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Expensive but worth it: older parents' attitudes and opinions about the costs and insurance coverage for in vitro fertilization

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Abstract

Objective—To describe older parents' attitudes and opinions about the costs and insurance coverage for IVF.

Design—Qualitative interview study.

Setting—Two Northern California IVF practices.

Patient(s)—Sixty women and 35 male partners in which the woman had delivered her first child after the age of 40 years using IVF.

Intervention(s)—Two in-depth interviews over 3 months.

Main Outcome Measure(s)—Thematic analysis of interview transcripts.

Result(s)—We found that although the costs of IVF were perceived as high, even by those with insurance or who could afford them, the cost of IVF relative to other expenses in life was dwarfed by the value attributed to having a child. Women were twice as likely as men to support insurance coverage for IVF. Both men and women with complete or partial IVF insurance coverage were more likely to support insurance than those without coverage. There was a broad range of attitudes and opinions about the appropriateness of IVF insurance coverage, which addressed questions of age, gender equality, reproductive choice, whether infertility is a medical illness, and the role of personal and societal economic equity and responsibility.

Conclusion(s)—Despite a generally favorable opinion about the appropriateness of insurance coverage by those who have successfully undergone IVF treatment, the affordability of IVF remains an unresolved dilemma in the United States.

Keywords

Assisted reproductive technology (ART); in vitro fertilization (IVF); age; cost; insurance

Over the past generation, IVF has evolved to become an established and successful medical treatment for many types of infertility and subfertility. Yet a major issue long identified with the utilization of IVF in the United States has been that of cost and medical insurance.

Writing on behalf of the Reproduction and Society Task Force of the European Society of Human Reproduction and Embryology, Connolly et al. (1) recently summarized these cost consequences by stating, "...the affordability of ART treatment is an important driver of utilization, treatment choices, embryo transfer practices and ultimately multiple birth rates... and infant outcomes." Despite the clear policy implications and consequences related to the economics of IVF, Connolly et al. go on to point out that "affordability and consumer and provider behaviour is only starting to be investigated and understood" (1).

Although studies have examined the cost of IVF in the United States (2–4), including the influence of state-mandated insurance coverage on utilization (5, 6) as well as the impact of age and/or basal FSH levels (7, 8), to the best of our knowledge the only qualitative research addressing IVF patients' attitudes toward costs and insurance has been in the United Kingdom. Peddie et al. (9) performed semistructured interviews with 25 women who had decided to end treatment after unsuccessful IVF treatment, and Redshaw et al. (10) analyzed the open-ended written responses to a mailed questionnaire of 108 women who had conceived after IVF.

As part of a larger research study addressing the sociodemographic trend of delayed parenting in the United States, we interviewed families and single women who had conceived their first child after IVF and delivered when the woman was at least 40 years of age. One aim of this research was to provide insight into the social and cultural factors that inform the discussion of ethical and policy issues that address the use of reproductive technology. This article presents our analysis of participants' responses to open-ended questions addressing the issues of cost and medical insurance coverage for IVF.

MATERIALS AND METHODS

This qualitative exploratory research was funded by the National Institute of Child and Human Development and was approved by the institutional review board at the University of California, San Francisco. Respondents were recruited from two large IVF centers in Northern California. Physicians sent letters to patients who had delivered a child after IVF when the woman was age 40 years or older at the time of the procedure. These age and parity criteria were selected to reflect our interest in the social phenomenon of delayed parenthood utilizing assisted reproductive technology (ART). All patients who met these criteria between 2000 and 2010 were sent invitation letters. The investigators had no prior knowledge of the demographic or treatment profiles of those who were selected to receive the recruiting letter.

Those who expressed interest returned a postcard to the investigators stating their willingness to consider participation. All participants reviewed and signed informed consent documents and were interviewed two times at 3-month intervals. Couples were interviewed together at the first interview and separately at the second interview to capture the couples' approach to decision making as well as the individuals' responses without their partners present. The 3-month interval was chosen to allow participants to further reflect on the questions, as well as to allow time for the researchers to review participant responses for follow-up, an approach that has been used successfully in past qualitative studies of reproductive decision making (11, 12). Both partners were prompted to respond to questions in the couple interviews. The second interviews were performed with participating members of the couple one after the other in the same session, so that participants did not have the

chance to discuss their responses or influence each other. Solo participants (those either not in a couple or participating without their partners) were also interviewed twice. The attrition rate between the first and second interview was 2%. Interviews were primarily conducted in the interviewee's homes by members of the research team, who were trained qualitative interviewers. The 1- to 2-hour-long interviews were recorded and transcribed verbatim.

The interview questions were intentionally open-ended to identify broad themes, ideas, and concepts rather than "yes" or "no" responses to specific questions. Code words defining and referencing these themes were developed. Each paragraph of each interview transcript was then analyzed for its thematic content and assigned one or more of these code words. By entering the coded interview transcripts into Atlas.ti data-sorting software (13), all interview data relating to any specific coded theme could be subsequently retrieved for further analysis. This report is based on an analysis of the interview data identified by the code "Cost," which was defined as "Discussion of costs of fertility treatments, the influence of cost on decision making and insurance coverage for ART." The data include responses to the following interview question and follow-up probes, as well as any ad hoc discussion of these topics: "What portions of your fertility treatment (if any) were covered by insurance? Should it be covered by insurance? What is your impression of the costs of treatment? What were your out-of-pocket expenses (approximately)? How do you see those expenses relative to other expenses in your lives?" Subsequent secondary themes were identified (14).

RESULTS

Study invitations were sent to 426 former patients. Of these, 115 (27%) returned postcards indicating interest in the study. Fifty-four patients did not respond to our efforts for further contact or were ineligible because their conception after age 40 was not their first child. The final cohort used in our analysis represented those participants who responded to the interview questions pertaining to costs and insurance and included 35 heterosexual partnered men, 46 heterosexual partnered women, 8 partnered lesbians, and 6 single women, for a total of 60 women and 35 men. The women's median age at the birth of her first child was 42 years. The majority of respondents were Caucasian, employed, married, had a postgraduate education, and reported family incomes of more than \$150,000. Forty-five percent of participants had IVF insurance coverage, 19% had some or partial coverage, and 36% had no coverage. By respondent estimates, the median out-of-pocket IVF expenses was \$10,000 for participants with insurance, \$20,000 for families with partial insurance, and \$27,000 for those with no insurance. The demographic information of the study respondents is detailed in Table 1.

The major findings of this study are as follows: [1] the costs of IVF were perceived as high, even for those with insurance or who could afford them, [2] the cost of IVF relative to other expenses in life was dwarfed by the value attributed to having a child, [3] women were twice as likely as men to support insurance coverage for IVF, [4] both men and women with complete or partial coverage were more likely to support insurance than those without coverage, and [5] there was a broad range of opinions with respect to the appropriateness of insurance coverage for IVF, which referenced age, gender equality, reproductive choice, whether infertility is a medical illness, and the role of personal and societal economic equity and responsibility.

Costs of IVF

Almost one-third of families cited the costs of IVF as being "expensive" or "very expensive" or had delayed initiating IVF specifically because of expense. More than one-fifth of families specifically cited the high cost of drugs associated with IVF. Even the families who said that they could afford it still acknowledged the expense by citing that they

were “fortunate” or “lucky” to have been financially secure or having had insurance coverage, and some specifically expressed compassion or sympathy for infertile couples that could not afford IVF.

Cost of IVF Relative to Other Expenses in Life

The most frequently cited comparison was that it was equivalent to the price of a car, whereas others thought that “the cost was in line with other medical things.” Some compared the cost of IVF to that of adoption, whereas others cited the high overall cost of having and raising children. Some recognized the specialized equipment and personnel involved in providing IVF services. Others rationalized that the cost of IVF was the price to pay for maximizing their pregnancy chances. However, when the value of the child was taken into consideration, the overriding consensus was that the costs became immaterial because a child is “worth everything.”

Attitudes About Insurance Coverage for IVF

Overall, when asked whether they thought IVF should be covered by medical insurance, 55% of participants were in favor, 16% were opposed, and 29% were uncertain. When analyzed by gender, approximately two-thirds of women supported insurance coverage for IVF, almost twice the fraction of men who voiced support. Overall, men and women with IVF coverage were more likely to be in favor of IVF insurance than those without coverage. The attitudes toward insurance coverage by gender and insurance coverage are summarized in Table 2.

There were a number of reasons invoked for these opinions. The most commonly cited rationale for insurance coverage was that infertility was a medical problem not inherently different from other medical illness or disease. Yet this stance was not universal. More than one-third of participants were uncertain or did not support medical insurance for IVF. Although they noted that other covered medical conditions were also expensive, they cited the elective nature of IVF and equated the decision to use IVF as a “quality of life” rather than purely medical issue. On the other hand, many, especially women, rejected the argument that having a child was a “choice” or was “elective” and cited the importance of having children to long-term well-being.

In general, many participants were critical of the health insurance industry and resisted the notion of insurance companies making decisions with medical ramifications. Women frequently saw the lack of IVF insurance as reflecting gender bias and several specifically pointed to the insurance coverage of sildenafil citrate (Viagra) as evidence. Some felt that lack of insurance coverage expressly represented discrimination against older women. In vitro fertilization insurance was also seen as an appropriate benefit to provide a safety net for women who had dedicated much time and energy to their careers. From a public policy perspective, some felt that lack of coverage reflected misplaced national health priorities, although others saw limits to health care costs for IVF as appropriate.

Many of those in support of IVF insurance coverage cited the biomedical ethical principle of justice/equity and frequently invoked identification with or compassion toward other infertile women. Yet those who were undecided questioned whether an ethical principle was truly involved.

Those who couched the issue in purely economic terms conjectured that expanded insurance coverage would increase demand and result in adverse financial consequences to society. Participants were particularly sensitive to the negative publicity associated with the recent birth of octuplets and were cognizant of the increased societal and health care costs of taking care of the multiple births that follow treatment with IVF. However, others argued for at

least some offsetting economic incentives or suggested that insurance would be more affordable if it were universally offered.

There was a range of responses to the question of age limits for IVF insurance coverage. Some felt that there should not be any specific age limits. Others thought age limits might be appropriate if insurance companies used a “science-based age cut-off.” Some mentioned a specific age (e.g., 45 years), whereas others were unsure of what specific age would be appropriate. Others were adamant that age limits were necessary to avoid wasting medical resources in “hopeless” situations.

Some participants who were undecided or who did not support insurance coverage for IVF envisioned the decision to use technology as “elective,” or as a “luxury,” “choice,” or “optional...like plastic surgery.” Even participants who were in favor or undecided felt that eligibility for IVF coverage should be individualized or qualified their support by enumerating a variety of restrictions that would prevent abuse. These included substantiating medical necessity, demonstrating failure of less-aggressive treatments, limiting the number of attempts or number of children, instituting financial caps, or applying age cutoffs. Yet despite their reservations, many cited the difficulty in knowing exactly how to apply these distinctions and referred to them as “a slippery slope” or asked, “Where do you draw the line in the sand?”

DISCUSSION

Throughout the world, the availability and cost of infertility services is a complex product of public and private health policies and economic, political, and social/cultural forces that determine the allocation of personnel, equipment, and facilities (15). Yet despite the availability of IVF for more than a generation, “there is limited understanding of the economics of ART to guide clinical practice and to inform policy...affordability and consumer and provider behaviour is only starting to be investigated and understood” (1).

In the present interview-based study of delayed child-bearing and IVF in which the women delivered their first child after age 40 years, approximately one-third of families characterized the costs as being “expensive” or “very expensive” or had delayed initiating IVF specifically because of expense. In dollar amounts, IVF treatment in the United States is the highest in the world and represents 20%–28% of the average American’s disposable annual income (3, 16). However, access to care is not only a function of absolute cost, but of affordability (i.e., the couple’s ability and willingness to pay minus any offsetting economic subsidies in the form of medical insurance or government subsidy). Internationally, affordability has been found to be a major determinant of IVF utilization (3, 16–18). Yet ART represents only 0.003%–0.06% of the total health care expenditures in the United States (3, 19), which leads to the conclusion that “while ART treatment may be expensive from an individual’s perspective it is not from a national healthcare perspective” (1).

Complicating a straightforward economic analysis of ART costs and expenditures is the difficulty in comparing the endpoint of infertility treatment with other medical interventions. Although most medical care is directed toward overcoming illness, relieving suffering, and extending or improving the quality of life, fertility treatment is unique in that it results in the creation of new life and alleviates suffering in infertile patients (1). Thus, even when participants perceived the cost of IVF as “hugely expensive,” the expenditure became immaterial when the value of the child was taken into consideration. Similar sentiments were voiced in two qualitative studies of the IVF experience in the United Kingdom, where the costs were considered “worth it” because children represented a “gift beyond price” (9, 10). Willingness-to-pay studies have found that infertile families in the

United Kingdom would accept a 20% risk of death and surrender 29% of their income to have a child (20), whereas US families would be willing to pay an amount that exceeds the actual dollar cost of IVF (21). However, it should be noted that willingness-to-pay data in support of IVF have been criticized as unrealistically divorcing patient's desires from their ability to pay (22).

Despite our cohorts' general expression that IVF was expensive, the most frequent financial comparison made by participants was to the price of a car—a costly but ubiquitous purchase for most middle class Americans. We conjecture that as the majority of Americans finance their automobile purchases in some manner, perhaps the lack of a well-established lending infrastructure led to “sticker shock” when IVF payment had to be made out-of-pocket. In addition, because Americans are also not used to paying cash for major medical procedures, it is likely that most patients are unfamiliar with what medical care actually costs. For example, a large international poll found that there was public support for IVF coverage only after those surveyed were told that three IVF cycles were no more expensive than a hip replacement (23). Similarly, being accustomed to having medication expenses ameliorated by insurance likely explains why participants were particularly critical of the high cost of the drugs used in IVF, although some complaints were directed at the discrepancy between the prices charged in the United States and in other countries. Finally, compared with typical expenditures that involve tangible goods or services, the uncertain outcome of IVF injects a stressful element of risk that may magnify concern over the costs involved (24).

As summarized in Table 2, we found that the majority of women in our cohort thought that IVF should be a covered medical expense regardless of whether they themselves had coverage. Women frequently saw the lack of insurance coverage as reflecting gender bias, with the insurance industry more willing to cover men's reproductive/sexual needs than women's. Historically the insurance industry has argued that IVF treatment is experimental and that infertility is a “socially constructed need” rather than a medical disorder (13, 25–27). Indeed, those study participants who did not support medical insurance cited the elective nature of IVF and equated the decision to use IVF as a “quality of life” rather than purely medical issue. Those in favor of insurance coverage disputed this contention and rejected any argument that having a child was a “choice” but rather a medical problem not inherently different from other medical conditions. Despite support for this view by the World Health Organization (28), a survey of 8,194 adults in six European countries, the United States, and Australia found that only 38% perceived infertility as a disease (23).

Participants in favor of insurance for IVF argued that the lack of coverage reflected misplaced national health priorities and expressed compassion for infertile people who could not afford the treatment that had enabled them to become parents. Although not all agreed that an ethical principle was involved, some participants argued on the basis of justice/equity and suggested that insurance would be more affordable if it were universally offered and the risks shared. In doing so they echoed the criticism that the private funding of IVF in the United States has created an inequitable distribution of medical infertility resources between those with the means to pay for treatment and those without (29). Although the lack of insurance coverage has been cited as contributing to unequal access to IVF treatment in the United States (30, 31), it should be noted that ethnic, racial, and educational disparities in access persist even in states with mandated IVF insurance (32–34).

Participants not in favor of coverage for IVF were concerned that expanded coverage would increase demand and thereby the economic costs to society and were in favor of restrictions that would prevent any benefit from being used “frivolously.” In fact, the utilization of IVF is higher in US states with mandated insurance coverage (34), and countries that subsidize IVF spend a greater percentage of their total health care expenditure on ART (3, 35). Yet an

argument can be made that the economic benefits of fertility treatments outweigh the costs (17). A modeling study of IVF in the United States found that each child conceived would contribute seven times the cost of the treatment in lifetime tax payments (36). Schmidt (37) observed an increased birth-rate for women older than 35 years in states that mandated insurance coverage and concluded that “on the basis of economics...financial or legislative barriers to IVF treatments for infertile families should be removed.”

Although those ambivalent about insurance coverage frequently suggested limiting IVF benefits through restrictions such as demonstrated medical necessity, number of attempts, number of children, age, or financial caps, they expressed uncertainty about exactly how and when to apply these restrictions. Many participants were averse to the idea of age limits for IVF insurance coverage, but some were not. Those who supported age limits for insurance felt that it was a different issue than paying out of one’s pocket and did not want to subsidize the “hopeless” conception attempts of older women. If a specific cutoff age was cited, it was generally 45 years. That age plays a role in the economic impact of IVF expenses is illustrated by the 2009 Society for Assisted Reproductive Technology statistics demonstrating that the chance of a live birth after a cycle of IVF plummets from 41% at age 35 years to 4% after age 42 years (38) and a Scottish study that found the cost of a successful IVF cycle for women aged >40 years to be three times higher than for women aged 35–39 years (8).

We acknowledge that this study’s self-selected design limits our ability to generalize our findings. Although the participants were much more likely to be highly educated, Caucasian, and financially secure than national population norms, their sociodemographic makeup is typical of those who utilize IVF in the United States (32–34). Almost two-thirds had at least partial insurance coverage, likely owing to their advanced professional backgrounds, which is higher than norms in states without mandated IVF insurance and which may have biased their opinions. Finally, the views of these participants may not completely represent the attitudes of all women who attempt IVF in their late thirties or early forties because the disappointment, regret, or self-recrimination of those whose IVF attempts were unsuccessful might influence their response to our interview questions. Despite arguments that IVF is socially affordable (1) and is likely of net economic benefit (36), questions of age, ethnic, racial, and social disparities, gender equality, reproductive choice, and the role of personal and societal economic equity and responsibility illustrate the complexity of this issue and call for continued research, to inform and motivate needed changes in public policy.

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References

1. Connolly MP, Hoorens S, Chambers GM. The costs and consequences of assisted reproductive technology: an economic perspective. *Hum Reprod Update*. 2010; 16:603–13. [PubMed: 20530804]
2. Collins J. Cost-effectiveness of in vitro fertilization. *Semin Reprod Med*. 2001; 19:279–89. [PubMed: 11679909]
3. Chambers GM, Sullivan EA, Ishihara O, Chapman MG, Adamson GD. The economic impact of assisted reproductive technology: a review of selected developed countries. *Fertil Steril*. 2009; 91:2281–94. [PubMed: 19481642]
4. Reindollar RH, Regan MM, Neumann PJ, Levine BS, Thornton KL, Alper MM, et al. A randomized clinical trial to evaluate optimal treatment for unexplained infertility: the fast track and standard treatment (FASTT) trial. *Fertil Steril*. 2010; 94:888–99. [PubMed: 19531445]

5. Griffin M, Panak WF. The economic cost of infertility-related services: an examination of the Massachusetts infertility insurance mandate. *Fertil Steril*. 1998; 70:22–9. [PubMed: 9660415]
6. Omurtag KR, Toth TL. The cost effectiveness and health outcomes of in vitro fertilization (IVF) as a mandated benefit. *Fertil Steril*. 2007; 88:S122.
7. Henne MB, Stegmann BJ, Neithardt AB, Catherino WH, Armstrong AY, Kao TC, et al. The combined effect of age and basal follicle-stimulating hormone on the cost of a live birth at assisted reproductive technology. *Fertil Steril*. 2008; 89:104–10. [PubMed: 17669406]
8. Maheshwari A, Scotland G, Bell J, McTavish A, Hamilton M, Bhattacharya S. Direct health services costs of providing assisted reproduction services in older women. *Fertil Steril*. 2010; 93:527–36. [PubMed: 19261279]
9. Peddie VL, van Teijlingen E, Bhattacharya S. A qualitative study of women's decision-making at the end of IVF treatment. *Hum Reprod*. 2005; 20:1944–51. [PubMed: 15802323]
10. Redshaw M, Hockley C, Davidson LL. A qualitative study of the experience of treatment for infertility among women who successfully became pregnant. *Hum Reprod*. 2007; 22:295–304. [PubMed: 16959809]
11. Nachtigall RD, Mac Dougall K, Harrington J, Duff J, Lee M, Becker G. How couples who have undergone in vitro fertilization decide what to do with surplus frozen embryos. *Fertil Steril*. 2009; 92:2094–6. [PubMed: 19700150]
12. Mac Dougall K, Becker G, Scheib JE, Nachtigall RD. Strategies for disclosure: how parents approach telling their children that they were conceived with donor gametes. *Fertil Steril*. 2007; 87:524–33. [PubMed: 17141770]
13. Muhr, T. Atlas.ti. Berlin: Scientific Software Development; 1993–2011.
14. Strauss, AL.; Corbin, JM. Basics of qualitative research: grounded theory procedures and techniques. Newbury Park, CA: Sage Publications; 1990.
15. Nachtigall RD. International disparities in access to infertility services. *Fertil Steril*. 2006; 85:871–5. [PubMed: 16580367]
16. Collins JA. An international survey of the health economics of IVF and ICSI. *Hum Reprod Update*. 2002; 8:265–77. [PubMed: 12078837]
17. Connolly MP, Ledger W, Postma MJ. Economics of assisted reproduction: access to fertility treatments and valuing live births in economic terms. *Hum Fertil (Camb)*. 2010; 13:13–8. [PubMed: 19903117]
18. Connolly MP, Griesinger G, Ledger W, Postma MJ. The impact of introducing patient co-payments in Germany on the use of IVF and ICSI: a price-elasticity of demand assessment. *Hum Reprod*. 2009; 24:2796–800. [PubMed: 19625316]
19. Collins JA, Feeny D, Gunby J. The cost of infertility diagnosis and treatment in Canada in 1995. *Hum Reprod*. 1997; 12:951–8. [PubMed: 9194646]
20. Dalton M, Lilford RJ. Benefits of in-vitro fertilisation. *Lancet*. 1989; 2:1327. [PubMed: 2574267]
21. Neumann PJ, Johannesson M. The willingness to pay for in vitro fertilization: a pilot study using contingent valuation. *Med Care*. 1994; 32:686–99. [PubMed: 8028404]
22. Welch HG, Larson EB. Dealing with limited resources. The Oregon decision to curtail funding for organ transplantation. *N Engl J Med*. 1988; 319:171–3. [PubMed: 3133563]
23. Adashi EY, Cohen J, Hamberger L, Jones HW Jr, de Kretser DM, Lunenfeld B, et al. Public perception on infertility and its treatment: an international survey. The Bertarelli Foundation Scientific Board. *Hum Reprod*. 2000; 15:330–4. [PubMed: 10655304]
24. De Lacey S. IVF as lottery or investment: contesting metaphors in discourses of infertility. *Nursing Inquiry*. 2002; 9:43–51. [PubMed: 12164714]
25. Redmayne S, Klein R. Rationing in practice: the case of in vitro fertilisation. *BMJ*. 1993; 306:1521–4. [PubMed: 8257491]
26. Neumann PJ. Should health insurance cover IVF? Issues and options. *J Health Politics Policy Law*. 1997; 22:1215–39.
27. Gloucestershire NHS. The future of healthcare in Gloucestershire: proposals for developing sustainable NHS services—a public consultation. Gloucester-shire: Gloucestershire NHS; 2006.

28. Zegers-Hochschild F, Adamson G, De Mouzon J, Ishihara O, Mansour R, Nygren K, et al. International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) revised glossary of ART terminology, 2009. *Fertil Steril.* 2009; 92:1520–4. [PubMed: 19828144]
29. Willison, DJ.; Hurley, JE.; Grootendorst, P. Variation in pharmacare coverage across Canada. Hamilton, Ontario, Canada: Centre for Health Economics and Policy Analysis, McMaster University; 1998.
30. Jain T, Harlow BL, Hornstein MD. Insurance coverage and outcomes of in vitro fertilization. *N Engl J Med.* 2002; 347:661–6. [PubMed: 12200554]
31. Jain T, Hornstein MD. To pay or not to pay. *Fertil Steril.* 2003; 80:27–9. [PubMed: 12849796]
32. Bitler M, Schmidt L. Health disparities and infertility: impacts of state-level insurance mandates. *Fertil Steril.* 2006; 85:858–65. [PubMed: 16580365]
33. Jain T. Socioeconomic and racial disparities among infertility patients seeking care. *Fertil Steril.* 2006; 85:876–81. [PubMed: 16580368]
34. Hammoud AO, Gibson M, Stanford J, White G, Carrell DT, Peterson M. In vitro fertilization availability and utilization in the United States: a study of demographic, social, and economic factors. *Fertil Steril.* 2009; 91:1630–5. [PubMed: 18539275]
35. Ata B, Seli E. Economics of assisted reproductive technologies. *Curr Opin Obstet Gynecol.* 2010; 22:183–8. [PubMed: 20125015]
36. Connolly MP, Pollard MS, Hoorens S, Kaplan BR, Oskowitz SP, Silber SJ. Long-term economic benefits attributed to IVF-conceived children: a lifetime tax calculation. *Am J Managed Care.* 2008; 14:598–604.
37. Schmidt L. Effects of infertility insurance mandates on fertility. *J Health Econ.* 2007; 26:431–46. [PubMed: 17129624]
38. Society for Assisted Reproductive Technology. Clinic summary report. Birmingham, AL: SART; 2009.

TABLE 1

Participant demographics.	
Total respondents	95 (100)
Women	60 (63)
Men	35 (37)
Age (y)	
Women at the birth of their first child	42 (40–46)
Men at the birth of partner's first child	43 (36–67)
Marital status ^a	
Heterosexual partnered men	35 (37)
Heterosexual partnered women	46 (48)
Same-sex women	8 (8)
Single heterosexual women	6 (6)
Median y in current marriage/partnership	10
Ethnicity	
Caucasian	81 (85)
African American	2 (2)
Asian	5 (5)
Other or none reported	7 (8)
Household income	
\$50,000–\$74,999	1 (1)
\$75,000–\$99,999	6 (6)
\$100,000–\$149,999	18 (19)
\$150,000–\$199,999	26 (27)
\$200,000–\$249,999	12 (13)
>\$250,000	32 (34)
Education	
Some college	10 (10)
College graduate	36 (38)
Postgraduate	49 (52)
IVF utilization	
Median cycles of IVF	2 (1–6)
Children	
No. of children	1 (1–3)
Age of first child (y)	3.5 (1–10)
Estimated average out-of-pocket IVF expenses	
Full coverage	\$10,000
Partial coverage	\$20,000
No coverage	\$27,000

Note: Values are number (percentage) or median (range) unless otherwise noted.

^aColumns may not total 100% owing to rounding error.

Nachtigall. Costs and insurance coverage for IVF. Fertil Steril 2012.

TABLE 2

Should medical insurance cover IVF?			
Insurance status	Yes	No	Uncertain
Women			
Covered (n = 27)	20 (74)	2 (7)	5 (19)
Partial (n = 11)	8 (73)	0 (0)	3 (27)
None (n = 22)	12 (55)	6 (27)	4 (18)
Total (n = 60)	40 (67)	8 (13)	12 (20)
Men			
Covered (n = 14)	6 (43)	2 (14)	6 (43)
Partial (n = 8)	2 (25)	1 (12)	5 (63)
None (n = 13)	5 (38)	4 (31)	4 (31)
Total (n = 35)	13 (37)	7 (20)	15 (43)

Note: Values in parentheses are percentages.

Nachtigall. Costs and insurance coverage for IVF. *Fertil Steril* 2012.