UROLOGYPRACTICE

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Out-of-Pocket Costs of Men Undergoing Infertility Care and Associated Financial Strain

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Abstract

Introduction: We determined the out-of-pocket expenses, measures taken to finance these expenses and associated financial strain in men seeking fertility care.

Methods: In this retrospective cohort the patients completed questionnaires recording the total amount of money spent on infertility care and on what aspect of care the money was spent. Participants also recorded measures taken to finance these costs, the amount of financial strain experienced and how this strain impacted decisions to seek and continue care. Multivariable logistic regression was performed to assess the relationships of fertility characteristics to financial costs and financial strain.

Results: A total of 111 participants completed the full survey. During the course of care 16% of patients spent more than $50,000 dollars. 16% spent between $30,000 and $49,999, 32% spent between $15,000 and $29,999, and 37% spent less than $15,000. Procedures comprised the largest component of costs. Of the subjects 47% reported financial strain. On multivariate analysis patients who used savings and went into debt were significantly more likely to experience financial strain ($p = 0.03$ and <0.001, respectively).

Conclusions: This study elucidates the previously uncharacterized economic hardships of male infertility care. Overall 64% of men who pursued fertility treatment had out-of-pocket expenses exceeding $15,000 dollars. Almost half reported financial strain and limitation of treatment options due to these expenses. These data give men and their partners a realistic expectation of the cost of pursuing fertility treatment, the extreme measures that many patients take to finance care and the financial strain associated with such options.

Key Words: testis; infertility, male; expenditures, out-of-pocket; reproductive techniques, assisted; questionnaires

Abbreviations and Acronyms

ART = assisted reproductive technology

ICSI = intracytoplasmic sperm injection

IUI = intrauterine insemination

IVF = in vitro fertilization

OOP = out-of-pocket

SES = socioeconomic status

Submitted for publication May 26, 2015.

No direct or indirect commercial incentive associated with publishing this article.

The corresponding author certifies that, when applicable, a statement(s) has been included in the manuscript documenting institutional review board, ethics committee or ethical review board study approval; principles of Helsinki Declaration were followed in lieu of formal ethics committee approval; institutional animal care and use committee approval; all human subjects provided written informed consent with guarantees of confidentiality; IRB approved protocol number; animal approved project number.

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2352-0779/16/34-1/0
UROLOGY PRACTICE

http://dx.doi.org/10.1016/j.urpr.2015.07.010
Vol. 3, 1-6, July 2016
Published by Elsevier

Infertility or the inability to achieve pregnancy in 1 year with continued intercourse affects approximately 15% of couples. A male factor is solely responsible in 17% and a male factor contributes in 33% to 35% of couples.[1]

Since the first live birth conceived via IVF in 1978,[2] large advances have been made in the field of ART in the number of available treatment modalities and technicians capable of performing such procedures, and overall success rates. These treatments, in addition to more traditional surgical techniques, provide patients with a variety of options.[3,4] Despite recent advances the costs of fertility treatments remain high, impose significant barriers to access for households of lower socioeconomic status,[5,6] and typically are poorly mitigated by insurance coverage[7,8] as most insurers recognize male infertility as a lifestyle choice, although in 2008 ASRM (American Society of Reproductive Medicine) classified infertility as a disease.[8,9]

We reported that the median cost to women undergoing infertility treatment can range from $1,182 for medications to $24,373 for IVF and $38,015 for IVF with donor eggs.[10] Other groups have examined the per cycle and per live birth costs of IVF with estimates ranging from $9,547[11] to $58,395.[12] More recently we evaluated OOP expenses of couples pursuing fertility care with a median OOP expense of $5,338 and a median as high as $19,234 for those undergoing IVF.[13] These estimates are limited to monetary costs and do not characterize the significant time spent, work hours lost and mental stress imposed by such treatments.[14]

Little has been published on the direct costs incurred by men pursuing fertility care. Previous studies have compared the cost-effectiveness of common surgical interventions (vasectomy reversal and varicocelectomy) vs ART. Older studies concluded that, in general, surgery tended to be more cost-effective from a payor standpoint and immediate IVF is never cost-effective.[15–18]

In our cohort of men seeking fertility care we used retrospective survey data to estimate the total OOP expenditures incurred while pursuing reproductive treatment, the components of these costs, the financial strain that subjects experienced and how this impacted their fertility care decisions. We hypothesized that infertility expenditures are associated with the treatment selected, socioeconomic factors and insurance coverage.

Methods

Cohort Description

Men were recruited from the Center for Reproductive Health at University of California-San Francisco upon presentation for infertility evaluation, hypogonadism or abnormal semen analysis. Of 263 men who met study inclusion criteria 216 agreed to participate, including 121 who pursued infertility care and submitted full questionnaires at the conclusion of care (supplementary Appendix, http://jurology.com/). The latter was defined as a patient report of no longer pursuing treatment and successful pregnancy was the most common reason. Pregnancies were self-reported by patients. Ten additional subjects were excluded due to discrepancies in financial reporting. Additional information on treatments used and diagnoses were gathered through patient chart reviews. The University of California-San Francisco institutional review board approved the study protocol and all subjects provided written consent.

Primary Outcomes

Direct costs of fertility treatment were determined by patient responses to a survey administered after the conclusion of care. Subjects were asked the question, "From the beginning of your care until the end, what was the total amount you spent on fertility care?" Answer choices were stratified into costs ranges from $1 to $499 and to more than $75,000. Due to few responses in many ranges data were collapsed into the categories less than $5,000, $5,000 to $14,999, $15,000 to $29,999, $30,000 to $49,999 and greater than $50,000. Details of expenses were elucidated further with a series of questions to characterize how much was spent on medications for the subject, medications for the partner, testing/diagnosis (ultrasound, laboratory evaluation, hysterosalpingogram, etc), fertility procedures (ie IUI and IVF/ICSI), surgery for the subject (ie sperm retrieval, vasectomy reversal and varicocelectomy) and surgery for the partner.

To assess financial strain participants were asked, "Did your fertility treatment cause financial strain?" To allow for logistic regression the answers were limited to yes or no. Subjects were also asked how the cost of fertility treatment impacted access to care, options and cycles of treatment, and whether cost greatly influenced the decision to stop fertility treatment.

Predictor Variables

Demographic information was collected with survey responses. Education was dichotomized to less than college graduate or college graduate. Income was stratified into less than $100,000, $100,000 to $199,999, $200,000 to $299,999 and greater than $300,000 for linear and logistic regression models. Race and ethnicity were self-reported and dichotomized to white or nonwhite.