

Chapter 2

Survey Data: Physician Practice

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Survey Data: Physician Practice

PREVALENCE AND DISTRIBUTION OF ARTIFICIAL INSEMINATION

Thirty-three percent of the cross-sectional sample of physicians reported that they would provide infertility services (table 2-1), with an average of 32 patients treated in the last year (table 2-2), suggesting that **approximately 1.2 million patients were treated by primary care and reproductive care physicians last year for infertility problems** (table 2-3). Of course, this estimate is somewhat imprecise, because it is physicians reporting on the number of patients they have seen. As more than one physician might treat the same individual, these figures may substantially overestimate the population seeking treatment.

Table 2-1. —Infertility Services As Part of Practice^a

(Question 1a):^b As part of your practice, would you provide infertility services or treatment for infertility?

Base: Cross-sectional sample physicians responding to survey

| | Unweighed base ^c | % | Yes | No |
|-------------------------------|-----------------------------|---|-----------|-----------|
| T o t a l | (827) | | 33 | 67 |
| Specialty | | | | |
| General practice | (162) | % | 7 | 93 |
| Family practice | (236) | % | 13 | 87 |
| OB/GYN ^d | (196) | % | 79 | 21 |
| Urology | (199) | % | 76 | 22 |
| Other | (34) | % | 15 | 85 |
| Practice | | | | |
| Office-based | (715) | % | 33 | 67 |
| Hospital-based | (108) | % | 31 | 69 |
| Age | | | | |
| U n d e r 3 5 | (126) | % | 37 | 63 |
| 3 5 t o 4 9 | (344) | % | 43 | 57 |
| 5 0 o r o l d e r | (342) | % | 23 | 77 |
| Sex | | | | |
| M a l e | (759) | % | 33 | 67 |
| Female | (66) | % | 36 | 64 |

^aThe sample is the cross-sectional sample

^bThe code number of the question in the survey instrument (see app B)

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

^dObstetrics/gynecology

SOURCE: Office of Technology Assessment, 1988

Among the cross-sectional sample physicians who would provide infertility services as part of their practice, most would provide fertility drug therapy (90 percent) and surgical therapy (72 percent), but few would provide in vitro fertilization (3 percent) or gamete intrafallopian transfer (3 percent), and fewer still surrogate mother matching (2 percent) (table 2-4). Artificial insemination falls between these two extremes: 38 percent of physicians treating infertility problems would provide artificial insemination by husband (AIH) and 24 percent, artificial insemination by donor (AID). Of those not offering artificial insemination, nearly half explained that the procedure is not part of their practice (table 2-5). One in 10 cited fear of litigation or liability, and one in 20 cited personal or ethical objections. Other physicians explained that lack of donors (3 percent) and facilities (3 percent) prevented the practice. Nearly one-third of those not accepting patients failed to cite a reason. However, four out of five physicians surveyed in the cross-sectional sample said that they had received no requests for either AIH or AID in the past 12 months, although 52 percent of the obstetrician/gynecologists had (table 2-6). Obstetrician/gynecologists also had larger artificial insemination practices than did other specialties (table 2-7).

Overall, artificial insemination is a common infertility treatment. The survey indicates that **during a 12-month period in 1986-87, approximately 172,000 women underwent at least one cycle of artificial insemination**, 100,000 of them under the supervision of physicians in primary care or obstetrics/gynecology, and the rest under the care of subspecialists. Overall, 9.3 percent of the physicians in primary care or reproductive care specialties have accepted a patient for artificial insemination in the past year, suggesting that

approximately 11,000 physicians in the United States perform—at least occasionally—artificial insemination (tables 2-8, 2-9).

Table 2-2.-Patients Treated for Infertility*

(Question 1b): ^bIn the past 12 months, approximately how many patients have you treated for infertility problems?

Base: Cross-sectional sample physicians responding to survey who would provide infertility services

| | Unweighed base ^c | | None | 1-10 | 11-20 | 21-50 | >50 | Mean no. of patients |
|-------------------------------|--------------------------------|---|------|------|-------|-------|-----|----------------------------|
| Total | (356) | % | 8 | 36 | 22 | 21 | 12 | 32.1 |
| Specialty | | | | | | | | |
| General practice | (11) | % | 27 | 73 | 0 | 0 | 0 | 3.9 |
| Family practice | (31) | % | 25 | 62 | 10 | 0 | 0 | 9.6 |
| OB/GYN ^d | (155) | % | 2 | 26 | 27 | 28 | 17 | 42.3 |
| Urology | (154) | % | 4 | 38 | 25 | 25 | 8 | 26.4 |
| Other | (5) | % | 20 | 20 | 20 | 20 | 20 | 31.2 |
| Practice | | | | | | | | |
| Office-based | (315) | % | 7 | 37 | 22 | 23 | 11 | 29.8 |
| Hospital-based | (43) | % | 18 | 32 | 25 | 11 | 18 | 53.0 |

*The sample is the cross-sectional sample

^bThe code number of the question in the survey instrument (see app 8)

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

^dObstetrics/gynecology

SOURCE: Office of Technology Assessment, 1988

Table 2-3. - Population Estimates of Infertility Treatment •

Base: Cross-sectional sample physicians responding to survey

| Unweighed base (827) ^b | Population size | Proportion treating | Mean patients | Total patients |
|-----------------------------------|--------------------|------------------------|------------------|-------------------|
| Specialty | | | | |
| General practice | 25,807 | 6.8 | 3.9 | 6,844 |
| Family practice | 43,221 | 13.2 | 9.6 | 54,770 |
| Obstetrics/gynecology | 28,511 | 79.2 | 42.3 | 955,164 |
| Urology | 8,944 | 76.5 | 26.4 | 180,633 |
| Total | | | | 1,197,411 |

^aThe sample is the cross-sectional sample

^bProportions and means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

Table 24.-Types of Infertility Treatment^a(Question 1c):^b Which of the following types of infertility therapies would you perform as part of your practice?

Base: Cross-sectional sample physicians responding to survey who would provide infertility services

| | Unweighed base: ^g | Total (356) | GP ^c (11) | FP ^d (31) | OB/GYN ^e (155) | UR ^f (154) |
|--|------------------------------|----------------|-------------------------|-------------------------|------------------------------|--------------------------|
| | % ^h | | % | % | % | % |
| Fertility drug therapy | 90 | 73 | 65 | 99 | 66 | |
| Surgical therapy | 72 | 20 | 10 | 64 | 94 | |
| Artificial insemination by husband | 38 | 27 | 20 | 52 | 10 | |
| Artificial insemination by donor | 24 | 20 | 15 | 34 | 4 | |
| In vitro fertilization/embryo transfer | 3 | 0 | 0 | 4 | 0 | |
| Gamete intrafallopian transfer | 3 | 0 | 0 | 4 | 0 | |
| Surrogate mother matching | 2 | 0 | 2 | 2 | 0 | |

^aThe sample is the cross-sectional sample.^bThe code number of the question in the survey instrument (see app. B)^cGeneral practice^dFamily practice^eObstetrics/gynecology^fUrology^gPercentages are presented as weighted sample estimates. The unweighed sample base is presented in parentheses so that the sampling variance for these estimates can be calculated^hSince multiple choices were permitted, percentages may add to more than 100%

SOURCE: Office of Technology Assessment, 1988

Table 2-5. - Reasons for Not Accepting Patients for Insemination

(Question 2c):^b What is the main reason you have not accepted any requests for artificial insemination in the past year? (Verbatim)

Base: Cross-sectional sample physicians responding to survey who received requests but did no inseminations

| Unweighed base (71) ^c | Total |
|---|-------|
| | % |
| Not my specialty/area of expertise | 43 |
| Legal risks/fear of litigation | 10 |
| Personal objection to artificial insemination | 5 |
| Lack of qualified donors | 3 |
| Lack of facilities | 3 |
| Recipient changed mind | 2 |
| Husband did not agree | 2 |
| Not medically indicated | 2 |
| Risk of HIV (AIDS) | 2 |
| All other | 6 |
| No reason reported | 32 |

^a The sample is the cross-sectional sample^b The code number of the question in the survey instrument (see app. B)^c Percentages are presented as weighted sample estimates. The unweighed sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

Table 2-6.-Requests for Artificial Insemination

(Question 2a):^bIn the past 12 months, approximately how many requests have you received for artificial insemination, including requests for insemination with either husband or donor sperm?

Base: Cross-sectional sample physicians responding to survey

| | Unweighted base ^c | % | None | 1-3 | 4-10 | >11 | Mean no. of requests |
|-----------------------------|---------------------------------|---|------|-----|------|------|----------------------------|
| Total | (827) | % | 82 | 10 | 5 | 2 | 1.6 |
| Specialty | | | | | | | |
| General practice | (162) | % | 99 | 1 | 0 | 0 | 0 |
| Family practice | (236) | % | 92 | 6 | 1 | <0.5 | 0.2 |
| Obstetrics/gynecology | (196) | % | 48 | 27 | 17 | 8 | 4.4 |
| Urology | (199) | % | 85 | 7 | 4 | 2 | 5.1 |
| Other | (34) | % | 88 | 3 | 6 | 3 | 0.9 |
| Practice | | | | | | | |
| office-based | (715) | % | 82 | 10 | 5 | 2 | 1.5 |
| Hospital-based | (108) | % | 87 | 6 | 3 | 4 | 2.7 |
| Age | | | | | | | |
| Under 35 | (126) | % | 80 | 11 | 5 | 1 | 1.1 |
| 35 to 49 | (344) | % | 75 | 14 | 8 | 3 | 1.9 |
| 50 or older | (342) | % | 89 | 6 | 3 | 2 | 1.5 |
| sex | | | | | | | |
| Male | (759) | % | 84 | 9 | 5 | 2 | 1.5 |
| Female | (66) | % | 70 | 20 | 7 | 4 | 2.7 |

^aThe sample is the cross-sectional sample.

^bThe code number of the question in the survey instrument (see app. B).

^cPercentages are presented as weighted sample estimates. The unweighted sample base represented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 827 where physicians failed to respond to particular question concerning demographic characteristic

SOURCE: Office of Technology Assessment, 1988

Table 2-7. - Patients Accepted for Insemination^a(Question 2b):^b How many patients have you accepted for artificial insemination, with either husband or donor sperm, in the past 12 months?

Base: Cross-sectional sample physicians responding to survey who received requests in last 12 months

| | Unweighted base ^c | % | None | 1-3 | 4-10 | >11 | Mean no. accepted |
|-----------------------|---------------------------------|---|------|-----|------|-----|----------------------|
| Total | (154) | % | 43 | 31 | 16 | 8 | 5.0 |
| Specialty | | | | | | | |
| General practice | (2) | % | 100 | | | | |
| Family practice | (19) | % | 72 | 16 | 0 | 4 | 1.0 |
| Obstetrics/gynecology | (101) | % | 32 | 36 | 21 | 11 | 6.5 |
| Urology | (28) | % | 70 | 20 | 0 | 0 | 1.4 |
| Other | (4) | % | 50 | 25 | 25 | 0 | 2.5 |
| Practice | | | | | | | |
| office-based | (136) | % | 44 | 31 | 17 | 7 | 4.0 |
| Hospital-based | (16) | % | 42 | 25 | 0 | 33 | 17.8 |
| Age | | | | | | | |
| Under 35 | (26) | % | 46 | 31 | 15 | 4 | 3.4 |
| 35 to 49 | (82) | % | 43 | 36 | 15 | 8 | 5.8 |
| 50 or older | (43) | % | 45 | 25 | 18 | 12 | 4.6 |
| sex | | | | | | | |
| Male | (132) | % | 44 | 30 | 16 | 8 | 4.7 |
| Female | (21) | % | 39 | 39 | 13 | 9 | 6.8 |

^aThe sample is the cross-sectional sample^bThe code number of the question in the survey instrument (see app. B)^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

Table 2-8.- Patients Accepted for Artificial insemination, by Physician specialty^a(Question 2b):^b How many patients have you accepted for artificial insemination, with either husband or donor sperm, in the past 12 months?

Base: Cross-sectional sample physicians responding to survey

| | Unweighted base ^c | % | None | 1-3 | 4-10 | >11 |
|-----------------------|---------------------------------|---|-------|------|------|-----|
| Total | (827) | % | 90.1 | 5.4 | 2.8 | 14 |
| General practice | (162) | % | 100.0 | 0 | 0 | 0 |
| Family practice | (236) | % | 98.0 | 13 | 0 | 3 |
| Obstetrics/gynecology | (196) | % | 64.8 | 18.8 | 10.9 | 5.4 |
| Urology | (199) | % | 95.6 | 2.9 | 0 | 0 |
| Other | (34) | % | 94.1 | 2.9 | 2.9 | 0 |

^aThe sample is the cross-sectional sample^bThe code number of the question in the survey instrument (see app. B)^cpercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling Variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

Table 2-9. -Population Estimate of Number of Physicians Conducting Artificial Insemination^a

| Specialty | Population size | Percentage having accepted a patient for artificial insemination | Estimated number of practitioners offering artificial insemination |
|-----------------------------|-----------------|--|--|
| General practice | 25,807 | 0 | 0 |
| Family practice | 43,221 | 1.64 | 709 |
| Obstetrics/gynecology | 28,511 | 35.15 | 10,022 |
| Urology | 8,944 | 2.94 | 263 |
| Total | | | 10,994 |

^aThe sample is the cross-sectional sample

SOURCE: Office of Technology Assessment, 1988

ARTIFICIAL INSEMINATION PRACTITIONERS

The cross-sectional survey found that 41 percent of all physicians who conduct artificial insemination report that they belong to a national fertility society, and nearly all physicians who perform more than 10 inseminations a year (92 percent) belong to such a professional organization. This population of fertility society members treat the majority (75 percent) of the 172,000 recipients of artificial insemination. Furthermore, the incidence of artificial insemination practice among practitioners surveyed in the general cross-sectional sample was too low to generate enough respondents with large artificial insemination practices for useful data. Therefore, a national probability sample of members of a fertility society who are likely to do a great deal of artificial insemination was developed (see app. A).

In 1985-86, the American Fertility Society (AFS) surveyed its members to identify those who offer artificial insemination, even on an occasional basis, although it did not distinguish between AIH and AID. The AFS members responding that they offer artificial insemination, plus the entire membership list of the American Andrology Society, provided the sampling frame here called the "fertility society sample" (table 2-10). Within this sample, a number of physicians reported that they have accepted four or more women for artificial insemination in the

Table 2-10. - Profiles of the Samples

| | Unweighed base: ^c | Fertility society sample ^a (646) | Cross-sectional sample ^b (827) |
|--|------------------------------|--|--|
| | | % | % |
| Specialty | | | |
| General practice | 0 | | 27 |
| Family practice | <0.5 | | 37 |
| Obstetrician/gynecologist | 80 | | 24 |
| Urology | 6 | | 8 |
| other | 14 | | 4 |
| Practice | | | |
| Office-based | 82 | | 68 |
| Hospital-based , | 17 | | 11 |
| Age | | | |
| Under 35. | 6 | | 16 |
| 35 to 49. | 57 | | 37 |
| 50 or older | 36 | | 45 |
| Sex | | | |
| Male , ... , | 92 | | 90 |
| Female | 8 | | 9 |
| Currently member of a fertility society | | | |
| Yes | 94 | | 11 |
| No | 6 | | 65 |

^aThe fertility society sample is drawn from the total membership of the American Society of Andrology and from a subset of the membership of the American Fertility Society who had responded to a previous survey that they do offer artificial insemination services.

^bThe cross-sectional sample is drawn from American Medical Association lists of Physicians identifying themselves as in general practice, family practice, obstetrics/gynecology, and urology

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

past year. These physicians are referred to as "regularly doing artificial insemination."

Ninety-five percent of the physicians in the fertility society sample report that they provide infertility services as part of their practice and have accepted patients in the last year (table 2-11). The remaining 5 percent tend to be researchers. On average, these physicians treat approximately 168 patients per year for infertility. There is relatively little difference in the average number of infertility patients seen per year by obstetrician/gynecologists (145) and urologists (162). Hospital-based physicians with infertility practices see more patients about infertility

problems per year (262) than do office-based physicians (151).

Specialists in reproductive endocrinology and infertility, who constitute the "other" category in table 2-11, however, see about twice as many patients for infertility problems per year (335). These specialists also handle a relatively large proportion of inseminations - on average annually 107 (table 2-12) - and represent nearly 36 percent of the total number of artificial inseminations conducted each year by fertility society members.

Table 2-11 .- Patients Treated for Infertility'

(Question 1b):^bIn the past 12 months, approximately how many patients have you treated for infertility problems?

Base: Would provide infertility services

| | Unweighed base ^c | | None | 1-10 | 11-20 | 21-50 | >50 | Mean no. treated |
|-----------------------------|--------------------------------|---|------|------|-------|-------|-----|---------------------|
| Total | (620) | % | 5 | 5 | 11 | 26 | 53 | 167,7 |
| Specialty | | | | | | | | |
| Obstetrics/gynecology | (520) | % | 5 | 4 | 11 | 30 | 50 | 144,6 |
| Urology | (31) | % | 3 | 9 | 21 | 12 | 53 | 161.6 |
| Other | (69) | % | 4 | 7 | 4 | 8 | 73 | 335,2 |
| Practice | | | | | | | | |
| Office-based | (522) | % | 5 | 4 | 12 | 29 | 50 | 151.0 |
| Hospital-based | (92) | % | 2 | 8 | 6 | 11 | 71 | 262.2 |

^a The sample is the fertility society sample

^b The code number of the question in the survey instrument (see app. B)

^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 620 where physicians failed to respond to particular question concerning demographic characteristic

SOURCE: Office of Technology Assessment, 1988

Table 2-12. - Inseminations During Past Year •

(Question 2b):^bHow many patients have you accepted for artificial insemination, with either husband or donor sperm, in the past twelve months?

Base: Have received requests in past twelve months

| | Unweighed base ^c | | None | 1-3 | 4-10 | 11-50 | >50 | Mean no. accepted |
|---------------------------|--------------------------------|---|------|-----|------|-------|-----|----------------------|
| Total | (550) | % | 11 | 22 | 21 | 31 | 15 | 34.0 |
| Specialty | | | | | | | | |
| OB/GYN ^d | (470) | % | 9 | 26 | 23 | 30 | 12 | 25.2 |
| Urology | (18) | % | 63 | - | 5 | 32 | - | 7.9 |
| Other | (62) | % | 10 | 3 | 10 | 33 | 43 | 106.7 |
| Practice | | | | | | | | |
| Office-based | (463) | % | 11 | 25 | 22 | 30 | 13 | 30.8 |
| Hospital-based | (16) | % | 11 | 7 | 14 | 37 | 31 | 52.9 |

^a The sample is the fertility society sample

^b The code number of the question in the survey instrument (see app. B)

^c Percentages and means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

^d Obstetncs/gynecology

SOURCE: Office of Technology Assessment, 1988

FERTILITY SERVICES

The physicians from the fertility society sample who treat infertility problems would normally offer fertility drug therapy (97 percent) and surgical therapy (90 percent) (table 2-13). They differ from the cross-sectional fertility practitioners in that 85 percent have received requests for artificial insemination, and most would offer the service: 85 percent would perform AIH and 62 percent would perform AID. (This is a product of the sample selection, as the sampling frame was based in large part on AFS members who reportedly perform artificial insemination.)

A number of these fertility society members also offer less common forms of infertility treatment, such as in vitro fertilization (19 percent) or gamete intrafallopian transfer (20 percent).

These treatments are found more commonly among endocrinologists and those reporting themselves as "infertility specialists" than in the general population of urologists and obstetrician/gynecologists.

Although these forms of infertility treatment are comparatively rare, even among specialists, the survey suggests that based upon an estimated population of 10,994 members of fertility societies (96 percent of whom provide infertility services or treatment), on the order of 2,111 physicians would perform gamete intrafallopian transfer, 2,005 would perform in vitro fertilization or embryo transfer, and 528 would arrange surrogate mother matches.

Table 2-13. -Types of Infertility Treatment*

(Question 1c): Which of the following types of infertility therapies would you perform as part of your practice?

Base: Would provide infertility services^e

| | Total (620) | Specialty | | | Sample | |
|--|----------------|------------------------------------|-----------------|---------------|---|------------------------------|
| | | Obstetrics/ gynecology (520) | Urology (31) | Other (69) | American fertility society (561) | Andrology society (59) |
| Unweighed base: ^d | % | % | % | % | % | % |
| Fertility drug therapy | 97 | 98 | 91 | 93 | 98 | 88 |
| Surgical therapy | 90 | 95 | 91 | 55 | 93 | 65 |
| Artificial insemination by husband | 85 | 90 | 24 | 82 | 90 | 47 |
| Artificial insemination by donor | 62 | 65 | 15 | 68 | 66 | 38 |
| In vitro fertilization/embryo transfer | 19 | 16 | 3 | 44 | 19 | 17 |
| Gamete intrafallopian transfer | 20 | 18 | 3 | 38 | 20 | 15 |
| Surrogate mother matching | 5 | 6 | 0 | 6 | 6 | 2 |

a The sample is the fertility society sample.

b The code number of the question in the survey instrument (see app. B)

c Since multiple choices were permitted, percentages may add to more than 100%.

d Percentages are presented as weighted sample estimates. The unweighed sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

REASONS FOR SEEKING ARTIFICIAL INSEMINATION

Nearly all women who request artificial insemination report to their physicians that they are married (92 percent) or living as a couple with a man (2 percent) (table 2-14). Even practices in which at least 75 percent of the inseminations use donor semen report that 92.5 percent of the women present themselves as married or living with a man.

Requests also come from women identifying themselves as without partners (3 percent) or as part of a lesbian couple (1 percent), which translates into approximately 4,000 requests from single women and 1,000 requests from lesbian couples being received during a 12-month period in 1986-87.

For patients seeking AIH or AID, male partner infertility is the primary reason for the request (table 2-15). Physicians doing mostly AIH as well as those primarily doing AID report that about 8 out of 10 requests for treatment are due to male infertility.

Other problems with the male partner that led to artificial insemination in the past year include: impotence (3 percent); genetic disorders (3 percent); exposure to mutagens (0.4 percent); Rh incompatibility (0.2 percent); and sexually transmitted disease (0.2 percent).

Fewer than 4 percent of the women accepted for artificial insemination in the past year stated that they sought insemination because of the lack of a male partner. Even among physicians whose practice is primarily (75 percent or more) AID, fewer than 5 percent of the women stated that they sought insemination because of the lack of a male partner. None of the physicians reported accepting cases in the past year when patients requested artificial insemination to obtain children with desired characteristics. **Overall, those currently seeking and obtaining artificial insemination, with a few exceptions, identify themselves as married couples with a male reproductive problem, primarily male infertility.**

Table 2-14. -Types of Patients^a

(Question 4a):^b What proportion of the patients who have requested artificial insemination in the past year were:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base: ^d | Total (367) | Proportion AIH ^c | | | |
|--|------------------------------|----------------|-----------------------------|----------------|-----------------|---------------|
| | | | 100% (61) | 99-75% (70) | 74-25% (144) | 24-0% (91) |
| | | % | % | % | % | % |
| Married couples | 92.2 | 97.8 | 94.1 | 90.7 | 90.7 | 90.7 |
| Women without a partner | 2.9 | 0.4 | 2.3 | 3.2 | 4.6 | 4.6 |
| Unmarried couples (heterosexual) | 2.2 | 1.9 | 2.7 | 2.2 | 1.8 | 1.8 |
| Unmarried couples (lesbian) | 0.7 | 0.2 | 0.8 | 1.0 | 0.6 | 0.6 |
| Don't know marital status | 0.7 | 0 | 0.6 | 1.2 | 0.4 | 0.4 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B)

^c"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

^dpercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

Table 2-15. - Reasons for Seeking Insemination^a

(Question 4b):^bWhat proportion of the patients whom you accepted for artificial insemination in the past year sought artificial insemination because of:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighted base: ^d | Total (367) | Proportion AIH ^e | | | |
|---|----------------|-----------------------------|----------------|-----------------|---------------|
| | | 100% (61) | 99-75% (70) | 74-25% (144) | 24-0% (91) |
| | % | % | % | % | % |
| Infertility of male partner | 81.4 | 78.0 | 84.1 | 80.5 | 83.7 |
| No male partner | 3.7 | 0.1 | 3.3 | 4.7 | 4.9 |
| Impotence of male partner | 3.3 | 3.6 | 2.6 | 3.9 | 2.7 |
| Genetic disorder of male partner | 3.1 | 1.5 | 1.7 | 2.9 | 5.4 |
| Exposure of male partner to mutagens | 0.4 | 0 | 0.3 | 0.3 | 0.8 |
| Rh incompatibility of male partner | 0.2 | 0 | 0.5 | 0.1 | 0.4 |
| Male partner has sexually transmitted disease | 0.2 | 0 | 0.2 | 0.3 | 0.3 |
| Other | 6.8 | 17.2 | 7.7 | 5.8 | 0.9 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B).

^c"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

^dPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

ARTIFICIAL INSEMINATION BY HUSBAND v. DONOR

Artificial insemination by husband (or partner) currently represents about half of all inseminations being done in the United States, although relatively few practitioners offer only this procedure. Among those regularly doing artificial insemination (i.e., four or more patients per year), 15 percent restricted themselves to AIH. The remaining 85 percent conduct a mixed prac-

tice, doing both AIH and AID.

Practitioners who do only AIH tend to have smaller practices. Sixty percent of the physicians who do inseminations only with husbands' or partners' semen have treated 4 to 10 insemination patients in the past year. Nearly all of the remaining 40 percent did 50 or fewer inseminations in the past year.

RECIPIENT SCREENING

General Screening Requirements

Prior to accepting a woman for insemination, the majority of physicians who regularly provide artificial insemination (i.e., accept four or more patients per year) will screen for indications of infertility (99 percent), obtain a medical history (98 percent), perform a physical examination (96 percent), test for disease that might affect a developing fetus (74 percent), and do a personal-

ity assessment (52 percent). Forty-four percent will also do some special screening for genetic defects, and 6 percent will do a karyotype (table 2-16).

Personality Assessments

The likelihood of requiring a personality assessment increases with the size of a physician's artificial insemination practice, changing from 48 percent of those seeing 4 to 10 insemination pa-

Table 2-16.-Types of General Screening: Recipient.

(Question 5):^a Prior to accepting a patient for artificial insemination, do you normally require that the patient undergo/provide:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighed base (367) ^c | Yes | No | Inappropriate response |
|--|-----|----|------------------------|
| Fertility history % | 99 | 1 | 1 |
| Personal medical history % | 98 | 1 | 1 |
| Physical examination % | 96 | 1 | 3 |
| Family medical and genetic history % | 93 | 5 | 2 |
| Personality assessment % | 52 | 43 | 5 |
| Karyotyping % | 6 | 87 | 7 |
| Screening for genetic disease (high risk groups) % | 44 | 53 | 2 |
| Diagnostic tests for selected diseases % | 74 | 22 | 4 |

^aThe sample is the fertility society sample.^bThe code number of the question in the survey instrument (see app. B).^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

tients per year, to approximately 53 percent of those with 11 to 50 insemination patients per year, to 61 percent of those with 100 or more. By contrast, there is relatively little variation by size of practice for most of the other general screening procedures (medical history, family history, fertility history, and physical examination). The survey instrument did not specify the type of personality assessment used. The nature of the "personality assessments" may vary from an interview and individual physician assessment to use of standardized psychological examinations. Further, the assessments could be used to detect diagnosable mental illness or to address more general considerations of fitness for pregnancy and motherhood (Mikesell, 1988).

Physicians with office-based practices are roughly as likely as those with hospital-based practices to require such an assessment (table 2-17). Personality assessments are somewhat less common, although still widely used, among physicians who perform only AIH (38 percent) compared with those performing mainly AID (54-59 percent). **Young physicians (29 percent) and female physicians (39 percent) are less likely than older (60 percent) and male physicians (53 percent) to require personality assessment prior to acceptance (table 2-17).** However, the sample size of physicians who are female or

Table 2-17.— Recipient Personality Assessment, by Physician Characteristics^a(Question 5):^b Prior to accepting a patient for artificial insemination, do you normally require that the patient undergo/provide:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base ^c | | Yes | No | Not applicable |
|-----------------------------------|-----------------------------|---|-----|----|----------------|
| Total | (367) | % | 52 | 43 | 5 |
| Age | | | | | |
| Under 35 | (21) | % | 29 | 71 | 0 |
| 35 to 49 | (221) | % | 51 | 46 | 3 |
| 50 or over | (121) | % | 60 | 32 | 8 |
| sex | | | | | |
| Male | (339) | % | 53 | 42 | 5 |
| Female | (28) | % | 39 | 54 | 7 |
| Practice | | | | | |
| Office | (296) | % | 53 | 41 | 6 |
| Hospital | (66) | % | 51 | 48 | - |
| Proportion AIH^d | | | | | |
| 100% | (61) | % | 38 | 50 | 13 |
| 75-99% | (70) | % | 55 | 44 | 3 |
| 25-74% | (144) | % | 54 | 44 | 2 |
| 0-24% | (91) | % | 59 | 38 | 4 |

^aThe sample is the fertility society sample.^bThe code number of the question in the survey instrument (see app. B).^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic^d"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

under 35 on which this figure is based is quite low.

Genetic Screening

Twenty-eight percent of the physicians regularly doing artificial insemination indicate that a family history of genetic disease would lead them to require genetic screening of a potential insemination recipient, and 7 percent would require screening of a patient whose reproductive history was consistent with an underlying genetic problem. As noted, 6 percent required karyotyping prior to accepting a recipient. Hence, genetic testing is far from routine for insemination patients, even those in higher than average risk groups (table 2-18).

Special screening for genetic diseases is more common among hospital-based practitioners (53 percent) than among office-based ones (42 percent), and the likelihood increases with the size

Table 2-18. —Circumstances Requiring Genetic Screening: Recipient

| (Question 6b): ^b Under what circumstances do you require special screening for genetic defects or diseases? (verbatim) | | |
|---|--|---------------------------------------|
| Base: Have accepted 4 or more patients for artificial insemination in the past year | | |
| | All physicians doing inseminations (367) | Physicians doing some screening (162) |
| Unweighed base: ^c | % ^d | % |
| Family history of genetic diseases or defects | 28 | 63 |
| Membership in high risk ethnic group | 13 | 29 |
| Personal medical history . . . (no reference to fertility) | 9 | 20 |
| Fertility history/reproductive problems (menstrual problems/spontaneous abortions/stillbirths) | 7 | 17 |
| Infectious diseases | 3 | 8 |
| Age | 1 | 3 |
| Other | 2 | 6 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B).
^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.
^dSince multiple choices were permitted, percentages may add to more than 100%.

SOURCE: Office of Technology Assessment, 1988

of the practice, from 34 percent of those with 4 to 10 patients per year to 63 percent of those seeing more than 50 a year. Few tests are available for genetic screening at this time, and special screening beyond oral family histories may be largely restricted to karyotyping for chromosomal defects and testing for a select group of disorders such as Tay-Sachs disease, sickle cell anemia, thalassemia, and so on.

Physicians who do AIH only are less likely (32 percent) than are those who also do AID (46-48 percent) to screen recipients for genetic diseases, although there is no difference in the risk of genetic disease. As with personality assessments, younger doctors (43 percent) are less likely than older ones (52 percent) to use genetic screening, and female physicians (39 percent) less likely than male physicians (45 percent), although the differences are not as striking.

Other Diagnostic Tests

A majority of physicians regularly doing artificial insemination (74 percent) require other diagnostic tests of recipients prior to accepting them for insemination, with hospital-based physicians again more likely (80 percent) than office-based physicians (73 percent) to require tests. The likelihood also increases with the size of the physician's artificial insemination practice, from 69 percent for those accepting 4 to 10 patients per year to 76 to 78 percent for those accepting more than 10. There is no real difference in the use of diagnostic tests between physicians doing AID (70 percent) and those exclusively doing AIH (72 percent) (table 2-19).

The diagnostic screening most often required by physicians doing artificial insemination is that for infertility (47 percent), by taking a fertility history or doing one of the many tests required for an infertility workup (U.S. Congress, 1988). The most commonly reported tests for infectious diseases were those for human immunodeficiency virus (HIV) antibodies (10 percent), chlamydia (9 percent), rubella (9 percent), gonorrhea (7 percent), syphilis (6 percent), hepatitis (4 percent), cytomegalovirus (3 percent), and herpes (1 percent) (table 2-21). In addition, 5 percent of physicians who conduct artificial insemination report testing for unspecified sexu-

ally transmitted diseases and 1 percent for other infectious diseases.

Table 2-19.-Diagnostic Tests: Recipients.

(Question 6c):^b Do you require any other diagnostic tests of potential recipients, prior to accepting them for artificial insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | % | Not applicable | | |
|-----------------------------------|------------------------------|---|----------------|-----------|----------------|
| | | | Yes | No | Not applicable |
| Total | (367) | | 74 | 22 | 4 |
| AI patients/past year | | | | | |
| 4-10 | (115) | % | 69 | 27 | 4 |
| 11-50 | (169) | % | 76 | 22 | 2 |
| 51-100 | (47) | % | 78 | 15 | 9 |
| >100 | (36) | % | 78 | 14 | 8 |
| Proportion AIH^d | | | | | |
| 100% | (61) | % | 72 | 28 | 2 |
| 75-99% | (70) | % | 77 | 22 | 2 |
| 25-74% | (144) | % | 77 | 18 | 5 |
| 0-24% | (91) | % | 70 | 23 | 7 |
| Practice | | | | | |
| Office | (296) | % | 73 | 23 | 4 |
| Hospital | (66) | % | 80 | 17 | 3 |

^aThe sample is the fertility society sample.

^bThe code number of the question is the survey instrument (see app. B).

^cPercentage are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic.

^d"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

SOURCE: Office of Technology Assessment, 1988

Correlation of Past Patient Rejection With Patient Characteristics

Four out of five patients who request artificial insemination are accepted. The remaining 20 percent are rejected for a variety of medical and nonmedical reasons (table 2-20). The most common reason that requests have been rejected are that the patient is unsuitable for nonmedical reasons: she is unmarried (52 percent), psychologically immature (22 percent), homosexual (15 percent), or welfare-dependent (15 percent) (table 2-22). Other reasons include evidence of child abuse (13 percent), drug abuse (11 percent), or alcohol abuse (10 percent). About 1 in 20 practitioners report rejecting applicants because of a prior criminal record. These rates are similar for physicians doing AIH only and those doing mostly AID.

Table 2-20.-Reasons for Rejecting Recipients.

(Question 3b):^b Could you describe the main reason(s) that you did not accept certain requests for artificial insemination? (verbatim)

Base: Accepted 4 or more patients for artificial insemination in the past year and rejected a request for artificial insemination

| | Total (190) | Number of recipients rejected | |
|---|----------------|-------------------------------|-----------|
| | | 1-4 (68) | > 5 (131) |
| Unweighted base: ^c | % ^d | % | % |
| Inappropriate recipient (NET) | 42 | 49 | 38 |
| Too old/over 40 | 5 | 4 | 5 |
| Single | 20 | 21 | 20 |
| Unmarried | 13 | 16 | 12 |
| Lesbian/homosexual | 7 | 9 | 6 |
| Emotionally unstable | 5 | 8 | 3 |
| Inappropriate unspec. | 4 | 3 | 5 |
| Not medically indicated (NET) | 31 | 16 | 38 |
| No male factor problem | 3 | 2 | 4 |
| Fernal factor problem | 6 | 3 | 8 |
| Male sperm too poor for AIH | 8 | 3 | 10 |
| Not indicated unspec.) | 16 | 9 | 19 |
| Will only do AIH ^e | 16 | 16 | 15 |
| Inappropriate couple (NET) | 10 | 10 | 9 |
| Unstable marriage | 5 | 6 | 5 |
| Financial/economic | 2 | 2 | 2 |
| Not suitable parents | 2 | 2 | 2 |
| Not ready | 1 | 2 | 1 |
| Lack of qualified donors | 7 | 9 | 6 |
| Inappropriate donor (NET) | 7 | 3 | 8 |
| Too closely related | 4 | 3 | 4 |
| Semen not suitable | 1 | 0 | 2 |
| Donor emotionally unstable | 1 | 0 | 2 |
| Other donor characteristics | 2 | 0 | 4 |
| Medical risks (NET) | 6 | 4 | 7 |
| Risk of HIV infection | 4 | 3 | 5 |
| Risk of venereal disease | 2 | 2 | 2 |
| Medical risks (unspec.) | 1 | 2 | 1 |
| Inadequate recipient understand. | 5 | 10 | 2 |
| Recipient changed mind | 3 | 2 | 4 |
| Husband did not agree | 2 | 0 | 4 |
| Recipient refused counseling | 2 | 3 | 2 |
| Lack of facilities | 2 | 2 | 2 |
| Not area of expertise | 1 | 3 | 0 |
| Personal objection to artificial insemination | 1 | 3 | 0 |
| Fear of litigation | >05 | 0 | 1 |
| Other | 4 | 2 | 5 |
| Not reported | 7 | 4 | 8 |

^aThe sample is the fertility society sample

^bThe code number of the question in the survey instrument (see app. B)

^cPercentage are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

^dSince multiple choices were permitted, percentages may add 10 more than 100%

SOURCE: Office of Technology Assessment, 1988

Nearly one-third of physicians who have rejected a request gave a medical justification: female infertility (6 percent), husband/partner

Table 2-21 .-Types of Diagnostic Tests: Recipients'

(Questions 6d, 6e):^b Which diagnostic tests do you require? (verbatim)

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | All physicians doing inseminations | | Physicians doing diagnostic testing | |
|--|------------------------------------|---------------------|-------------------------------------|---------------------|
| | In all cases (367) | In some cases (367) | In all cases (271) | In some cases (271) |
| Unweighed base: ^c | % ^d | % | % | % |
| Infertility tests (NET) | 47 | 38 | 63 | 52 |
| Blood type/rh factor | 17 | 3 | 23 | 4 |
| AIDS (HIV) testing | 10 | 4 | 13 | 6 |
| Urethral culture for chlamydia | 9 | 2 | 12 | 3 |
| Rubella antibody | 9 | <0,5 | 12 | < 0,5 |
| GC culture | 7 | 2 | 10 | 3 |
| Syphilis testing (VDRI/RPR) | 6 | 1 | 8 | 1 |
| Pap smear | 6 | < 0,5 | 8 | <0,5 |
| Sexually transmitted diseases | 5 | 1 | 7 | 2 |
| Routine blood screen analysis | 5 | 1 | 7 | 2 |
| Hepatitis serum. | 4 | 1 | 6 | 2 |
| NGU/Ureaplasma/Mycoplasma test | 4 | 1 | 5 | 2 |
| Cytomegalovirus | 3 | 1 | 4 | 1 |
| Physical exam and history | 2 | 1 | 3 | 2 |
| Semen mucus interaction | 2 | 3 | 3 | 4 |
| Herpes culture | 1 | 1 | 2 | 1 |
| Urinalysis | 1 | 0 | 1 | 0 |
| Thyroid panel | 1 | 1 | 1 | 2 |
| Other infectious disease | 1 | 1 | 1 | 1 |
| Karyotyping | 1 | 2 | 1 | 3 |
| Inheritable disease | 1 | 2 | 1 | 3 |
| Genetic screening.. . . . | 0 | 1 | 0 | 2 |
| Inappropriate response | 13 | 4 | 18 | 6 |
| No answer | 6 | 22 | 8 | 30 |

^aThe sample is the fertility society sample^bThe code number of The question in the survey instrument (see app. B).^cPercentages are presented as weighted sample estimates The unweighted sample bases presented parentheses so that the sampling variance for these estimates can be calculated.^dSince multiple choices were permitted, percentages may add to more than 100%

SOURCE: Office of Technology Assessment, 1988

semen too poor for AIH (8 percent), or in general finding that the procedure was not medically indicated (16 percent).

Physicians have also rejected potential recipients because they evidenced HIV antibodies (7 percent), syphilis (6 percent), gonorrhea (4 percent), genital herpes (3 percent), cytomegalovirus (2 percent), hepatitis (2 percent), and chlamydia (1 percent). Ten percent have rejected patients because of histories of serious genetic disorders. Eight percent have done so because of medical risks from pregnancy, and percent because the applicant was over 40.

Correlation of Likelihood of Rejection With Patient Characteristics

The incidence of past rejection of patients with certain types of characteristics may be misleading because some physicians may never have had contact with a potential recipient with such characteristics. Therefore, the physicians were asked for which recipient characteristics they "had rejected" or "would be likely to reject" a request for artificial insemination (table 2-22)

Fewer than half the physicians regularly doing artificial insemination have rejected or would be likely to reject a patient despite evidence of an

Table 2-22.-Criteria for Rejection: Recipients.

(Question 7):^a Have you ever rejected or would you be likely to reject a request for artificial insemination from a potential recipient because she was/has:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighed base (367) ^c | Have rejected | Would be likely to reject | Not likely to reject | Not applicable |
|--|---------------|---------------------------|----------------------|----------------|
| Unmarried without a partner % | 32 | 29 | 37 | 2 |
| Psychologically immature % | 22 | 63 | 12 | 3 |
| Unmarried with a partner % | 20 | 29 | 49 | 2 |
| Homosexual % | 15 | 48 | 33 | 4 |
| Welfare dependent : % | 15 | 39 | 41 | 5 |
| Evidence of child abuse % | 13 | 82 | 3 | 2 |
| Evidence of drug abuse % | 11 | 79 | 8 | 2 |
| Evidence of alcohol abuse % | 10 | 79 | 9 | 2 |
| History of serious genetic disorders % | 10 | 69 | 17 | 5 |
| Over 40 years old % | 9 | 26 | 62 | 3 |
| Medical risks from pregnancy % | 8 | 46 | 41 | 5 |
| HIV (HTLV) positive % | 7 | 88 | 2 | 2 |
| Syphilis % | 6 | 46 | 44 | 4 |
| Less than 18 years old : % | 6 | 64 | 27 | 3 |
| Gonorrhea % | 4 | 34 | 59 | 3 |
| Criminal record % | 4 | 49 | 40 | 7 |
| Genital herpes % | 3 | 15 | 78 | 3 |
| Less than average intelligence % | 3 | 29 | 62 | 6 |
| Hepatitis % | 2 | 36 | 58 | 4 |
| Cytomegalovirus : % | 2 | 28 | 65 | 5 |
| Chlamydia % | 1 | 16 | 78 | 4 |
| Less than high school degree % | 1 | 8 | 87 | 4 |
| Other living children % | <05 | 3 | 94 | 2 |
| Prior miscarriage % | <05 | 3 | 94 | 3 |

^a The sample is the fertility society sample

^b The code number of the question in the survey instrument (see app. B).

^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE Office of Technology Assessment, 1988

infectious disease, including genital herpes (18 percent), chlamydia (17 percent), cytomegalovirus (30 percent), gonorrhea (38 percent), or hepatitis (38 percent). Fifty-two percent have rejected or would be likely to reject a patient with syphilis. It should be noted that the physicians responding to this question frequently qualified their answers on the basis of the state of the disease.

Physicians were evenly divided on whether they would (49 percent) or would not (49 percent) be likely to reject an unmarried recipient with a partner. If the unmarried recipient does not have a partner, the proportion of physicians who have rejected or would be likely to reject the patient rises to 61 percent. If the patient is homosexual, presumably in addition to being unmarried and without a male partner, the number in-

creases to 63 percent of the surveyed fertility society physicians regularly doing artificial insemination.

Other recipients whom more than half the physicians have rejected or would be likely to reject include those with a criminal record (53 percent) or welfare dependence (54 percent). Those with AIH-only practices stated less frequently (52 percent) than those with predominantly AID practices (30 percent) that they have or likely would reject a recipient with a criminal record. Sperm banks report rarely, if ever, rejecting a man who requests semen storage for future AIH use, despite a history of these characteristics (see ch. 3).

Seventy-nine percent of the physicians are likely to reject or have already rejected a recipient because she has a history of serious genetic

disorders that might affect the resulting child. In contrast, 54 percent have rejected or would be likely to reject an applicant because of medical risks to herself associated with being pregnant.

Most of those who conduct artificial insemination on a regular basis have already rejected or would be likely to reject a patient who is a minor (70 percent), psychologically immature (85 percent), or evidenced alcohol abuse (89 percent), drug abuse (90 percent), child abuse (95 percent), or HIV antibodies (95 percent).

The age and sex of the physician are correlated with some aspects of recipient rejection (table 2-23). For example, physicians over age 50 are more likely than those under age 35 to have re-

jected or to state they would reject an unmarried, homosexual, or welfare-dependent recipient. They are also more likely to reject a recipient with a sexually transmitted disease, a history of serious genetic disorders, a criminal record, or infection with HIV. **In general, physicians over the age of 50 are more likely than those under the age of 35 to have rejected or state they would reject an applicant for artificial insemination, whether on medical or nonmedical grounds. This does not appear to be an artifact of the physician population, in which there are relatively more young physicians who are female and older physicians who are male, as with the exception of recipient homosexuality and infection with certain sexually transmitted diseases, male physicians are less likely than female physicians to have re-**

Table 2-23.-Acceptability of Recipient Characteristics, by Age and Sex of Physicians.

(Question 7):^a Have you ever rejected or would you be likely to reject a request for artificial insemination from a potential recipient because she was/has:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighted base: ^c | Not likely to reject | | | | |
|--|----------------------|-------------------|---------------|---------------|----------------|
| | Age | | | sex | |
| | Under 35 (21) | 35 to 49 (221) | > 50 (121) | Male (339) | Female (28) |
| | % | % | % | % | % |
| Less than 18 years old | 19 | 30 | 22 | 28 | 14 |
| Welfare dependent | 57 | 41 | 38 | 42 | 29 |
| Psychologically immature | 19 | 14 | 8 | 12 | 14 |
| Unmarried with a partner | 71 | 51 | 41 | 50 | 32 |
| Unmarried without a partner | 43 | 36 | 35 | 38 | 21 |
| Less than high school degree | 100 | 88 | 83 | 87 | 86 |
| Less than average intelligence | 81 | 69 | 48 | 62 | 64 |
| Criminal record | 52 | 41 | 37 | 41 | 25 |
| Homosexual | 52 | 33 | 30 | 32 | 39 |
| Other living children | 100 | 94 | 93 | 94 | 93 |
| Evidence of alcohol abuse | 0 | 10 | 7 | 9 | 7 |
| Evidence of child abuse | 5 | 3 | 2 | 3 | 0 |
| Over 40 years old | 71 | 68 | 50 | 61 | 75 |
| Prior miscarriage | 100 | 95 | 92 | 94 | 100 |
| Medical risks from pregnancy | 52 | 44 | 36 | 42 | 39 |
| History of serious genetic disorders | 33 | 16 | 15 | 16 | 25 |
| Syphilis | 62 | 46 | 39 | 42 | 71 |
| Gonorrhea | 71 | 59 | 59 | 58 | 75 |
| Genital herpes | 90 | 78 | 77 | 78 | 79 |
| Cytomegalovirus | 71 | 66 | 62 | 64 | 71 |
| Chlamydia | 86 | 76 | 80 | 77 | 86 |
| Hepatitis | 67 | 56 | 58 | 57 | 61 |
| HIV(HTLV) positive | 5 | 3 | 2 | 3 | 0 |

a The sample is the fertility society sample.

b The code number of the question in the survey instrument (see app B).

c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be

calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic

d Items are in order as they appeared on survey instrument

SOURCE: Office of Technology Assessment, 1988

jected or state they would reject applicants for artificial insemination, either on medical or nonmedical grounds. This finding must be qualified, however, by noting that there were only 28

practitioners in the sample of female physicians regularly doing artificial insemination (i.e., four or more insemination patients per year).

PRESENTATION OF RISKS AND OPTIONS

Four out of five physicians (82 percent) routinely present other options to patients seeking artificial insemination, even though some patients may have come specifically seeking artificial insemination after having considered other options presented by previous physicians. The alternative most often brought up is adoption (54 percent) (table 2-24). A fourth of artificial insemination practitioners normally present the option of in vitro fertilization (26 percent). A smaller proportion discuss gamete intrafallopian transfer (11 percent), embryo transfer (2 percent), and surrogate motherhood (less than 1 percent). Other options presented include fur-

ther testing for male infertility (11 percent), other forms of correction of male infertility (7 percent), and remaining childless (2 percent).

Options presented by physicians whose practices use only husband or partner semen differ from those presented by physicians also offering AID (table 2-24). Adoption is presented routinely in 43 percent of the AIH-only practices, compared with 57 percent of the predominantly AID practices. By contrast, in vitro fertilization is routinely presented in 34 percent of the AIH-only practices, compared with 23 percent of the predominantly AID practices. The option of

Table 2-24.-Alternatives to Insemination^a

(Question 16):^bWhich other options do you normally present? (verbatim)

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighed base: ^d | Total (367) | Proportion AIH ^e | | | |
|--|----------------|-----------------------------|----------------|-----------------|---------------|
| | | 100% (61) | 99-75% (70) | 74 25% (144) | 24-0% (91) |
| | % ^c | % | % | % | % |
| Adoption | 54 | 43 | 51 | 59 | 57 |
| In vitro fertilization | 26 | 34 | 29 | 25 | 23 |
| Further testing for male infertility | 11 | 7 | 9 | 14 | 12 |
| Gamete intrafallopian transfer | 11 | 22 | 13 | 11 | 3 |
| Other correction for male infertility | 7 | 7 | 4 | 6 | 9 |
| Intrauterine insemination | 3 | 2 | 3 | 4 | 4 |
| Artificial insemination by donor | 3 | 5 | 6 | 2 | 1 |
| Artificial insemination by husband | 3 | 0 | 4 | 5 | 1 |
| Further testing (unspec.) | 3 | 7 | 3 | 2 | 3 |
| Remain childless | 2 | 0 | 2 | 2 | 4 |
| Embryo transfer | 2 | 0 | 2 | 2 | 1 |
| Self insemination | 1 | 0 | 4 | 0 | 1 |
| Further testing for female infertility | 1 | 2 | 2 | 1 | 1 |
| Surrogate motherhood | <0.5 | 0 | 0 | 1 | 0 |
| All other | 5 | 7 | 6 | 6 | 3 |
| It depends | 4 | 2 | 9 | 3 | 4 |
| Not sure | 3 | 0 | 3 | 5 | 2 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B).

^c"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

^dPercentage are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

^eSince multiple choices were permitted, percentages may add to more than 100%.

SOURCE Office of Technology Assessment, 1988

Table 2-25.— Presentation of Risks¹

(Question 17a):^b Do you routinely present possible risks of artificial insemination to patients who request artificial insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | % | Yes | No | Not applicable |
|---------------------------------|------------------------------|---|-----|----|----------------|
| Total | (367) | | 85 | | 11 |
| Insemination patients/past year | | | | | |
| 4-10 | (115) | % | 81 | 14 | 1 |
| 11-50 | (169) | % | 84 | 11 | 4 |
| 51-100 | (47) | % | 96 | 6 | 0 |
| >100 | (36) | % | 94 | 6 | 0 |
| Proportion AIH ^d | | | | | |
| 100% | (61) | % | 62 | 27 | 2 |
| 75-99% | (70) | % | 90 | 4 | 4 |
| 25-74% | (144) | % | 92 | 8 | 1 |
| 0-24% | (91) | % | 87 | 11 | 2 |
| Practice | | | | | |
| Office | (296) | % | 86 | 11 | 1 |
| Hospital | (66) | % | 85 | 11 | 3 |
| Age | | | | | |
| Under 35 | (21) | % | 95 | 5 | 0 |
| 35 to 49 | (221) | % | 88 | 9 | 2 |
| 50 or over | (121) | % | 79 | 15 | 2 |

^a The sample is the fertility society sample
^b The code number of the question in the survey instrument (see app. B).
^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic
^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

gamete intrafallopian transfer follows a similar pattern. AID is presented as a treatment option in few of the AIH-only practices (5 percent).

Eighty-five percent of physicians regularly doing artificial insemination routinely present its possible risks (table 2-25) – most commonly infection and normal risks of birth defects, although the likelihood of presenting risks declines with the physician's age, from 95 percent of those under 35 to 79 percent of those 50 or older. Likelihood of presenting risks is also affected by the size of practice, increasing from 81 percent among practitioners with 4 to 10 patients per year to 94 to 96 percent among practitioners with more than 50 patients per year. Those doing AIH only are considerably less likely (62 percent) than those who also do AID (87-92 percent) to disclose risks.

Forty-five percent of the physicians mention the normal risks of birth defects, 40 percent mention infectious diseases, and 26 percent specifically mention sexually transmitted diseases when discussing risks. Eight percent routinely mention the risk of HIV transmission (table 2-26). Risks discussed also include other normal risks of pregnancy (13 percent), as well as specific risks of miscarriage (12 percent) and ectopic pregnancy (4 percent). Multiple pregnancies are presented as a risk by a few practitioners (2 percent). Far more, however, present the failure to conceive (17 percent) as a possible outcome. A relatively

Table 2-26. – Risks of Insemination.

(Question 17b):^b Which risks do you normally present? (verbatim)

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighted base: ^d | Total (367) | Proportion AIH ^c | | | |
|-------------------------------|-------------|-----------------------------|-------------|--------------|------------|
| | | 100% (61) | 99-75% (70) | 74-25% (144) | 24-0% (91) |
| Birth defects | 45 | 12 | 54 | 53 | 51 |
| Infection | 40 | 3 | 6 | 4 | 0 |
| Sexually transmitted disease | 26 | 15 | 28 | 31 | 28 |
| Failure to conceive | 17 | 16 | 22 | 14 | 17 |
| Normal risks of pregnancy | 13 | 8 | 12 | 14 | 12 |
| Miscarriage | 12 | 5 | 10 | 15 | 15 |
| HIV transmission | 8 | 2 | 10 | 11 | 7 |
| Ectopic pregnancy | 4 | 5 | 6 | 4 | 4 |
| Psychological (recipient) | 3 | 0 | 5 | 4 | 7 |
| Legal complications | 3 | 2 | 2 | 4 | 3 |
| Allergic reactions | 3 | 3 | 6 | 0 | 3 |
| Cramps/spasms | 2 | 2 | 2 | 2 | 3 |
| Hepatitis | 2 | 0 | 2 | 4 | 0 |
| Multiple pregnancies | 2 | 2 | 0 | 2 | 3 |
| cost | 2 | 0 | 5 | 1 | 1 |
| Psychological (husband) | 1 | 0 | 2 | 0 | 3 |
| Psychological (child) | 1 | 0 | 0 | 2 | 1 |
| Bleeding | 1 | 0 | 3 | 1 | 0 |
| Other | 10 | 8 | 7 | 5 | 11 |
| None reported | 3 | 5 | 3 | 5 | 3 |

^a The sample is the fertility society sample
^b The code number of the question in the survey instrument (see app B)
^c "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

^d Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated
 Since multiple choices were permitted, percentages may add to more than 100%

SOURCE: Office of Technology Assessment, 1988

small proportion of practitioners present psychological complications for the recipient (3 percent), the husband (1 percent), or the offspring

(1 percent) as part of the risks normally discussed, and then only in practices doing artificial insemination by donor.

DONOR SELECTION AND SCREENING

Sources of Donor Semen

Forty-five percent of artificial inseminations conducted in the preceding year used donor semen; 22 percent of all artificial inseminations used donor semen from sperm banks and 21 percent used physician-selected donors. AIH, using husband or partner semen donors, accounted for almost all the remaining inseminations (54 percent), as AID using semen from recipient-selected donors represented only 1 percent of all artificial inseminations in the preceding year and other sources (such as the physician himself) were reportedly even less common (table 2-27).

General Screening Requirements

Since relatively few physicians who accept four or more insemination patients a year are engaged exclusively in either AIH (16 percent) or AID (7 percent), practitioners were asked which screening procedures they normally required from donors selected by the recipient (such as husbands and partners), which they required

from other donors, and which they required from neither.

Physicians doing artificial insemination by donor appear to require far less screening for a donor selected by a recipient than they do for the recipient herself. Ninety-eight percent of the practitioners who regularly provide artificial insemination will require a personal medical history of a potential recipient, compared with 43 percent who require it of a recipient-selected donor (table 2-28). Similarly, fertility screening, family medical and genetic history, and personality assessments are less frequently required for recipient-selected donors than they are for the recipients themselves. Karyotyping, on the other hand, is more frequently done for these donors than for the recipients.

Genetic Screening

Approximately half of all physicians engaged in artificial insemination on a regular basis require special screening for genetic defects or diseases from some donors prior to accepting them (table 2-29). Even though available biochemical

Table 2-27. – Sources of Sperm^a

(Question 4d):^b In what proportion of artificial insemination was the sperm from:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighed base: ^d | Total (367) | Proportion AIH ^e | | | |
|-----------------------------------|----------------|-----------------------------|----------------|-----------------|---------------|
| | | 100% (61) | 75-99% (70) | 25-74% (144) | 0-24% (91) |
| Mean proportion from: | | | | | |
| Husband/partner | 54.0 | 100.0 | 840 | 489 | 88 |
| Sperm bank | 22.3 | 0 | 93 | 235 | 455 |
| Donor selected by you (physician) | 21.3 | 0 | 67 | 258 | 398 |
| Donor provided by recipient | 1.0 | 0 | 05 | 10 | 19 |
| Other | 0.4 | 0 | 0 | 08 | 05 |

^a The sample is the fertility society sample.

^b The code number of the question in the survey instrument (see app B).

^c "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

^d Means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

^e Includes from physician himself, from donor supplied by another source other than a sperm bank, or other unspecified sources.

SOURCE: Office of Technology Assessment, 1988

Table 2-28.-General Screening: Donors^a

(Question 35):^bPrior to acceptance as a donor, which of the following do you normally require from donors selected by the recipient (e.g., husbands, partners), which do you require from other donors, and which do you require from neither?

Base: Have accepted 4 or more patients for artificial insemination in the past year.

| Unweighted base (367) ^c | Recipient-selected donor | Only other donors | Don't require | Done by sperm bank | Practice only artificial insemination by husband |
|--|--------------------------|-------------------|---------------|--------------------|--|
| Personal medical history % | 43 | 57 | 4 | 9 | 11 |
| Family medical and genetic history % | 42 | 58 | 4 | 9 | 11 |
| Fertility history % | 43 | 55 | 4 | 9 | 11 |
| Physical examination % | 25 | 42 | 20 | 9 | 11 |
| Personality assessment % | 18 | 34 | 29 | 9 | 11 |
| Karyotyping % | 4 | 13 | 48 | 9 | 11 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B)

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

Table 2-29.-Genetic Screening: Donors^a

(Question 36a):^bDo you ever require special screening for genetic defects or diseases from any donors, prior to accepting them for artificial insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base ^c | | Yes | No | Practice only artificial insemination by husband | Sperm bank only | Not applicable |
|---------------------------------|-----------------------------|---|-----|----|--|-----------------|----------------|
| Total | (367) | % | 48 | 33 | 10 | 7 | 2 |
| Insemination patients/past year | | | | | | | |
| 4-10 | (115) | % | 32 | 41 | 20 | 7 | 2 |
| 11-50 | (169) | % | 47 | 34 | 8 | 10 | 2 |
| 51-100 | (47) | % | 76 | 17 | 2 | 6 | 0 |
| > 100 | (36) | % | 78 | 22 | 0 | 0 | 0 |
| Proportion AIH ^d | | | | | | | |
| 100% | (61) | % | 20 | 22 | 55 | 0 | 3 |
| 75-99% | (70) | % | 64 | 29 | 3 | 4 | 1 |
| 25-74% | (144) | % | 54 | 36 | 0 | 10 | 1 |
| 0-24% | (91) | % | 49 | 39 | 0 | 11 | 2 |
| Practice | | | | | | | |
| Office | (296) | % | 47 | 34 | 11 | 8 | 2 |
| Hospital | (66) | % | 59 | 30 | 6 | 4 | 0 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B)

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic

^d"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988.

tests for screening are few, such donor screening becomes more likely with increased practice size, rising from 32 percent of those with 4 to 10 patients per year to 76 to 78 percent among those with more than 50 patients a year. Hospital-

based physicians are somewhat more likely (59 percent) than office-based physicians (47 percent) to sometimes require special genetic screening of donors.

Twenty Percent of the physicians regularly doing artificial insemination indicate that a family history of genetic disease would lead them to require genetic screening of a potential donor (table 2-30). Eighteen percent would require it of a potential donor from an ethnic group at high risk to a genetic disease. Hence, genetic testing is not routine for donors, including those in higher than average risk groups.

Table 2-30.-Circumstances Requiring Genetic Screening: Donors^a

(Question 38b): ^bUnder what circumstances do you require special screening of donors for genetic defects or diseases? (verbatim)

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Physicians doing some screening (177) | All physicians doing inseminations (387) |
|--|---------------------------------------|--|
| Unweighted base ^c | % ^d | % |
| Family history of genetic diseases or defects | 42 | 20 |
| Membership in high-risk ethnic group | 38 | 18 |
| Personal medical history (no reference to fertility) | 9 | 4 |
| Fertility history/reproductive problems | 4 | 2 |
| Infectious diseases | 9 | 4 |
| Age . . . | 0 | 0 |
| O t h e r | 5 | 2 |
| Require for everyone | 5 | 2 |
| Sperm bank does screening | 7 | 4 |
| N o t r e p o r t e d | 4 | 2 |

a The sample is the fertility society sample

b The code number of the question in the survey instrument (see app B)

c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

d Since multiple choices were permitted, percentages may add to more than 100%

SOURCE Office of Technology Assessment, 1988

Other Diagnostic Tests

Fifty-six percent of physicians regularly providing artificial insemination require other diagnostic tests of donors prior to accepting them for insemination (table 2-31). Once again, hospital-based practitioners are more likely (76 percent) than are office-based practitioners (52 percent) to require diagnostic tests of donors.

Similarly, the requirement of diagnostic tests of donors increases directly with practice size, from 30 percent of those with 4 to 10 patients per year to 97 percent of those with 100 or more patients per year.

For those doing both AIH and AID, the rate of diagnostic testing of donors varies from 62 percent to 68 percent. As another 10 to 11 percent of these practitioners report that all testing is done by a sperm bank, rather than themselves, the rate of diagnostic testing maybe as high as 79 percent among these practices.

Physicians most commonly test for infectious diseases (table 2-32). Forty-four percent do tests for evidence of HIV infection, 28 percent for syphilis, 27 percent for gonorrhea, 26 percent for hepatitis, 23 percent for chlamydia, 12 percent for cytomegalovirus, 6 percent for herpes, and 11 percent for unspecified sexually transmitted diseases.

Fertility Screening

Seventy-two percent of the fertility society physicians predominantly doing artificial insemination by donor on a regular basis will screen donor semen for probable fertility (table 2-33), and an additional 10 percent obtain their semen samples from sperm banks, where such screening is routine. Sixteen percent of those predominantly doing AID, however, do not require such screening. For those doing fertility screening, over 90 percent use sperm count, motility, and morphology as criteria. A majority also examine semen for white blood cell count (76 percent) and viscosity (59 percent), and, if using frozen semen, for post-thaw motility (52 percent). Fertility testing increases with the size of practice, from 51 percent of those with 4 to 10 patients to 94 percent of those with more than 100 patients.

Correlation of Past Donor Rejection With Donor Characteristics

Among the 24 characteristics examined by the survey, a history of serious genetic disorders was the condition for which the greatest proportion of practitioners (21 percent) had rejected a donor (table 2-34). Practitioners also have rejected do-

Table 2-31.- Diagnostic Tests: Donors^a

(Question 36c):^b Do you ever require any other diagnostic tests for donors prior to initial acceptance, not counting analysis of sperm?
Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | | Yes | No | Practice only artificial insemination by husband | sperm bank only | Not applicable |
|---------------------------------|------------------------------|---|-----|----|--|-----------------|----------------|
| Total | (367) | % | 56 | 24 | 10 | 8 | 2 |
| Insemination patients/past year | | | | | | | |
| 4-10 | (115) | % | 30 | 42 | 19 | 8 | 3 |
| 11-50 | (169) | % | 60 | 18 | 9 | 11 | 2 |
| 51-100 | (47) | % | 76 | 15 | 2 | 9 | 0 |
| >100 | (36) | % | 97 | 3 | 0 | 0 | 0 |
| Proportion AIH ^d | | | | | | | |
| 1 0 0 % | (61) | % | 8 | 35 | 57 | 0 | 2 |
| 75 99% : : : : : | (70) | % | 65 | 20 | 4 | 10 | 1 |
| 2 5 7 4 % | (144) | % | 66 | 21 | 0 | 11 | 1 |
| 0 2 4 % | (91) | % | 62 | 26 | 0 | 10 | 3 |
| Practice | | | | | | | |
| Office | (296) | % | 52 | 26 | 12 | 9 | 2 |
| Hospital | (66) | % | 76 | 14 | 4 | 6 | 1 |

^aThe sample is the fertility society sample

^bThe code number of the question in the survey instrument (see app.B).

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic

^d"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

nors with evidence of being seropositive to HIV antibodies (13 percent), or having hepatitis (13 percent), genital herpes (13 percent), syphilis (12 percent), gonorrhea (11 percent), chlamydia (11 percent), and cytomegalovirus (10 percent). Rejections for reasons other than overt genetic or infectious disease were most commonly related to the risk of undetected HIV infection. Physicians have rejected donors due to homosexual contacts (16 percent), intravenous drug use (13 percent), multiple heterosexual partners (12 percent), sexual contacts with HIV-infected persons ("AIDS cases") (10 percent), and residence in areas with a high incidence of HIV infection (6 percent).

Physicians also reported rejecting donors due to drug abuse (14 percent), psychological immaturity (13 percent), alcohol abuse (11 percent), a criminal record (9 percent), less than average intelligence (8 percent), child abuse (6 percent), less than a high school education (6 percent), and less than average height (3 percent).

Correlation of Likelihood of Rejection With Donor Characteristics

As with potential recipients, physicians may have never rejected certain types of donors because they have not encountered someone with these particular characteristics. Therefore, they were asked if they "have ever rejected" or "would be likely to reject" donors with particular traits. Eight percent replied that they obtained semen only from sperm banks, and a further 10 percent answered that they did AIH only, implying that they did no screening (table 2-34).

Beyond this 18 percent who apparently do not screen, a minority of practitioners regularly doing artificial insemination have rejected or would reject a donor of less than average height (16 percent) or less than high school education (39 percent).

The donor characteristic that generates the most widespread concern among practitioners is exposure or risk of exposure to HIV. Eighty percent of the practitioners have rejected or would

Table 2-32.-Types of Diagnostic Tests: Donors'

(Question 36d,e):² Which diagnostic tests do you require: (verbatim)

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | All physicians doing inseminations | | Physicians doing diagnostic tests | |
|---|------------------------------------|---------------------|-----------------------------------|---------------------|
| | In all cases (367) | In some cases (367) | In all cases (205) | In some cases (205) |
| Unweighed base: ^c | | | | |
| | % ^d | % | % | % |
| HIV testing | 44 | 1 | 78 | 2 |
| Syphilis testing (VDRI/RPR) | 28 | 1 | 50 | 1 |
| GC culture (gonorrhea) | 27 | 2 | 49 | 3 |
| Hepatitis serum | 26 | 2 | 47 | 3 |
| Urethral culture for chlamydia | 23 | 2 | 41 | 3 |
| Blood type/rh factor | 20 | 1 | 36 | 2 |
| Cytomegalovirus | 12 | 1 | 21 | 1 |
| Sexually transmitted diseases (not specified) | 11 | 1 | 19 | 2 |
| Herpes culture | 6 | 2 | 10 | 3 |
| Routine blood screen analysis | 4 | 1 | 8 | 1 |
| NGU/ureaplasma/mycoplasma test (nongonococcal urethritis) | 4 | 1 | 8 | 2 |
| Semen analysis (unspec.) | 4 | 0 | 7 | 0 |
| infertility tests (NET) | 6 | 2 | 11 | 3 |
| Other infectious disease | 3 | 1 | 5 | 2 |
| Karyotyping. | 2 | 3 | 3 | 6 |
| Urinalysis | 2 | <0.5 | 3 | <0.5 |
| Rubella antibody | 1 | 0 | 2 | 0 |
| Physical exam and history | 1 | <0.5 | 2 | <0.5 |
| Semen mucous interaction | 1 | 1 | 2 | 2 |
| Inheritable disease | 1 | 6 | 2 | 11 |
| Genetic screening | 1 | 2 | 1 | 4 |
| Blood count with differentiation | 1 | 0 | 1 | 0 |
| Thyroid panel | <0.5 | 1 | <0.5 | 2 |
| Other inappropriate response | 1 | 0 | 1 | 0 |
| Other | 3 | <0.5 | 5 | <0.5 |
| No answer | 1 | 36 | 2 | 65 |

¹The sample is the fertility society sample.²The code number of the question in the survey instrument (see app. B).³Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.⁴Since multiple choices were permitted, percentages may add to more than 100%.

SOURCE: Office of Technology Assessment 1988

be likely to reject a donor who is seropositive for HIV antibodies. Similarly, they would rejector already have rejected an intravenous drug user (81 percent), someone who has had sexual contact with an HIV-infected person (79 percent), someone who has had homosexual contacts (78 percent) or multiple heterosexual partners (65 percent) or someone who resides in an area with a relatively high rate of HIV infection (54 percent). (Again, a further 18 percent in all these cases replied that they did AIH only, or exclusively used semen from sperm banks.)

Infectious diseases also caused concern for most physicians, as most have rejected or would

reject donors with genital herpes (67 percent), cytomegalovirus (68 percent] gonorrhea (69 percent] syphilis (73 Percent) or hepatitis (75 percent). They also reported that they would rejector have rejected donors with a criminal record (65 percent) or a history of child abuse (74 percent), alcohol abuse (77 percent), or drug abuse (79 percent).

Inherited Conditions and Donor Screening

A donor with a history of serious genetic disorders would reaccepted by only 1 percent of the surveyed physicians. To determine which heritable characteristics would disqualify a donor, the

Table 2-33.-Fertility Screening: Donors.

(Question 37):^b Do you normally require screening of the semen of donors for fertility or not?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | | Require | Don't require | Practice only artificial insemination by husband | sperm bank | Not applicable |
|---------------------------------|---------------------------------|---|---------|------------------|---|---------------|-------------------|
| Total | (367) | % | 66 | 12 | 10 | 10 | 2 |
| Insemination patients/past year | | | | | | | |
| 4-10 | (115) | % | 51 | 20 | 18 | 9 | 4 |
| 11-50 | (169) | % | 66 | 10 | 10 | 13 | 2 |
| 51-100 | (47) | % | 78 | 11 | 2 | 11 | · |
| >100 | (36) | % | 94 | 3 | 0 | 0 | 3 |
| Proportion AIH ^d | | | | | | | |
| 100% | (61) | % | 28 | 12 | 58 | 2 | 2 |
| 75-99% | (70) | % | 74 | 12 | 3 | 12 | 1 |
| 25-74% | (144) | % | 74 | 11 | 0 | 13 | 3 |
| 0-24% | (91) | % | 72 | 16 | 0 | 10 | 3 |
| Practice | | | | | | | |
| Office | (296) | % | 64 | 12 | 11 | 10 | 2 |
| Hospital | (66) | % | 76 | 9 | 6 | 8 | 2 |

^aThe sample is the fertility society sample^bThe code number of the question in the survey instrument (see app. B).^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic^d"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or Partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

survey asked physicians to report whether they would accept a donor with a particular disorder, reject a donor who has it, or reject a donor whose family history includes someone with the disorder. In general, the survey found that physicians are reluctant to accept donors with so much as a family history of genetic disorders, even those whose genetic transmission patterns are poorly understood or that pose no danger if the recipient is not a carrier of the disorder. **In a number of cases, a majority of physicians would reject healthy donors with family histories of x-linked disorders that are not transmissible unless the donor himself has the condition, for example, hemophilia (49 percent) or Duchenne's muscular dystrophy (61 percent) (table 2-35).**

Physicians also frequently screen out healthy donors with family histories of Tay-Sachs disease (50 percent), sickle cell anemia (46 percent), or thalassemia (47 percent). These are autosomal recessive disorders—i.e., a healthy donor may carry the trait and pass it on to his children, who will suffer from the disease if they

inherit the same gene from their mother as well. The donor himself will not suffer from the disease because although he has one chromosome with the disease gene, his matching chromosome has the normal gene. Carrier status for these particular disorders can be identified with laboratory tests, and physicians could choose to run such tests on potential donors rather than screen men out of the pool entirely on the basis of a family history. In the alternative, physicians could screen recipients and donors to assure that those with family histories of these disorders are not matched to one another.

Some autosomal recessive disorders, such as cystic fibrosis, have no reliable carrier test, and the 33 percent of physicians who do not reject a donor with a family history of this most common of genetic disorders among American caucasian children may be failing to screen out some donors who are carriers.

Some of the conditions that lead the majority of physicians to reject apparently healthy donors are autosomal dominant disorders, i.e., having

Table 2-34.-Criteria for Rejection: Donors^a(Question 40):^b Have you ever rejected or would you be likely to reject a donor because he was/has:

Base: Have accepted 4 or more patients for artificial insemination in the past year

Unweighed base (367)^c

| | | Have rejected | Would reject | would not reject | Practice only artificial insemination by husband | Semen bank only |
|--|---|------------------|-----------------|------------------------|---|-----------------------|
| History of serious genetic disorders | % | 21 | 59 | 1 | 10 | 8 |
| Homosexual contacts | % | 16 | 62 | 3 | 10 | 8 |
| Evidence of drug abuse | % | 14 | 65 | 2 | 10 | 8 |
| Psychologically | % | 13 | 46 | 22 | 10 | 8 |
| Genital herpes | % | 13 | 54 | 14 | 10 | 8 |
| Hepatitis | % | 13 | 62 | 6 | 10 | 8 |
| HIV (HTLV) positive | % | 13 | 67 | 1 | 10 | 8 |
| Intravenous drug user | % | 13 | 68 | 1 | 10 | 8 |
| Multiple heterosexual partners | % | 12 | 53 | 15 | 10 | 8 |
| Syphilis | % | 12 | 61 | 8 | 10 | 8 |
| Evidence of alcohol abuse | % | 11 | 66 | 4 | 10 | 8 |
| Chlamydia | % | 11 | 57 | 12 | 10 | 8 |
| Gonorrhea | % | 11 | 58 | 12 | 10 | 8 |
| Cytomegalovirus | % | 10 | 58 | 12 | 10 | 8 |
| Sexual contact with AIDS cases | % | 10 | 69 | 1 | 10 | 8 |
| Less than 18 years old | % | 9 | 45 | 26 | 10 | 8 |
| Over 40 years old | % | 9 | 31 | 40 | 10 | 8 |
| Criminal record | % | 9 | 56 | 13 | 10 | 8 |
| Less than average intelligence | % | 8 | 53 | 18 | 10 | 8 |
| Residence in high HIV area | % | 6 | 48 | 25 | 10 | 8 |
| Less than high school degree | % | 6 | 33 | 39 | 10 | 8 |
| Evidence of child abuse | % | 6 | 67 | 7 | 10 | 8 |
| Less than average height | % | 3 | 13 | 62 | 10 | 8 |
| Married | % | >0.5 | 2 | 76 | 10 | 8 |

^aThe sample is the fertility society sample^bThe code number of the question in the survey instrument (see app.B)^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

even one deleterious gene would cause the donor to express the symptoms of the disease. Therefore, a healthy donor can be presumed to be free of the trait. For example, 53 percent would screen out someone with a family history of neurofibromatosis; diagnosis of those with the disorder is possible from the characteristic café au lait spots on their bodies (although this could be missed in some donors suffering from very few visible symptoms).

With other diseases, such as Huntington's chorea, it is very difficult to test for carrier status, and its onset late in life makes it impossible to determine clinically if a donor has the deleterious gene. One available test requires extensive testing among related family members, is very time-consuming, and has an approximately 2-percent error rate. A newer test reduces the

error rate, but is not widely available. Given the severity of the disease, and the difficulty of determining if a person has the gene, it is surprising that the rate of rejection for apparently healthy donors having a family history of Huntington's (63 percent) is similar to that for those with a family history of Duchenne's muscular dystrophy or hemophilia, as apparently healthy donors could pass on Huntington's to their offspring, but not the other two diseases.

The variation among practitioners concerning rejection of donors with family histories of depression, Alzheimer's disease, malignant melanoma, and astigmatism reflect the current lack of definitive information on the role genetic predisposition plays in the etiology of these disorders.

The only condition on a list of 17 that a plurality of practitioners do not feel to be a basis for

Table 2-35.-inherited Conditions and Donor Rejection^a

(Question 41):^b For each of the following conditions, would you be likely to reject a donor only if he had the condition, if anyone in the donor's immediate family had the condition, or would you not reject a donor even if he had the condition?

Base: Have accepted 4 or more Patients for artificial insemination in the past year

| Unweighed base (367) ^c | Reject if any family history | Reject only if donor has | Not reject even if donor has | Practice only artificial insemination by husband | Semen bank only |
|--|------------------------------|--------------------------|------------------------------|--|-----------------|
| Huntington's chorea % | 63 | 25 | 1 | 9 | 8 |
| Duchennes muscular dystrophy % | 61 | 27 | 1 | 9 | 8 |
| Cystic fibrosis % | 55 | 29 | 4 | 9 | 8 |
| Neurofibromatosis % | 53 | 29 | 4 | 9 | 8 |
| Tay-Sachs % | 50 | 33 | 2 | 9 | 8 |
| Hemophilia % | 49 | 32 | 4 | 9 | 8 |
| Mental retardation % | 48 | 38 | 2 | 9 | 8 |
| Thalassemia % | 47 | 33 | 5 | 9 | 8 |
| Sickle cell anemia % | 46 | 35 | 4 | 9 | 8 |
| Alzheimer's disease % | 40 | 34 | 10 | 9 | 8 |
| Hypercholesterolemic heart disease % | 36 | 32 | 15 | 9 | 8 |
| Diabetes % | 31 | 38 | 14 | 9 | 8 |
| Malignant melanoma % | 27 | 38 | 18 | 9 | 8 |
| Depression % | 24 | 36 | 20 | 9 | 8 |
| Asthma % | 16 | 29 | 34 | 9 | 8 |
| Severe astigmatism % | 16 | 27 | 36 | 9 | 8 |
| Obesity % | 13 | 24 | 42 | 9 | 8 |

^aThe sample is the fertility society sample

^bThe code number of the question in the survey instrument (see app. B).

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1988

rejecting a donor is obesity. Although 13 percent of practitioners would reject a donor with a family history of obesity, and 24 percent would reject a donor who is obese, 42 percent of practitioners reported that they would not reject a donor who

has the condition. Obesity is now thought to have some genetic component, but the predisposition interacts with a number of strong environmental factors in most cases.

CHARACTERISTIC MATCHING

On average, about two-thirds of the requests for artificial insemination are accompanied by a request from the recipient to use a donor who meets certain criteria. Among physicians offering AID, 78 to 88 percent stated they are "willing" to select donor characteristics to recipient specifications. **Overall, 72 percent of all physicians offering artificial insemination are willing to match at least some recipient specifications (table 2-36), commonly race (97 percent), eye color (94 percent), complexion (90 percent), height (90 percent), ethnic or national origin (84 percent), weight (83 percent), body type (82 percent), and hair texture (81 percent) (table 2-37). A majority also match specifications concerning**

the donor's educational attainment (66 percent), age (62 percent), intelligence quotient (57 percent), and religion (56 percent), although a fairly substantial proportion of physicians who are generally willing to match at least some recipient specifications say that they would not try to match on the basis of education (29 percent), age (31 percent), intelligence quotient (37 percent), or religion (39 percent). **A majority of physicians refuse to match hobbies (56 percent) or income (72 percent). Nonetheless, 39 percent will match for hobbies, and 22 percent for income.** Physicians are more evenly split on whether they will (45 percent) or will not (50 percent) match for special abilities.

Table 2-36.—Willingness To Select Donor Characteristic^a

(Question 10):^b Are you generally willing to select donor characteristics to recipient specifications?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | % | Practice only artificial insemination by husband | | Not applicable |
|-----------------------------------|------------------------------|---|--|----|----------------|
| | | | Yes | No | |
| Total | (367) | | 72 | 20 | 7 |
| All patients/past year | | | | | |
| 4-10 | (115) | | 55 | 31 | 13 |
| 11-50. | (169) | | 77 | 17 | 5 |
| 51-100 (47) | | | 87 | 9 | 0 |
| > 100 (36) | | | 89 | 11 | 0 |
| Proportion AIH^d | | | | | |
| 100% (61) | | | 15 | 45 | 40 |
| 75-99% (70) | | | 78 | 16 | 1 |
| 25-74% (144) | | | 82 | 16 | 0 |
| 0-24% (91) | | | 88 | 12 | 0 |
| Practice | | | | | |
| Office (296) | | | 71 | 21 | 8 |
| Hospital (66) | | | 77 | 17 | 2 |
| Age | | | | | |
| Under 35 (21) | | | 67 | 29 | 0 |
| 35 to 49 (221) | | | 73 | 20 | 6 |
| 50 or over (121) | | | 73 | 17 | 9 |
| Sex | | | | | |
| Male (339) | | | 71 | 20 | 7 |
| Female (28) | | | 79 | 14 | 4 |

^aThe sample is the fertility society sample

^bThe code number of the question in the survey instrument (see app. B).

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to Particular question concerning demographic characteristic

^d"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1986

Table 2-37.—Specific Donor Characteristics.

(Question 11):^b Which of the following donor characteristics are you normally willing to try to match, if requested?

Base: Have accepted 4 or more patients for artificial insemination in the past year and willing to match donor characteristics to recipient characteristics

| | Unweighted base (264) ^c | % | Willing | Not willing | Not sure |
|----------------------------------|------------------------------------|---|---------|-------------|----------|
| | | | | | |
| Race | | | 97 | 2 | 2 |
| Eye color | | | 94 | 4 | 2 |
| Complexion | | | 90 | 7 | 3 |
| Height | | | 90 | 7 | 3 |
| Ethnic/national origin | | | 84 | 14 | 3 |
| Weight | | | 83 | 13 | 4 |
| Body type | | | 82 | 14 | 4 |
| Hair texture | | | 81 | 16 | 3 |
| Educational attainment | | | 66 | 29 | 5 |
| Age | | | 62 | 31 | 6 |
| I.Q. | | | 57 | 37 | 6 |
| Religion | | | 56 | 39 | 5 |
| Special abilities | | | 45 | 50 | 6 |
| Hobbies or interests | | | 39 | 56 | 6 |
| Income | | | 22 | 72 | 6 |

^aThe sample is the fertility society sample

^bThe code number of the question in the survey instrument (see app. B).

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1986

SEX SELECTION

Fourteen percent of practitioners regularly doing artificial insemination say that they offer sperm separation for preconception sex selection. Willingness to provide this appears to be wholly a function of practice size, rising from 5 percent of those with 4 to 10 patients per year to 31 percent of those with more than 100 patients per year. Practitioners with small practices most

often cite a lack of facilities as the reason for not offering the service, with ethical concerns expressed by one in six physicians. The survey instrument's questions could not substitute for a prospective clinical trial of the efficacy of sperm separation techniques, but the survey results did indicate that physicians do not generally perceive the technique as effective.

FRESH AND FROZEN SEMEN

Use of Fresh Semen

Nearly one third of those regularly doing artificial inseminations rely exclusively on fresh semen (28 percent). Four percent did not respond to the question, stating that they do only AIH (4 percent), thus implying that they feel questions concerning usage of frozen semen do not apply to them (table 2-38). About a quarter rely entirely on frozen semen. Practitioners who do only AIH use fresh semen almost exclusively. **More than one-fifth (22 percent) of those who do artificial insemination by donor, however, use fresh semen exclusively** (table 2-38).

Seventy-two percent of those regularly doing artificial insemination used fresh semen in the past year (table 2-39). The uniform frequency of

Table 2-38.-Fresh and Frozen Semen: User Profile.

(Question 32a):^b Have you performed any artificial insemination in the past year in which fresh sperm was used?

(Question 43a):^b Have you performed any artificial insemination in the past year in which frozen sperm were used?

Base: Have accepted 4 or more patients for artificial insemination in the past year and reported type of semen

| | Unweighed base ^c | % | Fresh and Frozen | | | Not applicable |
|--|-----------------------------|---|------------------|-----------|-----------|----------------|
| | | | Fresh only | frozen | only | |
| Total | (363) | % | 28 | 40 | 23 | 9 |
| Insemination patients/past year | | | | | | |
| 4-10 | (113) | % | 39 | 20 | 25 | 17 |
| 11-50 | (167) | % | 26 | 46 | 21 | 7 |
| 51-100 | (46) | % | 11 | 50 | 35 | 4 |
| >100 | (37) | % | 16 | 68 | 11 | 5 |
| Proportion AIH^d | | | | | | |
| 100% | (60) | % | 55 | 2 | 2 | 42 |
| 75-99% | (69) | % | 22 | 52 | 23 | 3 |
| 25-74% | (142) | % | 22 | 49 | 25 | 4 |
| 0-24% | (90) | % | 22 | 42 | 34 | 1 |
| Practice | | | | | | |
| Office | (292) | % | 28 | 40 | 21 | 11 |
| Hospital | (66) | % | 24 | 39 | 30 | 6 |

a The sample is the fertility society sample.
 b The code number of the question is the survey instrument (see app. B).
 c Includes 4% reporting "AIH Only"
 d Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 363 where physicians failed to respond to particular question concerning demographic characteristic "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

Table 2-39.-Use of Fresh Semen^a

(Question 32a):^b Have you Performed any artificial insemination in the past year in which fresh sperm was used?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base ^c | % | Use of Fresh Semen | | Not applicable |
|--|-----------------------------|---|--------------------|-----------|----------------|
| | | | Yes | No | |
| Total | (367) | % | 72 | 25 | 2 |
| Insemination patients/past year | | | | | |
| 4-10 | (115) | % | 69 | 28 | 4 |
| 11-50 | (169) | % | 74 | 23 | 2 |
| 51-100 | (47) | % | 65 | 37 | 0 |
| >100 | (36) | % | 89 | 11 | 0 |
| Proportion AIH^d | | | | | |
| 100% | (61) | % | 78 | 15 | 7 |
| 75-99% | (70) | % | 77 | 23 | 1 |
| 25-74% | (144) | % | 72 | 25 | 2 |
| 0-24% | (91) | % | 67 | 34 | 0 |
| Practice | | | | | |
| Office | (296) | % | 74 | 24 | 2 |
| Hospital | (66) | % | 65 | 35 | - |

a The sample is the fertility society sample
 b The code number of the question in the survey instrument (see app. B).
 c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

fresh semen use among physicians whose practices vary from 0 to 99 percent AID indicates that fresh semen is used for such inseminations even by physicians who have access to and use frozen semen for part of their practice (table 2-40).

These data were collected in 1987. As of February 1988, the American Fertility Society, the Centers for Disease Control, and the Food and Drug Administration have all recommended that only frozen semen be used, in conjunction with a minimum 6-month quarantine period and periodic donor retesting for evidence of antibodies to HIV. Physician practice may have substantially changed with respect to the use of fresh and frozen semen as a result of the 1988 recommendations. However, it should be noted that the American Association of Tissue Banks has been publishing standards since 1985 directing its member sperm banks to use of frozen semen,

Table 2-40.-Number of Inseminations: Fresh Semen^a(Question 32b):^b Approximately how many inseminations have you performed in the past year, using fresh sperm?

Base: Accepted 4 or more patients for artificial insemination in the past year and has used fresh semen

| | Unweighted base ^c | Mean | Not sure |
|---------------------------------|------------------------------|-------|----------|
| Total | (266) | 106.5 | 2% |
| Insemination patients/past year | | | |
| 4-10 | (79) | 20.0 | 1 |
| 11-50 | (125) | 76.2 | 1 |
| 51-100 | (30) | 166.1 | 3 |
| >100 | (32) | 374.4 | 6 |
| Proportion AIH ^d | | | |
| 100% | (48) | 40.4 | 0 |
| 75-99% | (53) | 129.9 | 0 |
| 25-74% | (104) | 109.0 | 3 |
| 0-24% | (60) | 129.1 | 2 |
| Practice | | | |
| Office | (220) | 102.5 | 2 |
| Hospital | (43) | 131.2 | 0 |

a The sample is the fertility society sample.

b The code number of the question in the survey instrument (see app B)

c Percentage and means are presented as weighted samples estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 266 where physicians failed to respond to particular question concerning demographic characteristic

d "Proportion AIH" means the proportion of the physician's artificial Insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE Office of Technology Assessment, 1966

with a 2-month quarantine and periodic donor rescreening.

Sources of Fresh Semen

The most common source of fresh semen is the recipient's husband or partner: 94 percent of practitioners who have used fresh semen report having done AIH (table 2-41). Medical students are the next most common source, used for AID by 44 percent of the physicians regularly doing artificial insemination, with graduate students (34 percent), hospital personnel (23 percent), and other physicians (20 percent) also having been used by at least one out of five physicians. Few practitioners reported having used their own semen (2 percent).

Use of Frozen Semen

Six out of ten physicians who regularly provide artificial insemination have used frozen semen in the past year. Its use is uncommon among those

doing only AIH (5 percent), but for all others, regardless of the proportion of their practices devoted to AIH, approximately three-quarters have used frozen semen in the past year.

Sources of Frozen Semen

Most practitioners who use frozen semen report that they obtain it from commercial sperm banks (74 percent); hospital supplies are used by no more than 5 percent of these physicians (table 2-42). Use of commercial sperm banks, however, is a function of practice size, declining from 88 percent of those with 4 to 10 patients per year to 55 percent of those with more than 100 patients per year. In fact, 62 percent of those with more than 100 patients per year do at least some of their inseminations with semen they have frozen and stored themselves, although this is generally restricted to physicians with a hospital-based practice.

Quarantine Periods

Seventy-five percent of the practitioners who use frozen semen report that they or their supplier quarantine the semen prior to use (table 2-43), although quarantining is less common

Table 2-41.-Sources of Fresh Semen^a(Question 33):^b Do you use the sperm of husbands or partners?(Question 34):^b Which of the other following sources have you used to obtain fresh sperm in the past year?

Base: Have accepted 4 or more patients for artificial insemination in the past year and has used fresh semen

| | Total Unweighted base: ^c (266) | Insemination patients/past year | | | |
|------------------------|---|---------------------------------|-------------|-------------|-----------|
| | | 4-10 (79) | 11-50 (125) | 51-100 (30) | >100 (32) |
| | % ^d | % | % | % | % |
| Husbands/partners | 94 | 94 | 93 | 93 | 97 |
| Medical students | 44 | 26 | 46 | 70 | 59 |
| Graduate students | 34 | 12 | 37 | 60 | 50 |
| Nonhospital personnel | 24 | 14 | 26 | 33 | 31 |
| Hospital personnel | 23 | 10 | 27 | 37 | 25 |
| Other doctors | 20 | 9 | 26 | 30 | 19 |
| Andrology laboratories | 18 | 12 | 21 | 20 | 19 |
| Self | 2 | 1 | 2 | 0 | 3 |

a The sample is the fertility society Sample

b The code number of the question in the survey instrument (see app B)

c percentage are presented as weighted sample estimates The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

d Since multiple choices were permitted, percentages may add to more than 100%

SOURCE: Office of Technology Assessment, 1988

Table 242.-Sources of Frozen Semen^a

(Question 44):^b Which of the following sources have you used in the past year to obtain frozen sperm?

Base: Accepted 4 or more patients for artificial insemination in the past year and has used frozen semen

| | Unweighed base ^c | % | Own supplies | Hospital supplies | Commercial vendor | Other |
|-----------------------------------|-----------------------------|---|--------------|-------------------|-------------------|-------|
| Total | (232) | | 26 | 7 | 74 | 4 |
| All patients/past year | | | | | | |
| 4-10 | (55) | % | 2 | 4 | 88 | 10 |
| 11-50 | (113) | % | 20 | 11 | 78 | 2 |
| 51-100 | (39) | % | 46 | 3 | 59 | 0 |
| >100 | (29) | % | 62 | 3 | 55 | 3 |
| Proportion AIH^d | | | | | | |
| 100% | (3) | % | 0 | | 100 | 0 |
| 75-99% | (52) | % | 12 | 12 | 86 | 2 |
| 25-74% | (107) | % | 32 | 5 | 68 | 5 |
| 0-24% | (69) | % | 28 | 7 | 72 | 3 |
| Practice | | | | | | |
| office | (184) | % | 19 | 6 | 80 | 4 |
| Hospital | (47) | % | 51 | 11 | 51 | 0 |

a The sample is the fertility society sample
^bThe code number of the question in the survey instrument (see app. B).
^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 232 where physicians failed to respond to particular question concerning demographic characteristic.
^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

SOURCE: Office of Technology Assessment, 1988

among those with 4 to 50 patients a year (66 to 70 percent) than by those with larger practices (90 percent). Hospital-based practices are also more likely (85 percent) than office-based practices (72 percent) to have a quarantine period (85 percent). **Quarantine periods average 3.6 months, although a quarter of the physicians report a longer period, usually 6 months (table 2-44).**

Table 243.-Use of Quarantine: Frozen Semen^a

(Question 46):^b Do you or your supplier have a quarantine period prior to use of frozen sperm?

Base: Accepted 4 or more patients for artificial insemination in the past year and has used frozen semen

| | Unweighed base ^c | % | Yes | No | Not sure |
|--|-----------------------------|---|-----|----|----------|
| Total | (232) | | 75 | 20 | 5 |
| Insemination patients/past year | | | | | |
| 4-10 | (51) | % | 66 | 34 | 2 |
| 11-50 | (113) | % | 70 | 22 | 8 |
| 51-100 | (39) | % | 90 | 5 | 5 |
| >100 | (29) | % | 90 | 10 | 0 |
| Proportion AIH^d | | | | | |
| 100% | (3) | % | 100 | 0 | 0 |
| 75-99% | (52) | % | 83 | 12 | 4 |
| 25-74% | (107) | % | 76 | 19 | 6 |
| 0-24% | (69) | % | 64 | 30 | 6 |
| Practice | | | | | |
| office | (184) | % | 72 | 22 | 6 |
| Hospital | (47) | % | 85 | 15 | 0 |

a The sample is the fertility society sample
^bThe code number of the question in the survey instrument (see app. B).
^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 232 where physicians failed to respond to particular question concerning demographic characteristic.
^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

SOURCE: Office of Technology Assessment, 1988

Table 2-44.-Length of Quarantine Period: Frozen Semen^a

(Question 47):^b How long is that quarantine period?

Base: Have accepted 4 or more patients for artificial insemination in the past year, has used frozen semen with a quarantine period

| Unweighted base (173) ^c | Total |
|------------------------------------|------------|
| | % |
| One month | 1 |
| Two months | 5 |
| Three months | 59 |
| Four months | 6 |
| Five months | 1 |
| Six months | 17 |
| Seven months | 1 |
| Eight months | 1 |
| Nine months or more | 0 |
| Not sure | 10 |
| Mean | 3.6 months |

a The sample is the fertility society sample
^bThe code number of the question in the survey instrument (see app. B).
^c Percentages and means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1988

PREGNANCY OUTCOMES AND RECORDKEEPING

Tracking Pregnancy Outcomes

Seventy-seven percent of the fertility society members who are regularly doing artificial insemination report that they know whether their patients become pregnant (table 2-45). These physicians report that nearly half of all the women they see (i.e., those seeking AIH and AID) do become pregnant, on average after seven inseminations over a period of 4.4 cycles. Of course, these recollections by physicians cannot substitute for prospective clinical trials of the efficacy of artificial insemination protocols. Further, figures on the number of inseminations and cycles vary greatly, according to the reason for seeking artificial insemination, whether the semen is washed or otherwise treated, and on the precise placement of the semen during insemination.

Table 2-45. —Awareness of Outcome^a

(Question 24):^b In what percentage of cases that you have treated by artificial insemination do you know whether pregnancy is achieved as a result or not?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | Mean percentage |
|-----------------------------|------------------------------|-----------------|
| Total | (367) | 77.1 |
| All patients/past year | | |
| 4 | (15) | 67.4 |
| 11-50 | (169) | 79.0 |
| 51-100 | (47) | 86.3 |
| > 100 | (36) | 88.0 |
| Proportion AIH ^d | | |
| 1 | (61) | 54.4 |
| 75-99% | (70) | 82.4 |
| 2 | (144) | 81.0 |
| 0-24% | (91) | 82.4 |
| Practice | | |
| Office | (296) | 76.5 |
| Hospital | (66) | 84.8 |

a The sample is the fertility society sample

b The code number of the question in the survey instrument (see app. B).

^c Means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic

^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

Physicians do not necessarily follow the entire course of the pregnancy, as the patient's obstetrician normally would; nearly half report that they do not. By combining the estimated proportion of patients who eventually become pregnant as a result of artificial insemination with the proportion of pregnancies from artificial insemination that yield live births, the survey suggests that **live births are achieved in 37.7 percent of cases involving artificial insemination.**

The likelihood of following the full course of a patient's pregnancy varies with a physician's practice size, from 74 percent of those with 4 to 10 patients a year to 24 to 28 percent of those with more than 50 patients a year.

Birth Outcomes

Physicians may know outcomes without actually following a woman's pregnancy by, for example, having women send back postcards with news of a birth or miscarriage (Raboy, 1986). Some 64 percent of physicians regularly practicing artificial insemination know whether pregnancy was achieved, a higher number than those following the pregnancies.

The majority of physicians who follow the births of their artificial insemination recipients (73 percent) report that they have never encountered a case of birth defects (table 2-46). Another 20 percent report one or two cases of birth defects in their experience. Four percent report three or more cases of birth defects among the offspring of their inseminations. While the survey data do not permit a direct comparison of the rate of birth defects among the offspring of artificial insemination with the offspring of natural insemination (the survey collected information on the number of patients accepted for insemination *in the past year* and the physician's *lifetime* experience of birth defects), they do not suggest that children conceived by artificial insemination are suffering from an incidence of birth defects in excess of the general population.

Although most practitioners follow the outcomes of the live births of patients whom they have inseminated, far fewer (16 percent) report

Table 2-46. - Experience With Birth Defects^a(Question 30b): ^bHow many cases of birth defects have you encountered?

Base: Accepted 4 or more patients for artificial insemination in the past year and follows outcomes of live births

| | Unweighted base ^c | % | None | One | Two | Three | More than four | Not sure | Mean no. of cases | |
|---------------------------------|---------------------------------|---|--------|-----|-----|-------|----------------------|-------------|-------------------------|----|
| Total | (233) | % | 73 | 11 | 9 | 2 | 2 | 2 | 0.5 | |
| Insemination patients/past year | | | | | | | | | | |
| 4-10 | (74) | % | 93 | 7 | 0 | 0 | 0 | 0 | 0.1 | |
| 11-50 | (103) | % | 79 | 9 | 7 | 2 | 1 | 2 | 0.3 | |
| 51-100 | (30) | % | 40 | 20 | 27 | 7 | 7 | 0 | 1.4 | |
| >100 | (26) | % | 31 | 23 | 23 | 4 | 12 | 8 | 1.4 | |
| Proportion AIH ^d | | | | | | | | | | |
| 1 | 0 | 0 | % (36) | % | 94 | 3 | 3 | 0 | 0 | .1 |
| 75-9996 | (44) | % | 70 | 9 | 14 | 2 | 2 | 5 | .6 | |
| 25-74% | (90) | % | 70 | 15 | 9 | 3 | 2 | 1 | 5 | |
| 0 | 2 | 4 | % (63) | % | 70 | 13 | 10 | 2 | 5 | 7 |
| Practice | | | | | | | | | | |
| Office | (189) | % | 79 | 8 | 8 | 2 | 2 | 1 | .4 | |
| Hospital | (43) | % | 46 | 26 | 14 | 5 | 5 | 5 | 1.0 | |

a The sample is the fertility society sample.

b The case number of the question in the survey instrument (see app. B).

c Percentages and means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 233 where physicians failed to respond to particular question concerning demographic characteristic.

d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

that they follow the health and development of children from these inseminations subsequent to birth. Consequently, developmental problems and certain forms of genetic disorders that do not manifest themselves at birth would not normally be tracked by these practitioners.

Recordkeeping

Fifty-four percent of those regularly doing artificial insemination keep records permitting them to match donors to the pregnancies resulting from use of the donor's semen. For those using semen from a sperm bank, such records could match the donor code used by the sperm bank to the pregnancy that resulted. Nine percent report that such records are unnecessary, as they do only AIH. Nearly one-third (32 percent) do not keep such records. Such recordkeeping is more likely with increased practice size, from 35 percent of those with 4 to 10 patients a year to 78 to 80 percent of those with more than 50 patients a year. Similarly, hospital-based practices are more likely (74 percent) than office-based practices (51 percent) to keep such records.

The information maintained in the donor records, beyond matching the donor to inseminations, varies according to the size of the practice. On average, 71 percent of the physicians maintaining such records will also know how many pregnancies have been achieved with the semen of each donor (table 2-47). Such information is less frequently kept by those with 4 to 10 patients (50 percent) than those with more than 100 patients (100 percent). Similarly, most practitioners who keep donor records also note family genetic history (71 percent), number of women inseminated (68 percent), number of children born (65 percent), physical examinations (59 percent), and followup examinations (52 percent). However, these details are more often kept by those with large practices than those with small or office-based practices.

Access to Donor Records

A majority of physicians regularly doing artificial insemination who keep donor records will not give anyone access to them, under any circumstances, even if all identifying information

Table 247.-Types of Records Kept^a(Question 49):^b Do you keep records for each donor of:

Base: Accepted 4 or more patients for artificial insemination in the past year and keeps donor records

| Unweighed base: ^c | Total (199) | Insemination patients in past year | | | |
|--|----------------|------------------------------------|---------------|----------------|--------------|
| | | 4-10 (41) | 11-50 (93) | 51-100 (37) | >100 (28) |
| | % ^d | % | % | % | % |
| Family genetic history | 71 | 52 | 72 | 81 | 89 |
| Number of pregnancies achieved | 71 | 50 | 70 | 76 | 100 |
| Number of women inseminated | 68 | 58 | 66 | 70 | 89 |
| Number of children born | 65 | 52 | 63 | 65 | 93 |
| Physical examination | 59 | 38 | 60 | 65 | 82 |
| Follow-up examinations | 52 | 28 | 51 | 65 | 75 |

^a The sample is the fertility society sample.^b The code number of the question in the survey instrument (see app B).^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated^d Since multiple choices were permitted, percentages may add to more than 100%

SOURCE: Office of Technology Assessment, 1988

about the donor is removed. Approximately three-quarters of practitioners with donor records say that they would not permit access to the donors themselves (76 percent), to recipients (72 percent), to the partners of recipients (73 percent), or to the resulting children (77 percent) (table 2-48). Nor would they allow access, even without the donors' names, to public health departments (67 percent) or research scientists (60 percent). **Even judicial requests would be refused by a majority of these physicians (52 percent).**

Table 2-48.-Access to Records^a(Question 50): ^b Would you permit access to donor records, including the name of the donor, only excluding the name of the donor, or not at all, to:

Base: Accepted 4 or more patients for artificial insemination in the past year and keeps donor records

| Unweighed base (199) ^c | Access with name | Access | | |
|-------------------------------------|------------------------|-----------------|--------------|-------------|
| | | without name | No access | Not sure |
| Donor | % ^d 8 | 9 | 76 | 6 |
| Recipient | % 2 | 20 | 72 | 5 |
| Recipient partner | % 2 | 19 | 73 | 5 |
| Offspring of insemination | % 1 | 16 | 77 | 5 |
| Public health department | % 2 | 25 | 67 | 4 |
| Research scientists | % <0.5 | 33 | 6 | 0 5 |
| Judicial requests | % 10 | 30 | 52 | 6 |

^a The sample is the fertility society sample^b The code number of the question in the survey instrument (see app. B).^c Percentage are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated^d Items are in order as they appear on survey instrument

SOURCE: Office of Technology Assessment, 1988

COSTS OF ARTIFICIAL INSEMINATION

Preinsemination Costs

The cost of screening, testing, and consultative activities varies among practitioners. Approximately 4 out of 10 who do artificial insemination on a regular basis report that the average cost to their patient for the consultations, examinations,

and testing prior to the first actual insemination is under \$100 (table 2-49), although 9 percent estimate the cost of preinsemination services at more than \$1,000.

The **average cost of preinsemination services** across all practitioners is \$309. Physicians who

Table 2-49.-Preinsemination Costs: Total^a

(Question 59): ^bWhat do you estimate the average cost is to your patient (or her insurance earner) for the consultations, examinations and testing prior to the first actual insemination?

Base: Have accepted 4 or more patients for artificial insemination in the east year

| Unweighted base (367) ^c | Total |
|------------------------------------|-------|
| | % |
| Under \$100 | 38 |
| \$100 -199 | 11 |
| \$200-299 | 15 |
| \$300-499 | 15 |
| \$500-999 | 11 |
| \$1,000 and over | 9 |
| Not sure | 1 |
| Mean cost | \$309 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B).
^c Percentages and means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment 1988

do inseminations only with husband or partner semen charge \$145, on average, for these services (table 2-50), approximately half the rate (\$300 to \$372) charged by physicians who do AID as well. This is consistent with earlier findings that physicians doing only AIH tend to require fewer tests. Hospital-based practices charge more (\$376), on average, than do office-based practices (\$298) for initial consultations, and practices with 100 patients or fewer charge less (\$265 to \$311) than those with more than 100 patients (\$521).

Cost of Insemination

The average cost to the patient for each insemination also varies considerably among practitioners. Approximately a third report an average cost per insemination of less than \$50 (table 2-51). A similar proportion of practitioners (38 percent) report an average per insemination cost of between \$50 and \$150. A quarter of practitioners estimate that the average is \$150 or more.

For all fertility society members regularly doing artificial insemination, the average cost to a patient for each subsequent insemination is \$92 (table 2-52), with variation largely due to the source of the semen. In cases of AIH, where there is no charge for the semen, the only costs are medical costs. The survey found that the average cost per additional insemination is \$30 in

Table 2-50. - Preinsemination Costs, by Physician Characteristics^a

(Question 59): ^bWhat do you estimate the average cost is to your patient (or her insurance carrier) for the consultations, examinations and testing prior to the first actual insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base ^c | Mean cost |
|---------------------------------|-----------------------------|-----------|
| Total | (367) | \$309 |
| Insemination patients/past year | | |
| 4-10 | (115) | 311 |
| 11-50 | (169) | 275 |
| 51-100 | (47) | 265 |
| >100 | (36) | 521 |
| Proportion AIH ^d | | |
| 100% | (61) | 145 |
| 75-99% | (70) | 372 |
| 25-74% | (144) | 357 |
| 0-24% | (91) | 300 |
| Type of semen | | |
| Fresh | (100) | 293 |
| Fresh/frozen | (146) | 324 |
| Frozen | (84) | 394 |
| Practice | | |
| Office | (296) | 298 |
| Hospital | (66) | 376 |
| Specialty | | |
| OB/GYN ^e | (307) | 303 |
| Other | (53) | 371 |

^a sample is the fertility society sample

^b The code number of the question in the survey instrument (see app. B).

^c Means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic
^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

^e Obstetrics/gynecology

SOURCE: Office of Technology Assessment, 1988

practices doing only AIH. By contrast, the average cost in practices doing AID varies from \$97 to \$115.

Total Cost of Insemination

To achieve pregnancy, physicians regularly doing artificial insemination reported that on average a woman spends \$309 in initial consultations, examinations, and testing, and \$92 for each of seven inseminations (used during an average of 4.4 cycles), for a total cost of \$953. However, practices doing only artificial insemination by husband report an average cost per patient of one-quarter (\$316) that charged by other types of practice (\$1,017 to \$1,248) (table

Table 2-51.—Insemination Costs: Total^a

(Question 60):^b What do you estimate the average cost is to your patient (or her insurance carrier) for each subsequent insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighted base (367) ^c | Total |
|------------------------------------|-------|
| | % |
| Under \$50 | 36 |
| \$50-99 | 15 |
| \$100 | 12 |
| \$101 -149 | 11 |
| \$150 | 9 |
| \$151-199 | 4 |
| \$200 | 5 |
| Over \$200 | 8 |
| Not sure | 1 |
| Mean cost | \$92 |

^aThe sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B).
^cPercentages and means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1988

2-53). There is relatively little variation in the total patient cost between practices with 4 to 10 patients a year (\$822), 11 to 50 patients (\$889), and 51 to 100 patients (\$945). Practices with more than 100 patients report a per-patient cost (\$1,718) nearly twice that of smaller practices

The full average cost per recipient for artificial insemination by donor or by husband, \$953, yields unestimated expenditure on the order of \$164 million spent by 172,000 women each year for this procedure. This figure may overestimate the cost if women undergo the inseminations over more than a 12-month period.

Physicians report that 51 percent of these women have insurance coverage for the procedure, and that on average the insurance covers 48

percent of the total cost. At a national level, this means that recipients pay three-quarters of the costs of artificial insemination out of their own pockets.

Table 2-52.—Insemination Costs by Physician Characteristic^a

(Question 60):^b What do you estimate the average cost is to your patient (or her insurance earner) for each subsequent insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | Mean cost |
|---------------------------------|------------------------------|-----------|
| Total | (367) | \$92 |
| Insemination patients/past year | | |
| 4-10 | (115) | 74 |
| 11-50 | (169) | 93 |
| 51-100 | (47) | 100 |
| >100 | (36) | 133 |
| Proportion AIH ^d | | |
| 100% | (61) | 30 |
| 75-99% | (70) | 103 |
| 25-74% | (144) | 97 |
| 0-24% | (91) | 115 |
| Type of semen | | |
| Fresh | (100) | 77 |
| Fresh/frozen | (146) | 106 |
| Frozen | (84) | 112 |
| Practice | | |
| Office | (296) | 88 |
| Hospital | (66) | 113 |
| Specialty | | |
| OB/GYN ^e | (307) | 89 |
| Other | (53) | 106 |

^a sample is the fertility society sample

^b The code number of the question in the survey instrument (see app. B).

^c Means are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic

^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

^e Obstetrics/gynecology

SOURCE: Office of Technology Assessment, 1988.

Table 2-53. -Total Coat of Procedure^a

(Question 59):^bWhat do you estimate the average cost is to your patient (or her insurance carrier) for the consultations, examinations and testing prior to the first actual insemination?

(Question 25):^bBased on your experience, what is the average number of inseminations needed to achieve pregnancy?

(Question 60):^bWhat do you estimate the average cost is to your patient (or her insurance carrier) for each subsequent insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighted base ^c | Initial cost | Subsequent inseminations | | | Total cost |
|---------------------------------|---------------------------------|-----------------|--------------------------|----------|-------|---------------|
| | | | Number | Cost per | Total | |
| Total | (367) | \$309 | 7.0 | \$92 | \$644 | \$953 |
| Insemination patients/past year | | | | | | |
| 4-10 | (115) | 311 | 6.9 | 74 | 511 | 822 |
| 11-50, | (169) | 275 | 6.6 | 93 | 614 | 889 |
| 51-100 | (47) | 265 | 6.8 | 100 | 680 | 945 |
| >100 | (36) | 521 | 9.0 | 133 | 1197 | 1718 |
| Proportion AIH ^d | | | | | | |
| 100% | (61) | 145 | 5.7 | 30 | 171 | 316 |
| 75-99% | (70) | 372 | 8.5 | 103 | 876 | 1248 |
| 25-74% | (144) | 357 | 6.8 | 97 | 660 | 1017 |
| 0-24% | (91) | 300 | 7.0 | 115 | 805 | 1105 |
| Type of semen | | | | | | |
| Fresh | (100) | 293 | 5.9 | 77 | 454 | 747 |
| Fresh/frozen | (146) | 324 | 6.9 | 106 | 731 | 1055 |
| Frozen | (84) | 394 | 8.4 | 112 | 941 | 1335 |
| Practice | | | | | | |
| Office | (296) | 298 | 7.2 | 88 | 634 | 932 |
| Hospital | (66) | 376 | 6.2 | 113 | 701 | 1077 |

^aThe sample is the fertility society sample

^bThe code number of the question in the survey instrument (see app. B).

^cMeans are presented as weighted sample estimates. The unweighted sample based is presented in parentheses so that the sampling variance for these estimates can be calculated

Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic

^d"Proportion AIH" means the proportion of the physician's artificial's insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE: Office of Technology Assessment, 1988

STANDARDS, GUIDELINES, AND REGULATION

The majority of fertility society members who do artificial insemination on a regular basis report that they are aware of specific professional guidelines for the selection of recipients or donors for artificial insemination (76 percent). These findings, however, overstate general awareness of professional standards because the sample was drawn from the membership of two national fertility organizations, one of which has issued guidelines and published them in the journal that all members automatically receive. By contrast, 44 percent of the cross-sectional sample of physicians who have four or more insemination patients a year are aware of professional

guidelines, but this sample is too small for confidence in the estimate. Even this figure may overestimate awareness in the total population of physicians doing artificial insemination, as those with only one to three patients a year were not asked whether they are aware of professional guidelines. **There is a correlation between the number of inseminations done per year and awareness of standards** (table 2-54), and physicians with only one to three may be among the least knowledgeable about professional standards.

Table 2-54. -Awareness of Professional Guidelines •

(Question 51):^aAre you aware of any specific professional guidelines or suggested procedures for the selection of recipients or donors for artificial insemination?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base ^c | % | Yes | No | Practice only artificial insemination by husband | sperm bank only | No response |
|-------------------------------------|--------------------------------|---|-----|----|---|-----------------------|----------------|
| Total | (367) | % | 76 | 15 | 5 | 1 | 3 |
| Insemination patients/past year | | | | | | | |
| 4-10 | (115) | % | 65 | 20 | 12 | 0 | 4 |
| 11-50 | (169) | % | 75 | 17 | 4 | 1 | 3 |
| 51-100 | (47) | % | 94 | 6 | 0 | 0 | 2 |
| > 100 | (36) | % | 94 | 3 | 0 | 0 | 3 |
| Proportion AIH ^d | | | | | | | |
| 100% | (61) | % | 42 | 23 | 32 | 2 | 3 |
| 75-99% | (70) | % | 80 | 17 | 0 | 0 | 4 |
| 25-74% | (144) | % | 84 | 13 | 0 | 1 | 3 |
| 0-24% | (91) | % | 86 | 12 | 0 | 0 | 3 |
| Practice | | | | | | | |
| Office | (269) | % | 74 | 17 | 6 | 1 | 3 |
| Hospital | (66) | % | 91 | 6 | 3 | 0 | 0 |
| Age | | | | | | | |
| Under 35 | (21) | % | 81 | 14 | 5 | 0 | 0 |
| 35 to 49 | (221) | % | 78 | 16 | 5 | 1 | <0.5 |
| 50 or older | (121) | % | 73 | 14 | 7 | 0 | 7 |
| Sex | | | | | | | |
| Male | (339) | % | 75 | 16 | 5 | 1 | 4 |
| Female | (28) | % | 89 | 4 | 7 | 0 | 0 |
| Cross-sectional Sample ^e | (36) | % | 44 | 39 | 6 | 0 | 11 |

^aExcept as noted otherwise in last line, the sample is the fertility society sample.

^bThe code number of the question in the survey instrument (see app. B).

^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic.

^d"Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) used.

^eCross-sectional sample physicians who have accepted 4 or more patients for artificial insemination in the past year

SOURCE Office of Technology Assessment, 1988

Awareness of professional standards is important because it is virtually tantamount to adoption of at least some of those procedures, although the gap between professional society recommendations and screening for infectious and heritable diseases indicates that some physicians are not following all the guidelines of which they are aware. Guidelines include procedures for screening recipients and donors, quarantining semen, and testing semen for motility, morphology, and other fertility indicators. Among those aware of such guidelines or procedures, 9 out of 10 have adopted those standards (table 2-55), with adoption widespread even among practices with only 4 to 10 patients (86

percent) and those that do only AIH (72 percent).

Among those who have adopted some professional guidelines, the vast majority report that they use those of the American Fertility Society (85 percent) (see box 2-A). The other guidelines used by significant numbers of practitioners are those of the American College of Obstetricians and Gynecologists (ACOG) (7 percent) and the American Association of Tissue Banks (6 percent) (AATB). ACOG, it should be noted, has adopted the guidelines of the American Fertility Society. IMTB, an organization concerning itself with tissue banking in general, issues standards

Table 2-55.-Adoption of Professional Guidelines^a

(Question 59):^b Have you adopted any of these guidelines or procedures as your protocol for artificial insemination?
Base: Accepted 4 or more patients for artificial insemination in the past year and are aware of guidelines

| | Unweighted base ^c | % | Yes | No | Practice only artificial insemination by husband | No response/not applicable |
|---------------------------------|------------------------------|---|-----|----|--|----------------------------|
| Total | (278) | % | 91 | 8 | <0.5 | 1 |
| Insemination patients/past year | | | | | | |
| 4-10 | (74) | % | 86 | 11 | 0 | 3 |
| 11-50 | (127) | % | 91 | 8 | 1 | 0 |
| 51-100 | (43) | % | 93 | 7 | 0 | 0 |
| >100 | (34) | % | 94 | 6 | 0 | 0 |
| Proportion AIH ^d | | | | | | |
| 100% | (25) | % | 72 | 20 | 4 | 4 |
| 75-99% | (55) | % | 94 | 6 | 0 | 0 |
| 25-74% | (120) | % | 91 | 8 | 0 | 1 |
| 0-24% | (77) | % | 94 | 6 | 0 | 0 |
| Practice | | | | | | |
| Office | (217) | % | 89 | 10 | <0.5 | 1 |
| Hospital | (60) | % | 97 | 3 | 0 | 0 |
| Age | | | | | | |
| Under 35 | (17) | % | 88 | 12 | 0 | 0 |
| 35 to 49 | (172) | % | 92 | 7 | 0 | 1 |
| 50 or older | (66) | % | 89 | 10 | 1 | 0 |
| sex | | | | | | |
| Male | (253) | % | 90 | 9 | <0.5 | 1 |
| Female | (25) | % | 100 | 0 | 0 | 0 |
| Cross-sectional sample? | (16) | % | 81 | 19 | 0 | 0 |

^a Except as noted otherwise in last line, the sample is the fertility society sample.

^b The code number of the question in the survey instrument (see app. B).

^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

^e Cross-sectional sample physicians who have accepted 4 or more patients for artificial insemination in the past year and are aware of guidelines.

SOURCE: Office of Technology Assessment, 1988.

Box 2-A.-American Fertility Society Guidelines for Physician Practice of Artificial Insemination by Donor

In 1986, the American Fertility Society issued revised guidelines for physician practice of artificial insemination by donor. They called for "careful consideration . . . to the possible need for psychologic evaluation and counseling" for the recipient and her partner, appropriate warnings of the emotional and psychological risks of the procedure, evaluation and correction if possible of any male partner infertility before resorting to AID, and careful evaluation of the recipient's reproductive health, including tests for antibodies to HIV and cytomegalovirus (CMV).

Sperm donors are to have their sperm screened for motility, morphology, concentration, and other indicators of fertility, and donors themselves are to undergo physical examination and blood testing for indications of syphilis, hepatitis B, gonorrhea, chlamydia, CMV, and HIV infection. The guidelines do not direct physicians to reject donors testing positive to CMV, as some physicians might still choose to use them for women who also test positive. Rescreening at 6-month intervals is suggested for all but syphilis. Fresh semen donation was permitted under the 1986 guidelines, with proper attention given to identifying donors at higher than average risk for HIV infection. Matching to recipient-specified physical characteristics was deemed appropriate, but mixing of donor and husband sperm was discouraged, as possibly interfering with fertilization.

In 1988, the American Fertility Society revised its guidelines to suggest to practitioners that they use only frozen semen following a minimum 6-month quarantine and after the donor had been retested and found once again to be seronegative to HIV. The AFS announcement coincided with announcements by the Centers for Disease Control and the Food and Drug Administration to the same effect.

SOURCES: American Fertility Society, "New Guidelines for the Use of Semen Donor Insemination: 1986," *Fertility and Sterility* 46 (Supp. 2): 95S-110S, 1986; American Fertility Society, "Revised New Guidelines for the Use of Semen-Donor Insemination," *Fertility and Sterility* 49: 211, 1988; U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, *Semen Banking, Organ and Tissue Transplantation, and HIV Antibody Testing, Morbidity and Mortality Weekly Report* 37:57-63, 1986.

that are mandatory for its member sperm banks. The other practitioners who have adopted professional guidelines report using those of their sperm bank (3 percent), their own guidelines (4 percent), or some other guidelines (6 percent) (table 2-56).

The widespread adoption of some of the AFS guidelines by practitioners has to be qualified by the recognition that the vast majority of the sample are members of AFS. Yet the same can be said about the vast majority of physicians who conduct artificial insemination on a regular basis. Although the cross-sectional sample is too small for any confidence in its estimates, over half the practitioners in this sample who use professional guidelines also use AFS guidelines.

As noted above, AFS guidelines changed in early 1988, in conjunction with a joint statement from the Centers for Disease Control and the Food and Drug Administration (U.S. DHHS, 1988). This survey, conducted in 1987, reflects adherence to earlier professional society guidelines, which permitted donation of fresh semen but recommended taking a medical history that would elicit risk factors (such as intravenous drug

use or homosexual contacts) and rejecting donors who appeared to be at risk.

Adequacy of Professional Practices

Most physicians regularly doing artificial insemination feel current practices are adequate or more than adequate to protect donors' privacy (89 percent), recipients' safety (83 percent), offsprings' rights (80 percent), and physicians' freedom from liability (59 percent) (table 2-57).

Thirty-five percent of the physicians feel that protection against liability is inadequate. Survey data indicate that the incidence of legal problems is 2 percent among those with 4 to 10 patients a year, 4 percent among those 11 to 100 patients per year, and 11 percent for those with more than 100 patients annually. Legal problems can be associated, for example, with screening for sexually transmitted or genetic diseases. Insurance, while available, can be quite expensive (Rothman, 1988).

Quality Assurance

A majority of practitioners regularly doing artificial insemination (i.e., accepting more than four insemination patients a year) approve of the current situation regarding involvement of State

Table 2-56.-Guidelines Used^a

(Question 53):^b What is the name of those guidelines that you use? (verbatim)

Base: Accepted 4 or more patients for artificial insemination in the past year and have adopted guidelines

| | Unweighted base ^c | % | AFS ^d | ACOG ^e | AATB ^f | Sperm bank guidelines | Own guidelines | Other guidelines | Don't know |
|---|---------------------------------|---|------------------|-------------------|-------------------|--------------------------|-------------------|---------------------|---------------|
| Total ^g | (252) | % | 85 | 7 | 6 | 3 | 4 | 6 | 4 |
| Insemination patients/past year | | | | | | | | | |
| 4-10..... | (64) | % | 73 | 11 | 0 | 6 | 5 | 3 | 8 |
| 11-50..... | (116) | % | 88 | 5 | 4 | 4 | 2 | 6 | 3 |
| 51-100..... | (40) | % | 95 | 5 | 10 | 0 | 8 | 10 | 0 |
| >100..... | (32) | % | 88 | 6 | 22 | 0 | 3 | 3 | 3 |
| Proportion AIH ^h | | | | | | | | | |
| 100%..... | (18) | % | 83 | 0 | 6 | 0 | 11 | 6 | 6 |
| 75-99%..... | (52) | % | 86 | 4 | 8 | 2 | 0 | 12 | 4 |
| 25-74%..... | (109) | % | 84 | 7 | 6 | 6 | 4 | 5 | 1 |
| 0-24%..... | (72) | % | 86 | 10 | 4 | 0 | 4 | 3 | 7 |
| Practice | | | | | | | | | |
| Office..... | (193) | % | 83 | 8 | 7 | 4 | 4 | 5 | 5 |
| Hospital..... | (58) | % | 91 | 3 | 5 | 0 | 3 | 9 | 0 |
| Age | | | | | | | | | |
| Under 35..... | (15) | % | 93 | 0 | 0 | 0 | 7 | 7 | 0 |
| 35 to 49..... | (158) | % | 85 | 6 | 8 | 3 | 1 | 6 | 4 |
| 50 or older..... | (78) | % | 85 | 9 | 5 | 4 | 6 | 5 | 4 |
| sex | | | | | | | | | |
| Male..... | (227) | % | 85 | 8 | 7 | 4 | 4 | 5 | 4 |
| Female..... | (25) | % | 92 | 0 | 4 | 0 | 0 | 8 | 0 |
| Cross-sectional sample ⁱ | (13) | % | 54 | 15 | 0 | 0 | 0 | 23 | 0 |

a Except as noted otherwise in last line, the sample is the fertility society sample.

b The code number of the question in the survey instrument (see app. B).

c American Fertility Society.

d American College of Obstetricians and Gynecologists

e American Association of Tissue Banks.

f Since multiple choices were permitted, percentages may add to more than 100%.

g Percentages are presented as weighted sample estimates. The Unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be

calculated. Unweighted sample base does not add to 252 where physicians failed to respond to particular question concerning demographic characteristic.

h Proportion AIH^h means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

i Cross-sectional sample physicians who have accepted 4 or more patients for artificial insemination in the past year, and who adopted guidelines.

SOURCE: Office of Technology Assessment, 1968

public health agencies (56 percent), local medical boards (54 percent), Federal public health agencies (52 percent), and national medical societies (51 percent) with respect to artificial insemination (table 2-58). Nearly half, however, would like to see the involvement of courts either decreased (12 percent) or eliminated (36 percent), and that of hospital professional review organizations either decreased (9 percent) or eliminated (40 percent). In contrast, 34 percent would like to see the involvement of national medical societies increased.

A minority would like to see the current involvement of Federal public health agencies (29 percent) and State public health agencies (23 percent) either reduced or eliminated. A somewhat smaller minority, on the other hand, would like to see Federal (12 percent) and State (16 percent) public health agencies more involved.

National Standards

Most physicians regularly doing artificial insemination favor national standards (unspecified as voluntary or mandatory) for donor

Table 2-57.-Adequacy of Professional Practices^a

(Question 54):^b How adequate do you think that present professional practices of artificial insemination are in terms of protecting the:
Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighed base (367) ^c | More than | | Less than | Practice only artificial | sperm | Don't know |
|-----------------------------------|-----------|----------|-----------|--------------------------|-----------|------------|
| | adequate | Adequate | adequate | insemination by husband | bank only | |
| Donor's privacy % | 34 | 55 | 5 | 2 | 0 | 4 |
| Recipient's safety % | 22 | 61 | 11 | 2 | 0 | 4 |
| Offspring's rights % | 18 | 62 | 12 | 2 | 0 | 6 |
| Physician's liability % | 9 | 50 | 35 | 2 | 0 | 4 |

^a The sample is the fertility society sample.

^b The code number of the question in the survey instrument (see app. B).

^c Percentages are presented as weighted sample estimates. The unweighed sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

Table 2-58. - Roles in Quality Assurance^a

(Question 55):^b For each of the following agencies, would you like to see their involvement in the quality assurance of artificial insemination procedures increased, remain the same, decreased, or eliminated?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| Unweighed base (367) ^c | Remain | | | Eliminated | Don't know |
|--|--------------------|-----------|----------|------------|------------|
| | Increased the same | Decreased | the same | | |
| National medical societies % | 34 | 51 | 2 | 7 | 6 |
| Local medical boards % | 16 | 54 | 3 | 22 | 6 |
| State public health agencies % | 16 | 56 | 7 | 16 | 6 |
| Federal public health agencies % | 12 | 52 | 8 | 21 | 6 |
| Hospital peer review organizations % | 6 | 39 | 9 | 40 | 7 |
| courts % | 6 | 40 | 12 | 36 | 6 |

^a The sample is the fertility society sample

^b The code number of the question in the survey instrument (see app. B).

^c Percentages are presented as weighted sample estimates. The unweighed sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

screening by sperm banks (80 percent), donor screening by private practitioners (68 percent), recipient screening (57 percent), and record-keeping (58 percent) (table 2-59), but strongly oppose releasing identifying information about sperm donors to any children conceived with those individuals' sperm. Support for national standards for donor screening did not significantly vary with size of practice, age or sex of the physician, or whether the practice was office-or hospital-based. Standards for recipient screening engendered the same uniformity of support, except that smaller, office-based practices were

somewhat less enthusiastic, perhaps reflecting the fact that physicians with those practices tend to do more AIH than AID.

Regulation of surrogate motherhood, an arrangement in which a woman is artificially inseminated with the intention of relinquishing the child at birth to the genetic father, should take place on the State (29 percent) or Federal (42 percent) level, according to fertility society practitioners regularly doing artificial insemination, but a substantial minority (27 percent) feel no law should regulate this variation on artificial in-

Table 2-59.-National Standards for Artificial Insemination.

(Question 56):^b Would you tend to favor or oppose the establishment of national standards for artificial insemination for:

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base (367) ^c | | Don't know |
|--|-----------------------------------|--------|------------|
| | Favor | Oppose | |
| Donor screening by sperm banks . . . % | 80 | 15 | 5 |
| Donor screening by private practitioners % | 68 | 26 | 5 |
| Recordkeeping requirements % | 58 | 37 | 5 |
| Recipient screening % | 57 | 38 | 6 |

a The sample is the fertility society sample.
 b The code number of the question in the survey instrument (see app. B).
 c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated

SOURCE: Office of Technology Assessment, 1988

semination practice (table 2-60). Support for regulation was somewhat greater among younger, female, and hospital-based physicians with large practices.

Table 2-60.- Regulation of Surrogate Motherhood •

(Question 57):^b Do you believe that the procedures for surrogate motherhood should be regulated by federal legislation, state legislation or not regulated by legislation?

Base: Have accepted 4 or more patients for artificial insemination in the past year

| | Unweighed base ^c | % | Federal law | State law | No law | Do not believe in surrogate motherhood | |
|--|-----------------------------|---|-------------|-----------|--------|--|------------|
| | | | | | | Do not believe in surrogate motherhood | Don't know |
| Total | (367) | % | 42 | 29 | 27 | 1 | 5 |
| Insemination patients/past year | | | | | | | |
| 4-10. | (115) | % | 35 | 27 | 27 | 0 | 11 |
| 11-50 | (169) | % | 47 | 28 | 28 | 1 | 2 |
| 51-100 | (47) | % | 44 | 28 | 28 | 0 | 4 |
| >100 | (36) | % | 42 | 39 | 19 | 0 | 3 |
| Practice | | | | | | | |
| office | (296) | % | 41 | 28 | 30 | <0.5 | 4 |
| Hospital | (66) | % | 53 | 33 | 15 | 0 | 4 |
| Age | | | | | | | |
| Under 35 | (21) | % | 52 | 33 | 19 | 0 | 5 |
| 35 to 49 | (221) | % | 44 | 32 | 24 | <0.5 | 4 |
| >50 | (121) | % | 38 | 23 | 33 | 1 | 7 |
| sex | | | | | | | |
| Male | (339) | % | 42 | 28 | 28 | 1 | 5 |
| Female | (28) | % | 43 | 46 | 18 | 0 | 4 |

a The sample is the fertility society sample
 b The code number of the question in the survey instrument (see app. B).
 c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 367 where physicians failed to respond to particular question concerning demographic characteristic

SOURCE: Office of Technology Assessment, 1988

GENERAL PHYSICIAN ATTITUDES

The survey instrument asked all physicians, regardless of the size of their artificial insemination practice, to respond to a series of questions concerning their attitudes toward the practice. **Physicians as a whole split almost evenly over whether requests for artificial insemination ought to be honored ‘regardless of marital status or sexual orientation’** (table 2-61). Looking more closely at those who are fertility society members, those “agreeing strongly” were equally likely to be male or female, younger or older. Those disagreeing strongly were more likely to be older. Data concerning the attitudes of female physicians are subject to error due to the small size, but indicate that a larger percentage of female physicians than male physicians disagree strongly with the statement.

With regard to self-insemination, once again physicians split over whether this is a ‘reasonable alternative to physician assisted insemination’ (table 2-62). Neither fertility society members (10 percent) nor physicians from the cross-sectional sample (8 percent) strongly agreed with the statement. In each case, an additional third of the respondents agreed “somewhat” with the statement. Here, female physicians showed a significantly greater tolerance for self-insemination than did male physicians, as did those with smaller practices compared with those with larger practices. This latter finding may reflect the greater proportion of AIH cases seen by those with smaller practices.

Table 2-61.- Recipient Acceptance Factors^a

| | | Unweighed base ^c | | Agree strongly | Agree somewhat | Disagree somewhat | Disagree strongly | Don't know |
|--|-------|--------------------------------|---|-------------------|-------------------|----------------------|----------------------|---------------|
| (Question 63d):^b Patient requests for artificial insemination should be honored, regardless of marital status or sexual orientation. | | | | | | | | |
| Base: Have accepted 4 or more patients for artificial insemination in the past year | | | | | | | | |
| Total | | | | | | | | |
| Fertility society sample | .. | (646) | % | 10 | 24 | 27 | 37 | 2 |
| Cross-sectional sample | ... | (827) | % | 9 | 19 | 29 | 40 | 4 |
| Insemination patients/past year | | | | | | | | |
| None | .. | (155) | % | 11 | 24 | 24 | 39 | 2 |
| 1-3 | ..... | (122) | % | 9 | 32 | 28 | 30 | 1 |
| 4-10 | .... | (115) | % | 5 | 22 | 32 | 39 | 2 |
| 11-50 | ..... | (169) | % | 13 | 19 | 26 | 41 | 2 |
| 51-100 | ..... | (47) | % | 6 | 35 | 26 | 33 | 2 |
| >100 | ..... | (36) | % | 22 | 16 | 24 | 38 | 0 |
| Recipients rejected in past | | | | | | | | |
| None | ..... | (166) | % | 14 | 24 | 34 | 27 | 1 |
| 1-4 | ..... | (68) | % | 9 | 18 | 22 | 51 | 2 |
| >5 | ..... | (131) | % | 7 | 21 | 23 | 48 | 2 |
| Age | | | | | | | | |
| Under 35 | ..... | (38) | % | 11 | 32 | 35 | 24 | 0 |
| 35 to 49 | ..... | (367) | % | 10 | 23 | 28 | 38 | 1 |
| >50 | ..... | (232) | % | 10 | 25 | 24 | 40 | 1 |
| sex | | | | | | | | |
| Male | ..... | (594) | % | 10 | 24 | 28 | 36 | 1 |
| Female | ..... | (50) | % | 10 | 28 | 10 | 48 | 4 |

^a Except as noted in second line, the sample is the fertility society sample.

^b The code number of the question in the survey instrument (see app. B).

^c Percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 646 where physicians failed to respond to particular question concerning demographic characteristic

SOURCE: Office of Technology Assessment, 1966

Table 242. - Self Insemination ^a(Question 63c): ^bSelf insemination is a reasonable alternative to physician assisted insemination in many cases.

| | Unweighted base ^c | % | Agree strongly | Agree somewhat | Disagree somewhat | Disagree strongly | Don't know |
|--|---------------------------------|---|-------------------|-------------------|----------------------|----------------------|---------------|
| Total | | | | | | | |
| Fertility society sample | (646) | % | 10 | 34 | 29 | 24 | 3 |
| Cross-sectional sample | (827) | % | 8 | 33 | 26 | 23 | 9 |
| Insemination patients/past year | | | | | | | |
| None | (155) | % | 10 | 40 | 24 | 20 | 6 |
| 1-3. | (122) | % | 12 | 37 | 24 | 25 | 2 |
| 4-10 | (115) | % | 5 | 28 | 42 | 21 | 3 |
| 11 - 50 | (169) | % | 13 | 34 | 29 | 23 | 1 |
| 51-100, | (47) | % | 6 | 37 | 33 | 22 | 4 |
| >100 | (36) | % | 3 | 22 | 24 | 49 | 3 |
| Sex | | | | | | | |
| Male | (594) | % | 9 | 33 | 30 | 24 | 3 |
| Female | (50) | % | 14 | 46 | 18 | 18 | 4 |

^aExcept as noted in second line, the sample is the fertility society sample^bThe code number of the question in the survey instrument (see app. B).^cPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 646 where physicians failed to respond to particular question concerning demographic characteristic

SOURCE: Office of Technology Assessment, 1988

Offspring rights to ‘communicate with their genetic fathers’ were uniformly and strongly opposed by the surveyed physicians, regardless of age, sex, or size of practice, although members of a fertility society were distinctly more likely (74 percent) than physicians from the cross-sectional sample (48 percent) to strongly oppose them (table 2-63).

The issue on which physicians’ exhibited the greatest diversity of attitudes concerned favored trait specialization (table 2-64). When asked if they agreed that “there is nothing wrong with

sperm banks that specialize in donors with intellectual, artistic, or athletic gifts,” 58 percent of the fertility society practitioners and 49 percent of the cross-sectional physicians strongly or somewhat agreed. Women were somewhat less likely than men to agree, and physicians under age 35 or with practices of over 100 insemination patients a year were the least likely to strongly agree. Nevertheless, in general, roughly equal proportions of physicians agreed strongly, agreed somewhat, disagreed somewhat, or disagreed strongly with the statement.

Table 2-63.-Offspring Rights ^a(Question 63e): ^b Offspring of artificial inseminations should have a right to communicate with their genetic fathers.

| | Unweighed base ^c | % | Agree strongly | Agree somewhat | Disagree somewhat | Disagree strongly | Don't know |
|-----------------------------------|--------------------------------|---|-------------------|-------------------|----------------------|----------------------|---------------|
| Total | | | | | | | |
| Fertility society sample | (646) | % | 3 | 6 | 15 | 74 | 2 |
| Cross-sectional sample | (827) | % | 6 | 15 | 25 | 48 | 6 |
| Proportion AIH^d | | | | | | | |
| 100% | (61) | % | 3 | 8 | 20 | 68 | 0 |
| 75-99% | (70) | % | 3 | 1 | 14 | 78 | 3 |
| 25-74% | (144) | % | 1 | 2 | 9 | 87 | 1 |
| 0-24% .. | (91) | % | 1 | 4 | 10 | 83 | 1 |
| sex | | | | | | | |
| Male .. | (594) | % | 3 | 6 | 15 | 75 | 1 |
| Female | (50) | % | 0 | 4 | 16 | 72 | 8 |

a Except as noted in second line, the sample is the fertility society sample.

b The ^{base} number of the question in the survey instrument (see app. B).

c percentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 646 where physicians failed to respond to particular question concerning demographic characteristic

d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used

SOURCE Office of Technology Assessment, 1965

Table 2-64. - Favored Trait Specialization ^a(Question 63g): ^b There is nothing wrong with sperm banks which specialize in donors with intellectual, artistic or athletic gifts.

| | Unweighted base ^c | % | Agree strongly | Agree somewhat | Disagree somewhat | Disagree strongly | Don't know |
|--|---------------------------------|---|-------------------|-------------------|----------------------|----------------------|---------------|
| Total | | | | | | | |
| Fertility society sample | (648) | % | 22 | 36 | 22 | 19 | 2 |
| Cross-sectional sample | (827) | % | 17 | 32 | 21 | 26 | 4 |
| Insemination patients/past year | | | | | | | |
| None | (155) | % | 21 | 31 | 22 | 23 | 2 |
| 1-3 | (122) | % | 24 | 45 | 20 | 10 | 2 |
| 4-10 | (115) | % | 30 | 37 | 18 | 13 | 2 |
| 11-50 | (169) | % | 20 | 35 | 28 | 16 | 1 |
| 51-100 | (47) | % | 13 | 30 | 17 | 39 | 2 |
| >100 | (38) | % | 8 | 30 | 32 | 30 | 0 |
| Proportion AIH^d | | | | | | | |
| 100% | (61) | % | 23 | 35 | 23 | 20 | 0 |
| 75-99% | (70) | % | 29 | 36 | 20 | 13 | 3 |
| 25-74% | (144) | % | 18 | 38 | 23 | 21 | 1 |
| 0-24% | (91) | % | 20 | 32 | 27 | 21 | 1 |
| Age | | | | | | | |
| Under 35 | (38) | % | 8 | 62 | 30 | 3 | 0 |
| 35 to 49 | (387) | % | 23 | 35 | 22 | 19 | <0.5 |
| > 50 | (232) | % | 23 | 33 | 22 | 21 | 2 |
| sex | | | | | | | |
| Male | (594) | % | 22 | 36 | 22 | 18 | 2 |
| Female | (50) | % | 18 | 24 | 30 | 24 | 4 |

a Except as noted in second line, the sample is the fertility society sample.

b The ^{code number} of the question in the survey instrument (see app. B).

^c Percentages are presented weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated. Unweighted sample base does not add to 646 where physicians failed to respond to particular question concerning demographic characteristic.

^d "Proportion AIH" means the proportion of the physician's artificial insemination practice in the past 12 months in which husband or partner sperm (rather than donor sperm) was used.

SOURCE: Office of Technology Assessment, 1988

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