedule or, if they are Medicaid-eligible, which accept Medicaid. Otherwise, there is little possibility that they will be able to obtain any infertility services beyond a preliminary evaluation.

The survey results suggest that few women are able to obtain services from private doctors at reduced fees (see Table P-6). Only nine percent of the obstetrician/gynecologists and 11 percent of the urologists provide infertility services and are willing to reduce their fees, and even fewer in the other specialties surveyed do so. Slightly more of the nonmetropolitan physicians provide infertility services at a reduced fee, but even in this group fewer than one in ten do so. No significant differences by region were evident.

Access is somewhat greater for Medicaid-eligible couples. Overall, 21 percent of physicians provide infertility care for which they accept Medicaid reimbursement; 32 percent of obstetrician/gynecologists and 44 percent of urologists do so (see Table P-7). Again, nonmetropolitan physicians are more likely to treat infertility problems and accept Medicaid. Generally, physicians who practice in the Northcentral region are more likely than other physicians to provide infertility services under Medicaid.

Table P-1: Number and Percentage of Physicians Who Provide Infertility Services, According to Their Specialty and Practice Location

Location	Number Who Provide Infertility Services					Percentage Who Provide Infertility Services				
	Total	General/Family Practitioners	Obstetrician/ Gynecologists	General Surgeons	Urologists	Total	General/Family Practitioners	Obstetrician/ Gynecologists	General Surgeons	Urologists
Unweighted N	1,508	220	573	281	434	1,508	220	573	281	434
Total	45,500	17,500	20,600	1,400	6,100	45%^	35%	96%	6%	92%
Metropolitan status										
Metropolitan	33,400	10,100	17,900	900	5,200	44	30^^	96	5	92
Nonmetropolitan	11,900	7,600	2,700	500	1,000	47	47	97	10	94
Region										
Northeast	8,600	-	4,800	-	1,400	41	-	94	-	93
Northcentral	12,900	-	4,600	-	1,400	52	-	98	-	96
South	13,200	-	6,600	-	2,100	40	-	95	-	88
West	11,000	-	4,500	-	1,300	50	-	98	-	94

- Too few to estimate; sample was not selected for regional estimates by this specialty.
^ Differences between specialties are statistically significant (p. <.05).
^^ Difference between metropolitan status groups is statistically significant (p. <.05).

Table P-2: Percentage of All Physicians That Provide Various Infertility Tests and Procedures, Grouped According to Levels, by Specialty and Region

Services by Level	Total	Specialization				Region				Metropolitan Status	
		General/ Family Practitioners	Obstetrician/ Gynecologist	Gen'l Surgeons	Urologists	North-east	North-central	South	West	Metro	Nonmetro
Unweighted N	1508	220	573	281	434	330	355	506	317	1088	420
Percentage who provide at least one service	45%	35%[a]	96%	6%	92%	41%	52%	40%	50%	44%	47%
Level I											
• Includes:											
- Basal body temperature instruction	36	32[a]	94	3	NA	33	44	31	39	35	41
- Infection investigation	30	23[a]	83	4	NA	28	35	27	31	29	31
• Percentage who provide at least one Level I procedure	37	32[a]	95	6	NA	32	44	33	40	35	42
• Percentage who provide all Level I procedures	29	22[a]	82	2	NA	26	35	25	30	28	30
Level II											
• Includes:											
- Semen analysis	37	32[a]	71	5	83	32	45	31	44	36	41
- Postcoital test	25	12[a]	87	1	NA	25	27	22	27	26	22
• Percentage who provide at least one Level II procedure	42	33[a]	92	5	83	38	49	37	46	41	44
• Percentage who provide all Level II procedures	20	11[a]	65	1	0	17	23	16	25	20	18

Table P-2 (Con't.)

Services by Level	Total	Specialization				Region				Metropolitan Status	
		General/ Family Practitioners	Obstetrician/ Gynecologist	Gen'l Surgeons	Urologists	North-east	North-central	South	West	Metro	Nonmetro
Level III											
• Includes											
- Sperm antibody test	12	7[a]	33	1	28	12	14	10	15	14[@]	7
- Clomiphene (medical drug therapy)	27	14[a]	91	1	NA	26	30	26	26	27	26
- Gonadotropin (hormone treatment)	12	4[a]	46	2	NA	11	12	13	11	13	9
- Hysterosalpingogram	24	8[a]	89	3	NA	22	26	22	24	25	20
- Laparoscopy	19	2[a]	85	2	NA	25	17	20	19	22	12
- Sonography	18	7[a]	66	2	NA	20	17	16	20	20	12
- Female microsurgery	7	+[a]	33	1	NA	8	6	8	9	9	4
- Male tubal reconstructive surgery	5	+[a]	1	1	62	4[aa]	5	5	6	5	3
- Artificial insemination, by donor	8	2[a]	34	0	4	8	6	8	11	9[@]	6
• Percentage who provide at least one Level III procedure	36	21[a]	95	5	69	33	39	34	39	37	34
• Percentage who provide all Level Three procedures	+	+	1	0	0	0	+	0	1	1	0

Note: The three levels used to group procedures are based on the Title X categorization of procedures for family planning agencies.

NA = Not asked of this specialty.

\+ Less than one percent.
[a] Statistically significant difference between specialties ($p < .05$)
[aa] Statistically significant difference between regions ($p < .05$)
[@] Statistically significant difference between metro statuses ($p < .05$)

Table P-3: Percentage Distribution of Physicians Who Provide Infertility Services by the Number of Infertility Patients They Reported Serving Annually, and Characteristics of Their Annual Infertility Patient Caseload, by Specialty

Infertility Patients	Total	General/Family Practitioners & General Surgeons	Obstetrician/ Gynecologists	Urologists
Unweighted N	989	92	520	377
o Number Served in 1982				
- Fewer than 13	50%	84%	26%	26%
- 13 to 24	13	6	19	18
- 25 to 48	17	8	24	22
- 49 to 72	10	0	17	14
- 73 to 96	2	0	3	3
- More than 96	8	1	11	17
- Total	100	100	100	100
o Range of patients served	1-1200	1-100	1-960	1-1200
o Average number served	34	9	50	56
o Median served	12	5	25	25
Percentage who served more than 12 patients				
- Of providers	50%	16	74	74
- Of all physicians	23	6	71	68
Projected national total number of patients served	1,550,000	170,000	1,030,000	340,000

Table P-4: Percentage of Physicians Who Provide Infertility Services: Where They Refer Female Infertility Patients, by Their Specialty, Practice Location, and Number of Patients Served

Physician Characteristics	Another Physician	Center/ Hospital	Never Been Asked	Do Not Refer
Unweighted N	598	280	148	43
Total	68%	23%	5%	3%
Specialty*				
Obstetrician/gynecologists	56	36	1	6
General/family practitioners and general surgeons	87	14	0	0
Urologists	45	12	42	3
Metropolitan status				
Metropolitan	66	24	6	4
Nonmetropolitan	74	22	3	1
Region				
Northeast	70	21	6	4
Northcentral	72	23	4	2
South	60	29	6	5
West	73	20	5	2
Number of Infertility Patients Served Annually*				
More than 12	61	28	7	4
Less than 13	76	19	4	2

* Statistically significant ($p < .05$).

Table P-5: Physicians Who Provide Infertility Services: Where They Refer Male Infertility Patients, by Specialty, Practice Location, and Number of Patients Served

Physician Characteristics	Another Physician	Center/ Hospital	Never Been Asked	Do Not Refer
Unweighted N	666	319	41	80
Total	73%	21%	3%	3%
Specialty*				
Obstetrician/gynecologists	77	19	1	3
General/family practitioners and general surgeons	80	16	5	0
Urologists	38	40	6	16
Metropolitan status*				
Metropolitan	74	19	3	4
Nonmetropolitan	70	24	4	2
Region				
Northeast	77	13	7	4
Northcentral	74	21	3	3
South	68	27	2	4
West	76	19	3	2
Number of Infertility Patients Served Annually*				
More than 12	71	23	1	5
Less than 13	75	19	5	1

* Statistically significant difference ($p < .05$).

Table P-6: Of All Physicians, Percentage Who Provide Infertility Services on a Reduced Fee Basis for Low-Income Patients, by Specialty and Practice Location

Location	Percentage of All Physicians			
	Total	General/Family Practitioners & General Surgeons	Obstetrician/ Gynecologists	Urologists
Unweighted N	1476	494	558	424
Total	6%*	5%	9%	11%
Metropolitan status				
Metropolitan	5	3**	9	11
Nonmetropolitan	9	8	10	15
Region				
Northeast	5	-	9	16
Northcentral	6	-	9	11
South	6	-	10	11
West	8	-	9	9

\- Too few to estimate; sample was not selected for regional estimates by this specialty.
* Statistically significant difference between specialties ($p < .05$)
** Statistically significant difference between metropolitan status groups ($p < .05$)

Table P-7: Of All Physicians, Percentage Who Provide Infertility Services and Accept Medicaid Reimbursement, by Specialty and Practice Location

Location	Percentage of All Physicians			
	Total	General/Family Practitioners & General Surgeons	Obstetrician/ Gynecologists	Urologists
Unweighted N	1490	496	567	427
Total	21%*	16%	32%	44%
Metropolitan status				
Metropolitan	17**	12**	27**	40**
Nonmetropolitan	32	27	60	71
Region				
Northeast	19**	-	33**	49**
Northcentral	29	-	44	54
South	16	-	26	34
West	22	-	27	45

\- Too few to estimate; sample was not selected for regional estimates by this specialty.

* Statistically significant difference between specialties ($p < .05$).

** Statistically significant difference between demographic groups within specialty ($p < .05$).

C. Family Planning Agencies

While the primary purpose of organized family planning agencies is to provide medical contraceptive methods to all women at risk of unintended pregnancy, particularly low-income women, family planning services include other medical prodecures as well. In 1980, nine percent of all family planning patients received no contraceptive method at their last visit because they were pregnant or came for other kinds of care. Ten percent of these patients came for specific infertility services (two percent) or were seeking to be pregnant (eight percent). At least 9,000 patients received infertility services. Title X is a major source of funding for most family planning agencies (76 percent of family planning clinic sites received Title X funds in 1983). 12/ Its guidelines require agencies to provide initial infertility screening services and permit them to use Title X funds, within reason, for more extensive infertility care. Up until now, little information has existed about the scope of infertility services that Title X funds are used for or that are provided by other organized family planning agencies.

The survey conducted for this project indicates that as of 1984, 70 percent of all family planning agencies, representing 1,700 agencies, provided infertility services, ranging from only preliminary screening procedures to comprehensive diagnosis and treatment services (see Table A-1). An additional seven percent provided counseling services only and are not considered here to be infertility service providers. Infertility services other than counseling are provided by 78 percent of all hospital agencies, 76 percent of 'other' agencies, 72 percent of Planned Parenthood affiliates, and 66 percent of health department agencies. Metropolitan-area agencies appear to be more

likely than nonmetropolitan area agencies to provide infertility services (74 and 66 percent, respectively), although the difference is not statistically significant. Agencies providing family planning services in the Northeast and West are more likely than others to include infertility services.

1. Procedures and Tests. Table A-2 lists a range of infertility tests and procedures, grouped according to the Title X Levels (I, II, III). Agencies are classified as providers of each service if they offer it on-site at one of their clinics or off-site but funded through their agency. Hospital agencies are more likely than other family planning agencies to offer each procedure, but often these services are available through hospital clinics other than family planning.

Most agencies provide at least one of the five Level-1 procedures, but only 19 percent provide all five (see Table A-2 for procedures grouped under Level I). Over half of all agencies provide counseling and education, initial physical examination for women, basal body temperature instruction and infection investigation. Only 26 percent provide initial exams for male patients. Health departments are least likely of the four agencies to provide at least one Level I procedure (74 percent vs. 78 to 81 percent). Agencies in the South, where health department agencies are most common, are less likely than those in other regions to provide at least one Level I procedure (71 percent vs. 83 to 87 percent).

Level II includes three tests: semen analysis, post-coital test and endometial biopsy. Only 24 percent of all agencies perform at least one of these tests, including 60 percent of the hospital agencies and 15 to 32 percent of the other three types of agencies (as Table A-2 illustrates). Just

nine percent of the agencies perform all three tests, including 44 percent of the hospital agencies. Agencies in the Northeast and, less so, in the West are more likely to offer such tests, primarily because hospital agencies are more common in these regions.

Eleven Level-III infertility procedures and treatments were asked about in the agency survey (see Table A-2). Thirty-seven percent of the agencies provide at least one of these procedures, most commonly genetic counseling and screening (31 percent), clomiphene drug therapy and sonography (15 percent). Few health departments and Planned Parenthood affiliates provide any of these services, except genetic counseling and screening. Just three percent of all agencies, including 15 percent of the hospital agencies, provide all 11 of these services. Northeastern agencies are far more likely than other agencies to provide each procedure (except genetic counseling, screening); 10 percent of the Northeastern agencies provide all 11 procedures, while less than five percent of the others provide as many.

2. Reasons More Services Are Not Provided and Referral Policies. All agencies were asked why they did not provide some or all infertility services. As may be seen in Table A-3, the most common reasons given were that the agencies lack appropriately trained staff (77 percent), these services are too costly to provide (67 percent), and they lack lab facilities (64 percent). Over half the agencies also cited too little demand for these services among their patient population and the presence of other medical providers in the area offering these services.

Agencies that provide some infertility services were as likely as those that do not to cite these reasons for not providing more services (see Table A-3). However, the agencies differ by type and by region in the reasons given for not providing some or all infertility services. Hospital agencies most commonly cited the existence of other medical providers in the area as the reason for not providing more infertility care (55 percent); none of the other reasons were cited by more than 46 percent of the hospital agencies. Over 80 percent of the health department agencies cited the lack of trained staff and the lack of lab facilities as their deterrent to providing more infertility care. More than 70 percent of the Planned Parenthood affiliates cited the lack of trained staff and the existence of other medical providers as their reasons. Finally, the most common reason cited by other types of agencies was the lack of trained staff (74 percent).

Reasons differ somewhat by region. Too little demand and costly/inconvenient are the reasons most frequently mentioned in the Northcentral Region, while lack of facilities -- trained staff and lab -- were most commonly mentioned in the South. The presence of other medical providers and lack of staff were the main reasons in the Northeast, and lack of staff and costly/inconvenient were the principal reasons in the West. These reasons largely reflect the types of family planning agencies in each region.

Agencies in nonmetropolitan areas were more likely than those in metropolitan areas to mention all the reasons except the presence of other medical providers offering the services. Lack of trained staff and lack of lab facilities were the reasons cited most frequently by nonmetropolitan agencies.

Ninety-two percent of the agencies will refer patients elsewhere for infertility services they do not provide. Interestingly, nonproviders are less likely to refer these patients elsewhere than are providers. Hospitals and health departments are less likely to refer than are Planned Parenthood and other agency types.

3. Referrals. Tables A-4 and A-5 show where agencies refer female and male patients for services not provided by the agency. Approximately half the agencies that refer female patients will send them to a specific private physician, regardless of the type of care needed, whether specialized tests or preliminary examination (see Table A-4). About 20 to 24 percent that refer female patients recommend infertility treatment centers and 24 to 31 percent recommend other sources of care, depending upon the procedures needed. Six to eleven percent refer patients to facilities within their agency system.

Hospital agencies are more likely to refer female patients within the hospital system (19 to 27 percent) than are other agencies to refer patients to specific clinics within their agency system (see Table A-4). Hospital agencies are less likely than other agencies to refer female patients to a private physician and more likely to recommend a specialized center or another hospital. Agencies that provide infertility services are more likely to refer female patients to hospitals and, less so, infertility treatment centers, than are nonproviders of infertility services.

Family planning agencies that refer infertility patients are less likely to refer male patients for each of the procedures than they are to refer female patients (21 to 24 percent vs. 2 to 4 percent do not refer), which may reflect the lack of male patients requesting such services. Aside from this

difference the distribution of where agencies refer male patients is similar to where they refer female patients (see Table A-5).

These results support the conclusion from the NSFG analysis that specialized infertility treatment centers serve a relatively small proportion of all infertility patients, and that most care is provided by private physicians.

4. Restrictions. Forty-four percent of the family planning agencies providing infertility care have at least one restriction in their provision of these services, noted in Table A-6. Twenty-five percent will serve only patients seeking to become pregnant, not those who are curious about whether they are fertile. Ten percent require prior agency approval before providing specialized test procedures. This is presumably a financial measure to control the amount of money and time devoted to infertility services. Fewer than 10 percent restrict their services to couples only, those with primary infertility problems, those over a minimum age (18 years on average), or under a maximum age (40 years on average). Overall, these restrictions do not appear to constitute major obstacles for patients needing infertility services.

5. Patients Served Annually. Only half of the family planning agencies providing infertility care could estimate the number of patients served annually. Among those that could provide estimates, the median number of female infertility patients annually was nine; the median number of male infertility patients served was five (see Table A-7). The agencies differed greatly in their volume of infertility patients, ranging from one to 1000 female patients annually; just 36 percent of those providing infertility

services serve more than 12 female infertility patients annually. Agencies providing specialized tests tend to serve more female patients than agencies providing preliminary tests only.

6. Service Funding. Most family planning agencies use multiple funding sources to support their infertility services. Eighty-four percent use more than one source, with an average of three funding sources used by the various providers (see Table A-8). Patient fees are the most common source of funds for this service, cited by 81 percent of the agencies providing infertility services. Seventy-three percent accept Medicaid reimbursements and 56 percent use Title X funds for infertility services provision (seven percent also had a special Title X initiative grant). Thirty-nine percent of all family planning agencies use Title X funds for infertility services. Less commonly used funding sources are state and local funds (35 percent of the agencies providing infertility services), Social Services block grant funds (22 percent), Maternal and Child Health block grant funds (17 percent), or other sources (11 percent), including Indian Health Services funds or private contributions.

A number of agencies obtain Medicaid reimbursement for some infertility services but not others. While 74 percent will accept Medicaid for an initial exam, fewer, 62 percent, accept Medicaid for counseling services (as Table A-9 shows). No more than 21 percent of the infertility service providers accept Medicaid for other types of services. This pattern reflects both the types of services agencies provide and state reimbursement policies.

The agencies' public funding for infertility services permits them to make these services available to low-income women and men. Seventy-three percent

of the family planning agencies that provide infertility care use an income-based sliding fee schedule or serve low-income women without charge (as noted in Table A-9). Twenty-eight percent of the agencies providing infertility services also will accept insurance reimbursements as payment in full or will serve low-income patients for free.

Agency differences in fee and Medicaid-acceptance policies are reflected in the composition of their infertility patient caseload. In thirty-one percent of the agencies providing infertility services, patients served without charge comprise at least 50 percent of their patient population; in 17 percent of the agencies, reduced-fee patients are 50 percent or more of their infertility patients. In 15 percent of the agencies, Medicaid patients are a majority of their patient infertility caseload. In 83 percent of the agencies, a majority of the infertility patients receive either free, reduced-fee or Medicaid-reimbursed services.

Table A-10 illustrates maximum fees charged for selected infertility services. While an initial infertility visit averages $49.25 among these family planning agencies, the charge for this visit can range widely from $5 to $125. Additional tests are also costly: A post-coital test averages $42 and a semen analysis $31. Diagnostic procedures to check for blocked tubes, for example, are much more expensive: a hysterosalpingogram averages $418 and a laparoscopy, $1,117. Even drug therapy, such as clomiphene, can be an expensive addition: five tablets averaged $22. The charges for all these procedures varied widely among the agencies. Low-income women and men would be unable to obtain these services without the flexible fee policies and Medicaid policies of most agencies.

7. Community Awareness Efforts. Seventy-six percent of the agencies cited at least one method by which women and men in the community become aware that infertility services are available (see Table A-11). Referral from other clients, a method requiring no effort on the part of the agency, was the most commonly cited means (57 percent). Less common were specific publicity efforts made by the agencies: 36 percent gave talks or presentations about their infertility services: 12 percent placed specially developed brochures and posters in other agencies about the availability of these services, and 8 percent of the agencies had notices about these services in newspapers and magazines. Some agencies noted that infertility patients were referred to them from other providers: 31 percent received agency referrals and 21 percent received referrals from private physicians.

Table A-1: Percentage of Family Planning Agencies That Provide Infertility Services (Other than Counseling) by Agency Type, Metropolitan Status and Region

Location	Total	Agency Type			
		Hospital	Health Department	Planned Parenthood	Other
Unweighted N	508	130	108	135	135
Total	70%	78%	66%	72%	76%
Metropolitan Status					
Metropolitan	74	79	69	70	79
Nonmetropolitan	66	77	65	85	71
Region					
Northeast	80*	77	50	74	92*
Northcentral	74	92	69	79	72
South	63	65	64	61	58
West	79	80	79	71	81
Estimated number of providing agencies	1712	212	935	127	437

* Statistically significant difference between regions ($p < .05$).

Table A-2: Percentage of Family Planning Agencies Providing Specific Infertility Tests and Procedures, Grouped by Level, According to Agency Type and Region

Tests and Procedures	Total	Agency Type: Hospital	Health Department	Planned Parenthood Affiliate	Other	Region: Northeast	North-central	South	West
Unweighted N	508	130	108	135	135	138	116	149	105
Level I									
o Includes:									
- counseling, education, information	64%	80%	59%	69%	70%	80%	77%	55%	70%
- physical exam, women	61	76	57	56	66	69	67	58	58
- basal body temperature instruction	61	75	52	68	72	78	67	51	73
- infection investigation	52	68	46	49	58	62	59	43	62
- physical exam, men	26	47	18	16	41	45	32	19	29
o Percentage that provide at least one Level I procedure*	77	83	74	78	81	87	83	71	83
o Percentage that provide all five Level I procedures	19	43	10	10	33	36	27	12	22
Level II									
o Includes:									
- semen analysis	17	53	8	18	23	34	18	11	24
- post coital test	15	51	8	12	16	29	13	11	17
- endometrial biopsy	15	57	5	8	23	32	14	10	19
o Percentage that provide at least one Level II procedure	24	60	15	22	32	37	22	19	31
o Percentage that provide all three Level II procedures	9	44	1	5	12	25	8	4	11

(cont.)

Table A-2 (cont.)

Tests and Procedures	Total	Agency Type: Hospital	Health Department	Planned Parenthood Affiliate	Other	Region: North-east	North-central	South	West
Level III									
o Includes:									
- genetic counseling, screening	31	52	32	12	24	34	23	36	24
- sonography	15	56	8	5	17	32	12	12	15
- clomiphene (medical drug therapy)	15	51	7	7	17	30	15	10	16
- laparoscopy	13	55	5	5	14	29	12	20	11
- gonodotropin (hormone treatment)	12	44	5	5	15	26	10	8	14
- hysterosalpingogram	12	53	3	5	15	29	12	7	12
- female micro-surgery	10	46	4	2	10	26	7	8	8
- sperm antibody test	9	39	3	2	13	21	10	6	11
- varicocelectomy	8	33	2	2	11	21	7	4	8
- artificial insemination, by donor	6	27	2	2	7	16	5	4	5
- Male tubal reconstructive surgery	5	26	1	1	6	16	5	2	6
o Percentage that provide at least on level III procedure	37	62	36	19	32	41	31	39	33
o Percentage that provide all 11 Level III procedures	3	15	0	0	4	10	4	1	1

Note: The three levels used to group procedures are based on the Title X gradations or prodecures for family planning agencies. The agency types differ significantly ($p < .05$) on all tests and procedures. The regions differ significantly on all test and procedures except infection investigation and genetic counseling/screening.

* Counseling is counted here as a Level I procedure, and therefore these percentages are higher than those shown in Table A-1.

Table A-3: Percentage of Agencies Mentioning Specific Reasons for Not Providing Some or All Infertility Services and Referral Policy, by Whether these Agencies Provide Infertility Services, Type of Agency, Region and Metropolitan Area

Reason	Total	Infertility Services Provided		Agency Type				Region				Metropolitan Status	
		None or Counseling Only	Other	Hosp.	Hlth. depts.	Planned Parenthood	Other	North east	North central	South	West	Metro	Non metro
Unweighted N	503	130	373	128	105	135	135	136	116	146	105	153	350
o Lack appropriately trained staff	77	74	78	46[a]	85	72	74	62[a]	61	86	77	69[a]	86
o Too costly an inconvenient to provide the services	67	62	70	40[a]	74	66	66	56[a]	76	67	68	62[a]	73
o Lack of lab facilities	64	61	65	28[a]	81	37	47	43[a]	57	74	56	53[a]	77
o Too little demand for the services	57	60	55	39[a]	62	40	58	47[a]	67	62	42	51[a]	62
o Other medical providers in the area offer the services	56	49	59	55[a]	52	76	57	63	59	50	63	63[a]	48
o Other[aa]	7	7	7	16[a]	6	7	6	11	8	6	6	7	7
Percentage that will refer patients elsewhere	92	84	95	90[a]	89	100	96	96	97	86	99	94	89

Notes: Agencies could list more than one reason, so percentages do not sum to 100 percent.

[aa] Other reasons include: lack of funding or government reimbursement; patients are unable to afford services; inappropriate patient population; do not serve males; legal or malpractice problems.

[a] Statistically significant difference between agency types, regions or metropolitan status categories ($p < .05$)

Table A-4: For Referring Agencies, Percentage Distribution of Facilities to Which Female Patients are Referred for Each Kind of Service, According to Agency and Provider Type

Service and Where Refer	Total	Agency Type: Hospital	Health Dept.	Planned Parenthood	Other	Infertility Services Provided: None or Counseling Only	Other
o Counseling							
Unweighted N	341	76	74	100	91	)	234
- clinics within the agency	11%	27%	8%	12%	10%	5%	14%
- private physician	49	26	51	63	51	56	46
- infertility treatment center	20	17	23	23	13	17	22
- hospital	26	34	21	36	24	19	27
- other	13	8	13	15	13	16	11
- do not refer for this service	4	10	3	1	6	2	5
o Exam							
Unweighted N	344	68	76	108	92	106	238
- clinics within the agency	8%	21%	7%	8%	7%	2%	11%
- private physician	55	31	55	73	55	55	55
- infertility treatment center	20	12	23	26	15	18	22
- hospital	24	38	20	32	26	21	2(
- other	11	9	11	8	12	15	9
- do not refer for this service	2	10	0	1	6	2	2
o Preliminary tests							
Unweighted N	389	72	86	125	106	104	285
- clinics within the agency	6%	18%	4%	4%	6%	4%	6%
- private physician	56	35	56	74	56	50	58
- infertility treatment center	21	16	20	30	20	18	22
- hospital	29	47	24	34	34	23	31
- other	12	7	13	9	11	15	11
- do not refer for this service	3	6	2	1	5	5	3
o Specialized tests, procedures							
Unweighted N	426	98	84	129	115	102	324
- clinics within the agency	6%	19%	4%	3%	5%	5%	6%
- private physician	54	38	50	78	61	46	57
- infertility treatment center	24	24	22	32	27	18	27
- hospital	31	42	24	40	37	24	33
- other	11	10	12	8	11	16	9
- do not refer for							

Table A-5: For Referring Agencies, Percentage Distribution of Facilities to Which Male Patients are Referred for Each Kind of Service, According to Agency and Provider Type

Service and Where Refer	Total	Agency Type: Hospital	Health Dept.	Planned Parenthood	Other	Infertility Services Provided: None or Counseling only	Other
o Counseling							
Unweighted N	341	76	74	100	91	107	234
- clinics within the agency	11%	27%	8%	12%	10%	5%	14%
- private physician	49	26	51	63	51	56	46
- infertility treatment center	20	17	23	23	13	17	22
- hospital	24	34	21	36	24	19	27
- other	13	8	13	15	13	16	11
- do not refer for this service	4	10	3	1	6	2	5
o Exam							
Unweighted N	346	68	76	108	92	106	238
- clinics within the agency	8%	21%	7%	8%	7%	2%	11%
- private physicians	55	31	55	73	55	55	55
- infertility treatment center	20	12	23	26	15	18	22
- hospital	24	38	20	32	26	21	26
- other	11	9	11	8	12	15	9
- do not refer for this service	2	10	0	1	4	2	2
o Preliminary tests							
Unweighted N	389	72	86	125	106	104	285
- clinics within the agency	6%	18%	4%	4%	6%	4%	6%
- private physicians	56	35	56	74	56	50	58
- infertility treatment center	21	16	20	30	20	18	22
- hospital	29	47	24	34	34	23	31
- other	12	7	13	9	11	15	11
- do not refer for this service	3	6	2	1	5	5	3
o Specialized Tests and Procedures							
Unweighted N	426	98	84	129	115	102	324
- clinics within the agency	6%	19%	4%	3%	5%	5%	6%
- private physicians	54	38	50	78	61	46	57
- infertility treatment center	24	24	22	32	27	18	27
- hospital	31	42	24	40	37	24	33
- other	11	10	12	8	11	16	9
- do not refer for this service	4	4	5	1	4	5	4

Table A-6: Restrictions Imposed by Agencies Providing Infertility Services (Other than Counseling)

Restrictions	Percentage Of Providers
Unweighted N	261
o Has at least one Restriction	44%
o Type of Restrictions	
- serve only those seeking to become pregnant	25
- require agency approval for specialized services	10
- provide for couples only	5
- patient must be of minimum age (average 18 years)	5
- provide for primary infertility only	3
- patient must not be over maximum age (average 40 years)	2
- other restrictions	6

Notes: Agencies could check more than one restriction, so restrictions do not sum to 100 percent.

Other restrictions include: the couple must have tried for at least a year; serve only established patients.

Table A-7: Size of Family Planning Agencies' Infertility Patient Caseload for Selected Procedures for Female and Male Patients

Type of patients	Unweighted N	Average	Range	Median
Female Infertility Patients				
o Total	138	40	1-1000	9
o Counseling	138	37	1-1000	8
o Exam	122	35	1-750	7
o Preliminary tests	32	102	1-900	25
o Specialized tests	32	32	1-200	15
Male Infertility Patients				
o Total	47	38	1-1000	5
o Counseling	45	13	1-325	5
o Exam	23	19	1-325	5
o Preliminary tests	30	25	1-250	10
o Specialized tests	6	4	1-10	3
Total Family Planning Patients				
o Female patients	331	3060	8-80,090	975
o Male patients	388	25	0-1960	0

Table A-8: Of Infertility Service Providers and of all Agencies, Percent Which Use Each Funding Source for Infertility Services

Funding Source	Agencies Providing Infertility Services Other than Counseling	All Agencies
Unweighted N	264	411
Percent of agencies with more than one funding source	94%	59%
Average number of sources of funding for infertility services	3	NA
o Patient fees	81%	57%
o Medicaid, Title XIX	73	51
o Title X	56	39
o State and local funding	35	25
o Social Services Block Grant	22	15
o MCH, Block Grant	17	12
o Special Title X initiative	7	5
o Other Sources	11	8

NA = not applicable.

Note: Other sources include: Indian Health Service funds; private donations; foundation grants.

Table A-9: Financial Policies for Infertility Services

Financial Policy	Agencies Providing Infertility Services Other than Counseling	All Agencies
Unweighted N	148-255	
o Percent which provide service and accept Medicaid		
- Counseling	62%	43%
- Exam	73	52
- Preliminary tests	21	15
- Specialized diagnostic procedures	15	11
- Medical drug therapy	15	11
- Surgical procedures	15	11
o Vary fees for low income patients or serve without charge	73	51
o Accept insurance reimbursement as payment in full	8	6
o Percentage of agencies, at least 50 percent of whose patient population is the following:		
- Medicaid	15	11
- Reduced-fee	17	12
- Free	31	22
- Free, reduced-fee, or Medicaid	83	61
- Full-fee	17	12

Table A-10: Charges for Selected Infertility Procedures and Tests, Family Planning Agencies

Charge	Average	Range	Median
o Initial visit (Unweighted N = 173)	$ 49.25	$5 - 125	$ 44.82
o Post coital test (Unweighted N = 40)	41.52	15 - 100	35.00
o Semen analysis (Unweighted N = 42)	30.85	8 - 100	25.00
o Hysterosalpingogram (Unweighted N = 28)	418.00	25 - 3000	160.00
o Laparoscopy (Unweighted N = 27)	1117.00	80 - 2200	1000.00
o Clomiphene, 5 tablets (Unweighted N = 21)	21.54	4 - 80	15.00

Table A-11: Percentage of Agencies Providing Infertility Services (other than Counseling) Which Rely on Various Community Awareness Methods

Efforts	Agencies Providing Infertility Services other than Counseling
Unweighted N =	253
Uses at least one community awareness effort	76%
Type	
o Client referrals	57
o Talks, presentations by staff	36
o Agency referrals	31
o Private physician referrals	21
o Infertility brochures, posters in other agencies	12
o Newspapers, magazines	8
o Radio, TV announcements	6
o Other efforts	11

Note: "Other" includes referral from other clinics, health departments and social services; general agency brochures.

D. Infertility Treatment Centers

Nineteen infertility treatment centers completed surveys describing their infertility treatment policies and practices. These centers were selected for study because physicians surveyed in a previous AGI survey (results described above) identified them as facilities where they referred patients with infertility problems. This selection procedure would have weighted the sample in favor of large facilities to which many physicians refer patients. Fifteen of the 19 centers are university-based; the rest are medical or research centers that provide infertility services. While the sample is small and not necessarily representative, the findings presented below illustrate the scope of services and the policies under which services are provided by such facilities across the country.

Five percent of the centers (one of the 19*) specialize in male patients only and provide all the male-related procedures and tests listed in Table C-1. Twenty-six percent serve women only, although most of these will also perform semen analysis in addition to all the female-related procedures and tests listed in Table C-1. Both types of centers also provide artificial insemination by donor. The remaining 68 percent of centers provide almost all the various infertility diagnosis and treatment procedures listed in Table C-1, grouped by the Title X levels for comparison with the family planning agencies and private physicians surveyed for this study. A large proportion of the centers (74 percent) offer in-vitro fertilization.

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* Although only 19 centers were surveyed, results will be presented as percentages rather than numbers of centers. Numbers as well as percentages are shown in the tables.

Thirty-seven percent of the centers do not cover all infertility services and gave reasons for not providing some services (see Table C-2). Most common was the existence of other medical providers in the area and the lack of appropriately trained staff. Other reasons mentioned were lack of patient demand, cost of the services, and inadequate lab facilities. Those centers that do not provide all services will refer patients needing such care elsewhere; no centers said there was no facility to which they could refer patients.

Thirty-seven percent of the centers have at least one restriction on the infertility services they provide (see Table C-3). Most frequently, they limit their services to couples (16 percent) or to those seeking to become pregnant (11 percent). One center will not serve anyone over 40 years of age and another requires facility administration approval for specialized services. No center mentioned a minimum age or a policy to treat primary infertility only.

Only nine of the centers could estimate the number of infertility patients served annually and four could estimate the number of male patients. Table C-4 lists the range of estimates of the number of female infertility patients provided with various services annually. Because of the small number of centers providing estimates of male patients, these data are not presented. The centers vary widely in the volume of patients served, ranging from 500 to 3,500 female infertility patients annually. The data suggest that in these centers more patients are provided with specialized drug therapy than with specialized diagnostic procedures.

While all centers rely on patient fees to fund the services they provide, some also use public and other funding sources as well, as Table C-5 illustrates. Fifty-three percent accept Medicaid. Other state and local funds are used by 37 percent of the centers; 16 percent utilize Title X funds for their infertility services. Eleven percent use Maternal and Child Health and Social Services block grants. As Table C-6 shows, most centers accepting Medicaid reimbursement do so for all services they provide.

A few centers have financial policies which are favorable for low-income women and men seeking infertility care, which may reflect their use of public funds to provide these services (see Table C-6). Only sixteen percent will lower their fees based on patients' income; 37 percent will accept insurance reimbursement as payment in full. Without such policies or Medicaid eligibility and center acceptance of Medicaid reimbursement, these centers' services are usually too expensive for low-income couples.

Table C-6 illustrates the range of center charges for selected procedures. These charges varied widely among these 19 sites. Initial infertility visits cost from $48 to $155. The greatest variation was for a hysterosalpingogram, for which the highest charge is ten times the lowest charge. Given these high charges and that few centers have favorable fee policies for low-income patients, it is not surprising that in at least 74 percent of the centers, full-fee patients constitute half or more of the patient caseload (see Table C-6). No more than 10 percent of the centers have free patients, reduced fee patients or Medicaid patients comprising over half their patient caseload.

Most centers rely on referrals from private physicians (89 percent) or other clients of the centers (79 percent) to reach new patients (see Table C-7). Many (37 percent) also take referrals from other agencies. Relatively few (37 percent) make efforts to publicize their services by means of brochures and posters (21 percent), radio or television (21 percent), newspapers and magazines (26 percent) or through facility staff talks and presentations (32 percent). These findings suggest that couples with infertility problems may not become aware of treatment possibilities unless they are informed by their physician or have friends who have utilized the services. Part of the unmet need for services could be explained by lack of awareness of the local availability of such services as microsurgery or artificial insemination by donor.

Table C-1: Percentage of Infertility Treatment Centers That Provide Various Infertility Procedures, by Level

Procedures	Percent	Number
Total	100%	19
Level I		
o Includes:		
- counseling, education, information	95	18
- physical exam, woman	95	18
- physical exam, man	74	14
- basal body temperature instruction	100	19
- infection investigation	100	19
o Percentage providing at least one Level I procedure	100	19
o Percentage providing all five Level I procedures	68	13
Level II		
o Includes:		
- semen analysis	95	18
- post coital test	95	18
- endometrial biopsy	89	17
o Percentage providing at least one Level II procedure	100	19
o Percentage providing all three Level II procedures	84	16
Level III		
o Includes:		
- sperm antibody test	89	17
- clomiphene (medical drug therapy)	95	18
- gonodotropin (hormone treatment)	95	18
- hysterosalpingogram	95	18
- laparoscopy	95	18
- sonography	89	17
- varicocelectomy	68	13
- female microsurgery	95	18
- male tubal reconstructive surgery	68	13
- artificial insemination, by donor	100	19
- genetic counseling, screening	95	18
- in vitro fertilization	74	14
o Percentage providing at least one Level III procedure	100	19
o Percentage providing all 12 Level III procedures	58	11

Note: The three levels used to group procedures are based on the Title X categorization of infertility procedures for family planning agencies, with the exception of basal body temperature instruction, which has been regrouped with Level I.

Table C-2: Reasons Given for Not Providing All Infertility Services, and Referral Policies

Characteristic	Percent	Number
o Reasons for not providing services		
Total	100%	19
- provide all services	63	12
- other medical providers in the area	26	5
- lack appropriately trained staff	16	3
- too little demand for these services	11	2
- too costly to provide services	11	2
- serve men only	11	2
o - inadequate lab facilities available	5	1
Referral policy		
Total	100%	18
- centers refer patients elsewhere	39	7
- center provide all necessary services	61	11

Table C-3: Percentage of Infertility Treatment Centers Having Various Restrictions on the Provision of Services

Policies	Percent	Number
Total	100%	19
Serve couples only	16	3
Serve only those seeking to become pregnant	11	2
Facility administration approval needed for specialized services	5	1
Will not serve anyone over 40 years of age	5	1
Percentage with at least one restriction	37	7

Table C-4: Range of Annual Number of Infertility Patients Served by Infertility Treatment Centers

Female Infertility Patients	Range
o Total (n = 5)	500-3500
o preliminary tests and procedures (e.g., semen analysis, postcoital test)(n = 8)	100-3500
o specialized diagnostic procedures (e.g., hysterosalpingogram) (n = 8)	60-400
o specialized drug therapy (e.g., clomiphene, gonadotropin) (n = 8)	100-2711
o specialized surgical procedures (e.g., laparoscopy, varicocelectomy) (n = 9)	50-500

Note: Two centers reported visit data which were excluded from these estimates.

Table C-5: Percentage of Infertility Treatment Centers that Use Various Sources of Funding for Infertility Services

Funding Source	Percent	Number
Total	100%	19
o Patient fees	100	19
o Medicaid	53	10
o State and local funds	37	7
o Title X	16	3
o Maternal & Child Health Block Grant	11	2
o Social Services Block Grant	11	2
o Other	21	4

Note: "Other" funding sources include private contributions and insurance.

Table C-6: Financial Policies of Infertility Treatment Centers, and Range of Charges for Selected Procedures

Financial Policy	Percent	Number
o Total	100%	19
Accept Medicaid for:		
- counseling	53	10
- physical exam	53	10
- preliminary tests	47	9
- diagnostic procedures	53	10
- drug therapy	53	10
- surgical procedures	47	9
o Sliding scale or no charge for patients	16	3
Accept insurance reimbursement as payment in full	37	7

o Usual fee for selected procedures	Range	Median
- initial infertility visit (n = 15)	$48-155	60
- semen analysis (n = 16)	18-75	35
- hysterosalpingogram (n = 13)	30-300	105
- laparoscopy (n = 13)	350-2000	800
- clomiphene (5 tablets) (n = 8)	7-30	15
- varicocelectomy (n = 5)	500-2000	1000
- tubal reversal (n = 13)	100-6500	2500
- vasectomy reversal (n = 6)	1500-7000	2100

o At least 50 percent of patients pay as follows:		
- Full fee	74%	14
- Medicaid	5	1
- Reduced fee	5	1
- Free	0	0
- Mixture of methods	5	1
- No answer	11	2

Table C-7: Percentage of Infertility Treatment Centers That Use Various Outreach Methods

Method	Percentage	Number
Total	100	19
o Referrals from private physicians	89	17
o Referrals from other clients	79	15
o Referral from other agencies	37	7
o Facility staff talks, presentations	32	6
o Newspapers, magazines	26	5
o Radio, TV	21	4
o Brochure, poster	21	4
Percentage using at least one community awareness effort	37	7

V. Need, Availability and Accessibility of Services

A. Results

This section attempts to synthesize information about the number of women needing infertility services and the number of physicians and family planning agencies that offer the services to arrive at an assessment of the accessibility of the services to those who need it.

Table N-1 summarizes the number of women (or couples) who need infertility services - that is, have a fertility impairment (other than contraceptive sterilization) that is possibly treatable and want to have a child (or more children).

Nationally there are some 2.4 million such women. Not included in Table N-1 are 880,000 couples who are contraceptively sterilized but would like to have the sterilization reversed in order to have children.

The cost of infertility services may affect the access of low-income women to infertility services. Among those in need of infertility services are 374,000 with household income under 150 percent of the poverty level. About 100,000 of those in need of services have Medicaid coverage, which may help to pay for the services if they can find a provider who accepts Medicaid reimbursement.

One or more components of infertility care are provided by at least 46,000 physicians in office-based practice. Almost all these provide initial testing and evaluation, and some 37,000 provide more specialized infertility tests and procedures. However, very few, only about 2,700, adjust their fees for low-income patients. Just under 10,000 will serve Medicaid patients.

Most family planning agencies also provide some infertility services. Nationally there are some 1,700 such agencies that take infertility patients. Seventy-three percent of these vary their fees or serve low-income patients without charge. Almost half of these are in the South. Only about half of the agencies which provide infertility services do any specialized infertility tests and procedures.

Comparing the need for infertility services with the number of physicians, the ratio is 53 potential patients for each physician who provides any infertility services. There are 66 potential patients for each physician who provides any specialized tests and procedures. The ratios are lower if hospital clinics, family planning agencies and other facilities which serve infertility patients are included with the physicians. From these ratios, it would appear that the physicians who now treat infertility are capable of serving all patients who need infertility services, provided that other segments of their practice don't demand so much of their time that too little is available for infertility.

Nevertheless, difficulty locating and getting to the offices of the physicians might still be a problem for some potential infertility patients. A rough indicator of the magnitude of this difficulty is the size of the total population (not limited to women or those in need) in thousands per service provider, as shown in Table M-1. This measure reflects the size of the town or community in which a provider is likely to be found. The first figure shown, for reference, is the population per obstetrician/gynecologist. Nationally, in 1982 there were about 10,800 in the population for each obstetrician/gynecologist. Regions differed slightly, the Northeast being the

best-served with 9,600 people per obstetrician/gynecologist, and the Northcentral states the least well served (12,500). In nonmetropolitan areas there were 20,100 residents per obstetrician/gynecologist, which suggests that women in those areas rely more on general practitioners for gynecological and obstetrical care.

By the population-per-physician measure, Level I infertility care is more available than care from obstetricians and gynecologists. There were only 5,100 people in the population for each physician offering some kind of infertility service. This means that there is a fair probability that a community with 5,000 residents will have such a physician and an excellent probability that a community of 20,000 will have one. Differences by region are relatively small. Nonmetropolitan areas are as well or better served than are metropolitan areas, in part because of the high proportion of nonmetropolitan general practitioners who treat infertility, as shown earlier.

At one for each 6,300 population, physicians providing more specialized (Level III) tests and procedures are less available than those providing any infertility service, but they are still more available than obstetrician/gynecologists. The South, at 10,100 population per physician, is less well served by physicians doing specialized tests and procedures than are the other regions. Nonmetropolitan areas are about as well served as are metropolitan areas.

Any specific test or procedure is less available than physicians who perform at least one test. For example, laparoscopy is one-half as available, sperm antibody tests and gonadotropin one-third, female microsurgery one-fifth, and male tubal reconstructive surgery is one-seventh as available as physicians who perform at least one specialized test or procedure. For

female microsurgery, there is one physician for each 33,000 people in the population, and for male tubal reconstructive surgery, one for every 46,000.

Even if infertility services exist in a community, there may be barriers to the utilization of those services. One such barrier may be lack of knowledge that the services exist or where they are provided. If there are several physicians in a community, potential patients must find one who will treat infertility. As was shown earlier, both physicians and family planning agencies almost always refer for services they don't provide. There remains a question, not answered by this study, about the extent of the public's knowledge of the existence of infertility treatment in general and of specific procedures such as artificial insemination by donor.

A second possible barrier is lack of financial resources with which to pay for infertility treatment. Few physicians offer infertility services on a sliding-fee scale; there are 86,000 in the population for each such physician. If family planning agencies which have sliding scales or free services are counted with the physicians, the population per provider is 59,000. This means that a patient in a community much smaller than 59,000 would have a good chance of not being able to find reduced-fee services from a physician or family planning clinic without traveling outside the community. For low-income women covered by Medicaid the situation is somewhat better at 24,000 population per Medicaid physician provider.

The picture for low-income women is not as bad as would appear from the above figures. In practice, many low-income women obtain medical services from hospital clinics, often without charge. As was shown earlier, hospital clinics were the most recent source of care for 12 percent of all infertility

patients, and many of the hospitals may have sliding fee scales or free services. On the other hand, it may be much easier for women to obtain an initial evaluation for infertility at a low fee or covered by Medicaid than it is to obtain more expensive specialized services.

B. Discussion

Demographers and medical specialists have suggested that the need for infertility services will expand over the next few years for a number of reasons. 13/ The number of people in their reproductive years will continue to increase for several years; thus, the number with impaired fecundity will increase. More women are postponing childbearing to their 30's, postponing the discovery that they have fertility problems as well as being exposed for a longer time to risk of disease which might impair their fecundity. These trends, along with recent advances in medical technology for screening and diagnosing fertility problems, indicate that more services, particularly the more specialized procedures, will be needed in the future.

The results of this study suggest that for people with adequate financial resources, either their own income or insurance with infertility coverage, infertility services are as available as most other types of medical care. Initial testing and evaluation is available from many physicians as well as from hospital clinics, family planning clinics and other health facilities. Specialized infertility services are less common but still appear to be generally available. Most family planning agencies give as a reason for not providing more types of infertility tests and procedures that such services are available elsewhere in the area. Of course, certain very specialized

procedures such as in-vitro fertilization may not be available in most areas. While the major infertility centers provide these procedures, there appear to be few such centers, and they serve only a small fraction of all infertility patients.

The situation is less favorable for low-income women, especially for those who need specialized tests and procedures. Apparently worst off are poor women without Medicaid or other insurance. Unfortunately, most poor women in need of infertility services are not Medicaid recipients, not because they are less poor than Medicaid recipients but because most have no children and are ineligible. Very few physicians say they are willing to adjust their fees according to their patients' income, and one might expect that those who do, do so only for their long-term patients. Thus it would appear to be very difficult for most low-income women to locate a physician willing to provide infertility services at low cost or without charge. In practice, most of the uninsured low-income women who obtain specialized infertility services probably do so at hospital clinics. Evidence of the impact of economic barriers to service is that, among women who need infertility services, only one-fourth of those under 150 percent of the poverty level have received them, as compared with about half of women with higher incomes (Table W-5).

The need for, and adequacy of, microsurgery for those who have been contraceptively sterilized involves many questions that cannot be answered definitively with the data available here. The most important of these is the number of sterilized couples who would actually choose to undergo an operation to have the sterilization reversed if there were no barriers to access to this service. The NSFG suggests that sterilization regret is widespread, with

reversal desired by 10 percent of those sterilized. However, many of these might not choose microsurgery after considering the inconvenience, risk of complications, and probability of success. The number of reversals actually performed is apparently small compared to the 880,000 women who say they or their partner would like a reversal. According to the Hospital Discharge Survey, in 1983 there were only 3,000 male reversal procedures (reconstruction of the vas deferens) and 18,000 female procedures ("other repairs of fallopian tube," which may be for sterilization reversal or other reasons), 14/ this in spite of the large number of physicians who say they are willing to perform the operations. Thus, there is an important question about the practical implications of the expressed desire for reversal.

Table V-1: Need for Infertility Services, Number of Physician and Family Planning Agency Providers, and Population Per Provider, by Region and Metropolitan Status, United States, 1982

	Total	North-east	North-central	South	West	Metro	Non-Metropolitan
Number of women in need of infertility services (000's)							
Total	2,417	440	694	765	519	1,982	435
<150% of poverty level	374	*	*	*	*	*	*
on Medicaid	101	*	*	*	*	*	*
Number of physicians providing infertility services (000's)							
Provide any	45.5	8.6	12.9	13.0	11.0	33.4	11.9
Provide specialized**	36.5	7.3	9.7	7.8	8.7	27.9	8.4
Provide any, vary fees for low-income patients	2.7	0.4	0.8	0.6	0.9	1.7	1.1
Provide any, accept Medicaid	9.6	1.6	3.7	2.1	2.4	5.7	3.8
Number of family planning agencies providing infertility services							
Provide any	1,712	257	305	810	340	NA	NA
Provide specialized**	905	132	128	502	143	NA	NA
Provide any, vary fees for low-income patients	1,250	NA	NA	NA	NA	NA	NA
Population (000's) per provider							
Pop. per Ob/Gyn (for reference)	10.8	9.6	12.5	11.3	9.8	9.4	20.1
Per MD providing any infer. serv.	5.1	5.7	4.6	6.0	4.1	5.3	4.7
Per MD providing specialized* serv.	6.3	6.8	6.1	10.1	5.2	6.3	6.6
Per MD providing any infer. serv. and varies fees for low-income patients	86	123	74	131	50	104	51
Per MD or family planning agency that varies fees	59						
Per MD providing any infer. serv. and accepts Medicaid	24	31	16	37	19	31	15

Note: NA = Data not available

** Any Level III services

* Too few cases for an accurate estimate

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REFERENCES

1. The Alan Guttmacher Institute, Final Report on a Study of the Provision of Voluntary Sterilization Services to U.S. Men and Women by Physicians in Private Practice, New York, September 1984.

2. A. Torres, "The Family Planning Program and Cuts in Federal Spending: Initial Effects of the Provision of Services," Family Planning Perspectives, 15:184-191, July/August 1983.

3. Title X guidelines, BCHS, 1981.

4. National Survey of Family Growth, Cycle III. Tape Contents Manual, prepared by Family Growth Survey Branch and Computer Applications Staff, Division of Vital Statistics, National Center for Health Statistics, 1984.

5. W.D. Mosher, and W.F. Pratt, "Fecundity and Infertility in the United States, 1965-82", NCHS Advancedata, 104, February 11, 1985; and W.D. Mosher, "Reproductive Impairments in the United States, 1965-1982," Demography, 22:415, 1985.

6. J.D. Forrest and S.K. Henshaw, "What U.S. Women Think and Do About Contraception," Family Planning Perspectives, 15:157, 1983.

7. J.D. Forrest and S.K. Henshaw, op. cit., and C.A. Bachrach, "Contraceptive Practice Among American Women, 1973-1982," Family Planning Perspectives, 16:253, 1984.

8. R.B. Gold and A.M. Kenney, "Paying for Maternity Care," Family Planning Perspectives, 17:105, 1985, Table 1.

9. "Infertility and Sexually Transmitted Diseases: A Public Health Challenge," Population Reports, Series L. No. 4, July 1983; and N.L. Porter and F.S. Christopher, "Infertility: Towards an Awareness of a Need Among Family Life Practitioners," Family Relations, 33:309-311, April, 1984.

10. A. Torres, "Estimates of Cost of Infertility, Natural Family Planning Sterilization Services in Ambulatory Health Care Facilities," unpublished memorandum, The Alan Guttmacher Institute, New York, February, 1981.

11. M. Roland, "Infertility Therapy: Effect of Innovations and Increasing Experience," The Journal of Reproductive Medicine, 25:41-46, July, 1980.

12. The Alan Guttmacher Institute, Current Functioning and Future Priorities in Family Planning Services Delivery, New York, December 1983.

13. S.O. Aral and W. Cates, "The Increasing Concern with Infertility. Why Now?" Journal of American Medical Association 250:2327-2331, November 4, 1983; and M.M. Adams, G.P. Oakley, Jr., J.S. Marks, "Maternal Age and Births in the 1980's", Journal of American Medical Association 247:493-494, January 22/29, 1982.

14. National Center for Health Statistics, "Detailed Diagnoses and Surgical Procedures for Patients Discharged from Short-Stay Hospitals, United States, 1983," Vital and Health Statistics, Series 13, No. 82, March, 1985.

APPENDIX A: Private Physician Survey-

Infertility Services Questions

Infertility Services

Q–36 For about how many patients did you perform infertility diagnosis and/or treatment during 1982?

_____ *(If none, please skip to Q–38.)*

Q–37 Which of the following services do you perform for the purposes of infertility diagnosis and treatment?

1 Basal body temperature instruction
2 Postcoital test
3 Semen analysis
4 Hysterosalpingogram
5 Laparoscopy
6 Sonography
7 Sperm antibody/immunological evaluation
8 Investigation of infections associated with infertility (such as chlamydia or gonorrhea)
9 Medical drug therapy, such as clomiphene, for ovulation induction
10 Artificial insemination by donor
11 Microsurgery for female tubal obstruction, pelvic disease, or female sterilization reversal
12 Hormone treatment, such as gonadotropin, for ovulation induction
13 Male tubal reconstructive surgery
14 Other (Specify _____)

Q–38 Where do you refer the male and female patients for whom you cannot perform particular diagnoses or treatments?

	Male	Female
I have never been asked.	1	1
I refer them to another physician in my group. (Specify specialization _____)	2	2
I refer them to an infertility specialist not in my group.	3	3
I refer them to a special infertility center or clinic.	4	4
I do not refer patients for infertility services.	5	5
Other (Specify _____).	6	6

Q–39 Please circle all the reasons you do not refer some or all of your patients for particular diagnoses or treatments. *(If you refer all of your patients for these services, please skip to Q–40.)*

1 There is no place to refer patients.
2 The cost would be prohibitive for my patients.
3 There are no adequate laboratory facilities.
4 I provide all the appropriate tests myself.
5 Other (Specify _____)

Q–40 Are your fees standard for all your patients, or do they vary according to your patients' financial circumstances?

1 Standard fees for all patients.
2 Fees vary according to patients' financial circumstances.
3 Other (Specify _____)

Q–41 In your private practice, do you accept Medicaid reimbursements for infertility diagnosis or treatment?

1 No.
2 I have never been asked.
3 Yes.

APPENDIX B: Family Planning Agency Survey -

Provision of Infertility Services in the United States.

Provision of Infertility Services in the United States

The purpose of this survey is to help us understand more about the provision of infertility services. Please answer for your agency as a whole, including all clinics if your agency operates more than one site. If you wish to comment on any questions, please feel free to use the space in the margins or on the back page. Your comments will be read and taken into account.

Thank you for your help.

Return this questionnaire to:

The Alan Guttmacher Institute
360 Park Avenue South
New York, New York 10010

If you have any questions, please call Dr. Terry Orr, collect, at (212) 685-5858, x220.

INFORMATION FOR INDIVIDUAL AGENCIES AND CLINICS WILL BE KEPT CONFIDENTIAL.

Q–1 What was the total number of clinic locations operated by your agency during 1984 at which medical infertility services were provided? _____

Q–2 Are the following infertility diagnostic and treatment services available on-site in your agency's clinic(s), available off-site by another provider but funded through your agency, or not provided through your agency?

Infertility service	Provided on-site	Provided off-site	Not provided	
Infertility counseling, education, information	1	2	3	
Physical exam and history, women	1	2	3	
Physical exam and history, men	1	2	3	
Basal body temperature instruction	1	2	3	
Postcoital test	1	2	3	
Semen analysis	1	2	3	
Hysterosalpingogram	1	2	3	
Laparoscopy	1	2	3	
Sonography	1	2	3	
Endometrial biopsy	1	2	3	
Sperm antibody/immunological evaluation	1	2	3	
Investigation of infections associated with infertility, such as chlamydia or gonorrhea	1	2	3	
Drug therapy, such as clomiphene, for ovulation induction	1	2	3	
Artificial insemination by donor	1	2	3	
Hormone treatment, such as gonadotropin, for ovulation induction	1	2	3	
Microsurgery for female tubal obstruction, pelvic disease or female sterilization reversal	1	2	3	
Male tubal reconstructive surgery	1	2	3	
Vancocelectomy	1	2	3	
Genetic counseling, screening	1	2	3	

Other (Specify _____)

Q–3 Please circle all the reasons that some or all of the services listed in Q–2 are not provided through your agency.

1 There is too little demand for these services.

2 It is too costly or inconvenient for us to provide these services.

3 We lack appropriately trained staff who can provide these services.

4 Available lab facilities are inadequate.

5 Other medical providers in the area offer these services.

6 Other (Specify _____)

Q–4 Do your clinic staff refer any patients for infertility diagnostic or treatment services either to other clinics within your agency or elsewhere?

1 Yes. *(Please continue with Q–5.)*

2 No.

If no, is it because they provide all necessary services?

1 Yes. *(Please skip to Q–7.)*

2 No. *(Please skip to Q–17.)*

Q–5 To what type of provider do clinic staff refer female patients for the infertility services listed below if these services are not provided at the clinic? Please consider couples being treated as two individual patients.

Type of provider	Counseling	Initial exam	Preliminary tests	Specialized tests
Other clinics run by this agency	1	1	1	1
Specific physician	2	2	2	2
Infertility treatment center (Specify _____ _____)	3	3	3	3
Hospital (Specify _____ _____)	4	4	4	4
Other (Specify _____ _____)	5	5	5	5
Do not refer or never had patients requiring this procedure	6 (37–40)	6 (41–44)	6 (45–48)	6 (49–52)

Q–6 To what type of provider do clinic staff refer *male* patients for the infertility services listed below if these services are not provided at the clinic? Please consider couples being treated as two individual patients.

Type of provider	Counseling	Initial exam	Preliminary tests	Specialized tests
Other clinics run by this agency	1	1	1	1
Specific physician	2	2	2	2
Infertility treatment center (Specify _____ _____)	3	3	3	3
Hospital (Specify _____ _____)	4	4	4	4
Other (Specify _____ _____)	5	5	5	5
Do not refer or never had patients requiring this procedure	6 (53–56)	6 (57–60)	6 (61–64)	6 (65–68)

If none of the infertility services listed in Q–2 are provided through your agency, please skip to Q–17.

Q–7 Please circle the policies your agency has for the provision of infertility diagnostic and treatment services.

1 Will serve couples only; will not serve an individual without his or her partner. 69

2 Will serve only patients who are seeking to become pregnant. 70

3 Will serve only those with primary infertility; will not serve those with secondary infertility problems (i.e., those who have given birth and are not able to become pregnant again). 71

4 Clinic staff may not perform specialized diagnostic or surgical procedures without agency approval. 72

5 Will not serve anyone below age _____. 73-74-75

6 Will not serve anyone over age _____. 76-77-78

7 Other (Specify _____) 80 CC2 5-6

Q–8 Please circle all sources of funding your agency uses to support the provision of infertility services.

1 Title X (regular grant) 7

2 Title X (special initiative; specify _____) 8 9

3 Medicaid (Title XIX) 10

4 Maternal and Child Health Block Grant (Title V) 11

5 Social Services Block Grant (Title XX) 12

6 State and local government 13

7 Patient fees 14

8 Other (Specify _____) 15 16

Q–9 For each of the following infertility diagnostic or treatment services, please indicate whether your agency accepts Medicaid reimbursements for eligible patients.

Infertility service	Yes	No	Not reimbursable in my state	Service not provided for eligible patients requesting
Infertility counseling or education	1	2	3	4
Initial exam and history	1	2	3	4
Preliminary infertility tests and procedures (e.g., semen analysis, postcoital test)	1	2	3	4
Specialized diagnostic procedures (e.g., hysterosalpingogram)	1	2	3	4
Specialized drug therapy (e.g., clomiphene)	1	2	3	4
Specialized surgical procedures (e.g., laparoscopy, vancocelectomy)	1	2	3	4

Q–10 Are your agency's fees for infertility services standard for all your patients, or do they vary according to your patients' financial or other circumstances?

1 Fees are standard for all patients.

2 Fees vary according to patients' financial circumstances. *(Please enclose fee schedule.)*

3 Other (Specify _____)

Q–11 Does your agency accept patients' insurance reimbursements as payment for infertility services provided, or do you require your patients to pay you directly?

1 We accept insurance reimbursements as payment in full.

2 We accept insurance reimbursements as partial payment and bill patient for balance.

3 Patient pays directly and seeks insurance reimbursement him/herself.

4 We have no specific policy; it depends upon the insurance company's policies.

5 We have no specific policy; it depends upon the procedure.

6 Other (Specify _____)

Q–12 What is your agency's maximum charge for the following infertility tests and procedures? (Please check the appropriate category for tests or procedures not provided through your agency.)

Infertility service	Maximum charge	Not provided
Initial visit, new patient (including physician's charge and other clinic fees)	$_____	_____
Postcoital test (including both clinic and lab test fees)	$_____	_____
Semen analysis (including both clinic and lab test fees)	$_____	_____
Hysterosalpingogram (including hospital fee, physician's and radiologist's charges, lab test fees)	$_____	_____
Diagnostic laparoscopy (including hospital fee, physician's and other charges)	$_____	_____
Clomiphene, for ovulation induction (five tablets)	$_____	_____

Q–13 Please circle the percentage of your infertility patients whose services are paid for in the following ways (percentages should add to 100):

	0%	1–10%	11–25%	26–50%	51–75%	76–100%
Patients who are covered by Medicaid	1	2	3	4	5	6
Patients who pay and/or whose insurance pays the full fee	1	2	3	4	5	6
Patients who pay a reduced fee	1	2	3	4	5	6
Patients who are served for free	1	2	3	4	5	6

Q–14 When did your agency begin providing infertility services?

19 _____

Q–15 How are women and men in need of infertility services in your community made aware that your agency provides these services?

1 Specific infertility brochures, posters placed in other community agencies *(Please enclose sample, if available.)* 56

2 Radio, TV announcements. 57

3 Talks, presentations by agency staff. 58

4 Newspapers, magazines. *(Please enclose sample, if available.)* 59

5 Referrals from other agencies. 60

6 Referrals from private physicians. 61

7 Referrals from other clients. 62

8 Other (Specify _____) 63 64

Q–16 How many unduplicated patients received the following infertility services through your agency in the most recent year for which you have data? Please report separately for female and male patients (couples should be counted as two separate patients). Note that subtotals may not add to the total number of patients, because some patients may receive more than one type of service. If you cannot provide data for unduplicated *patients*, please estimate total *visits*.

Infertility service	Female		Male		
	Patients	or Visits	Patients	or Visits	
Total number of patients or visits	_____	_____	_____	_____	65–68 69 70–73 74
Counseling	_____	_____	_____	_____	75–78 79 80 2 CD3 5–8 9
Initial exam, history	_____	_____	_____	_____	10–13 14 15–17 18
Preliminary tests and procedures (e.g., semen analysis, postcoital test)	_____	_____	_____	_____	19–22 23 24–26 27
Specialized diagnostic tests and treatment (e.g., clomiphene, laparoscopy, vancocolectomy)	_____	_____	_____	_____	28–30 31 32–34 35

What year do the above data cover? _____ 36

Are these fiscal year _____ or calendar year _____ estimates? 37

Please use comparable data sources to estimate total medical family planning patients in the next question (Q–17).

Q–17 How many unduplicated *medical family planning* patients (including infertility patients) did your agency serve during the most recent year for which you have data? Please exclude patients receiving only referral services, pregnancy testing or abortion. If you cannot provide data for unduplicated *patients*, please estimate total medical *visits*.

	Patients	or Visits	
Female family planning patients	_____	_____	38–42 43
Male family planning patients	_____	_____	44–47 48

What year do the above data cover? _____ 49

Are these fiscal year _____ or calendar year _____ estimates? 50

Q-18 Please describe any problems you have encountered in your agency's provision of these services

Q-19 Is there anything else you would like to tell us about the delivery of infertility services through your agency?

Respondent's name

Position

Agency

Telephone number

Please remember to enclose your fee schedule for infertility services.

THANK YOU FOR YOUR COOPERATION.

APPENDIX C: Infertility Treatment Center Survey - Provision of Infertility Services in the United States

Provision of Infertility Services in the United States

Thank you for your help.

Return this questionnaire to:

The Alan Guttmacher Institute
360 Park Avenue South
New York, New York 10010

If you have any questions, please call Dr. Terry Orr, collect, at (212) 685-5858, x220.

INFORMATION FOR INDIVIDUAL FACILITIES WILL BE KEPT CONFIDENTIAL

Q–1 Are the following infertility diagnostic and treatment services provided through your facility?

Infertility service	Provided	Not provided	
Infertility counseling, education, information	1	2	7
Physical exam and history, women	1	2	8
Physical exam and history, men	1	2	9
Basal body temperature instruction	1	2	10
Postcoital test	1	2	11
Semen analysis	1	2	12
Hysterosalpingogram	1	2	13
Laparoscopy	1	2	14
Sonography	1	2	15
Endometrial biopsy	1	2	16
Sperm antibody/immunological evaluation	1	2	17
Investigation of infections associated with infertility, such as chlamydia or gonorrhea	1	2	18
Drug therapy, such as clomiphene, for ovulation induction	1	2	19
Artificial insemination by donor	1	2	20
Hormone treatment, such as gonadotropin, for ovulation induction	1	2	21
Microsurgery for female tubal obstruction, pelvic disease or female sterilization reversal	1	2	22
Male tubal reconstructive surgery	1	2	23
Varicocelectomy	1	2	24
Genetic counseling, screening	1	2	25
In vitro fertilization	1	2	26

Other (Specify _____

_____) 27–29

Q–2 Please circle all the reasons that some or all of the services listed in Q–1 are not provided through your facility.

1 There is too little demand for these services. 30

2 It is too costly or inconvenient for us to provide these services. 31

3 We lack appropriately trained staff who can provide these services. 32

4 Available lab facilities are inadequate. 33

5 Other medical providers in the area offer these services. 34

6 Other (Specify _____). 35–36

7 We provide all services. 37

Q–3 Do your staff refer any patients elsewhere for infertility diagnostic or treatment services? 38

1 Yes. *(Please continue with Q–4.)*

2 No. We provide all necessary services.

3 No. We neither provide all necessary services nor refer patients elsewhere because: (please circle)

a. There is no place to refer patients.

b. Cost would be prohibitive for patients.

c. Other (Specify _____

_____).

Q–4 When did your facility begin providing infertility services?

19 _____ 39–40

Q–5 Please circle the policies your facility has for the provision of infertility diagnostic and treatment services.

1 Will serve couples only; will not serve an individual without his or her partner

2 Will serve only patients who are seeking to become pregnant.

3 Will serve only those with primary infertility; will not serve those with secondary infertility problems (i.e., those who have given birth and are not able to become pregnant again).

4 Staff may not perform specialized diagnostic or surgical procedures without consultation or administrator's approval.

5 Will not serve anyone below age _____.

6 Will not serve anyone over age _____.

7 Other (Specify _____).

8 None of the above.

Q–6 Please circle all sources of funding your facility uses to support the provision of infertility services.

1 Patient fees

2 Medicaid (Title XIX)

3 Title X, Public Health Service Act

4 Maternal and Child Health Block Grant (Title V)

5 Social Services Block Grant (Title XX)

6 State and local government

7 Other (Specify _____)

Q–7 For each of the following infertility diagnostic or treatment services, please indicate whether your facility accepts Medicaid reimbursements for eligible patients.

Infertility service	Yes	No	Not reimbursable in my state	Service not provided; no eligible patients requesting
Infertility counseling or education	1	2	3	4
Initial exam and history	1	2	3	4
Preliminary infertility tests and procedures (e.g., semen analysis, postcoital test)	1	2	3	4
Specialized diagnostic procedures (e.g., hysterosalpingogram)	1	2	3	4
Specialized drug therapy (e.g., C. "mphene)	1	2	3	4
Specialized surgical procedures (e.g., laparoscopy, vancocelectomy)	1	2	3	4

Q–8 Are your facility's fees for infertility services standard for all your patients, or do they vary according to your patients' financial or other circumstances?

1 Fees are standard for all patients.

2 Fees vary according to patients' financial circumstances. *(Please enclose fee schedule.)*

3 Other (Specify _____).

Q–9 Does your facility accept patients' insurance reimbursements as payment for infertility services provided, or do you require your patients to pay you directly?

1 We accept insurance reimbursements as payment in full.

2 We accept insurance reimbursements as partial payment and bill patient for balance.

3 Patient pays directly and seeks insurance reimbursement him/herself.

4 We have no specific policy; it depends upon the insurance company's policies.

5 We have no specific policy; it depends upon the procedure.

6 Other (Specify _____).

Q–10 What is your facility's usual charge for the following infertility tests and procedures? (Please check the appropriate category for tests or procedures not provided through your facility.) Include the physician's charge, lab test and other facility fees and hospital fees, when appropriate.

Infertility service	Usual charge	Not provided	
Initial visit, new patient	$ _____	_____	38–41
Semen analysis	$ _____	_____	42–45
Hysterosalpingogram	$ _____	_____	46–49
Diagnostic laparoscopy	$ _____	_____	50/1 CD2. 5–8
Clomiphene, for ovulation induction (five tablets)	$ _____	_____	9–12
Vasoepididymostomy	$ _____	_____	13–16
Reversal of tubal ligation	$ _____	_____	17–20
Vasectomy reversal	$ _____	_____	21–24

Q–11 Please circle the percentage of your infertility patients whose services are paid for in the following ways (percentages should add to 100):

	0%	1–10%	11–25%	26–50%	51–75%	76–100%	
Patients who are covered by Medicaid	1	2	3	4	5	6	25
Patients who pay and/or whose insurance pays the full fee	1	2	3	4	5	6	26
Patients who pay a reduced fee	1	2	3	4	5	6	27
Patients who are served for free	1	2	3	4	5	6	28

Q–12 How do women and men in need of infertility services in your community learn that you provide these services?

1 Specific infertility brochures, posters placed in community agencies. *(Please enclose sample, if available.)* 29

2 Radio, TV announcements. 30

3 Talks, presentations by agency staff. 31

4 Newspapers, magazines. *(Please enclose sample, if available.)* 32

5 Referrals from agencies. 33

6 Referrals from private physicians. 34

7 Referrals from other clients. 35

8 Other (Specify _____). 36 37

9 None of the above. 38

Q–13 How many unduplicated patients received the following infertility services through your facility in the most recent year for which you have) data? Please report separately for female and male patients (couples should be counted as two separate patients). Note that subtotals may not add to the total number of patients, because some patients may receive more than one type of service. If you cannot provide data for unduplicated *patients*, please estimate *visits*.

Infertility service	Female		Male		
	Patients	or Visits	Patients	or Visits	
Total number of patients or visits	_____	_____	_____	_____	39–42. 43 44–47 48
Preliminary tests and procedures (e.g., semen analysis, postcoital test)	_____	_____	_____	_____	49–52. 53 54–57 58
Specialized diagnostic procedures (e.g., hysterosalpingogram)	_____	_____	_____	_____	59–62. 63 64–67 68
Specialized drug therapy (e.g., clomiphene, gonadotropin)	_____	_____	_____	_____	69–72. 73 74–77 78 80. 2 CD3
Specialized surgical procedures (e.g., laparoscopy, vasoepididymostomy)	_____	_____	_____	_____	5–8 9 10–13 14

What year do the above data cover? _____ 15

Q-14 Please describe any problems you have encountered in your facility's provision of infertility services

Q-15 Is there anything else you would like to tell us about the delivery of infertility services through your agency?

Respondent's name

Position

Facility

Telephone number

Please remember to enclose your fee schedule for infertility services.

THANK YOU FOR YOUR COOPERATION.