

An employer's experience with infertility coverage: a case study

A case study of Southwest Airlines, a Fortune 500 company, demonstrates that a well-designed infertility coverage plan can control resource use. This successful model could be used by employers who wish to ensure that their employees have access to high-quality, cost-effective infertility services in a managed-care environment. (*Fertil Steril*® 2009;92:2103–5. ©2009 by American Society for Reproductive Medicine.)

Key Words: Fertility benefit, health insurance mandates, insurance coverage, in vitro fertilization

Infertility is defined by the American Society for Reproductive Medicine (ASRM) as the failure to achieve a successful pregnancy after at least 12 months of regular unprotected intercourse (1). In 2002, infertility was estimated to affect 7.4% of married women of child-bearing age in the United States (2). The management of the infertile couple may require diagnostic procedures, surgical or drug treatments, and/or assisted reproductive technology (ART). The average cost of an in vitro fertilization (IVF) treatment cycle, excluding drug treatment, ranged from \$7000 to \$11,000 in 2001 (3), and multiple IVF cycles may be required to achieve a successful treatment outcome.

Reimbursement for infertility treatment is often excluded from managed-care plans as infertility is perceived to be a social rather than a medical condition (4). There is no federal legislation to ensure that infertility treatment is covered by health-care plans in the United States, and coverage varies considerably by state (2). Currently, 15 states have laws mandating that insurance companies provide coverage for some infertility treatments (5). The scope of these state mandates varies hugely, and some exclude coverage of IVF, which represents one of the most effective but costly components of infertility treatment (6). Furthermore, state mandates are not binding on self-insured or small-scale employers under the Employee Retirement Income Security Act. As a result, the availability of health insurance coverage for infertility treatment is limited in the United States (6).

Kaylen Silverberg, M.D.^a

Dennis Meletiche, Pharm.D.^b

Gina Del Rosario, M.P.A.^c

^a *Texas Fertility Center, Austin, Texas*

^b *EMD Serono, Inc., Rockland, Massachusetts*

^c *Southwest Airlines, Dallas, Texas*

Received October 17, 2008; revised and accepted May 21, 2009; published online July 23, 2009.

K.S. has received grant funding and also honoraria and lecture fees from EMD Serono, Inc. D.M. is currently employed by EMD Serono, Inc. G.D.R. has nothing to disclose.

Manuscript development supported by Merck Serono S.A., Geneva, Switzerland. (Merck Serono S.A. and EMD Serono, Inc. are affiliates of Merck KGaA, Darmstadt, Germany.)

Reprint requests: Kaylen Silverberg, M.D., Texas Fertility Center, 6500 N Mopac, Building 1, Suite 1200, Austin, TX 78731 (FAX: +512-451-0977; E-mail: kaylen@txfertility.com).

Approximately, one third of all employers in the United States now offer some degree of infertility coverage; however, only 11% of employers cover ART procedures such as IVF (7). In an online survey of companies that offer infertility coverage, employers (n = 605) cited the following two most common reasons for providing the benefit: to enable access to quality, cost-effective care for employees (75%); to be recognized as a family-friendly company and retain valued employees (72%) (8). Employers also reported that infertility coverage had improved the morale of employees (14%) and generated positive public relations (12%) (8).

Despite these incentives, employers may be reluctant to expand their policy coverage to include infertility benefits, or even to continue funding such initiatives in the current economic climate. We present a case study of an infertility insurance benefit that has been developed and implemented successfully within a managed-care setting.

Southwest Airlines is a highly profitable, low-fare, high frequency airline that has successfully developed and implemented an infertility benefit for its employees. This Fortune 500 company employs approximately 33,000 people across 64 cities in 32 states. More than half the employees of Southwest Airline are of reproductive age, and, in response to employee requests, the company implemented an infertility benefit in 1999.

The Southwest Airlines plan incorporates many of the tenets described by the ASRM Practice Committee (9). For example, infertility in the managed-care plan is defined as the inability to conceive after 12 months of unprotected intercourse. Recurrent miscarriage and congenital anomalies (such as septate uterus) are covered under the basic medical plan, and treatment does not count against the employee's infertility benefit. All services must be provided by a reproductive endocrinologist who is certified by the American Board of Obstetrics and Gynecology; Southwest Airlines imposes no further restrictions on the choice of specialist.

The benefit covers prescription medications for infertility of up to a \$5000 lifetime maximum, and medical infertility-related services up to a lifetime maximum of \$10,000. Corresponding copayments are 50% for each benefit class. Medical services including office visits, surgical procedures, intrauterine insemination, IVF, and associated laboratory services are offered. Ovulation induction may be achieved by up to six cycles of clomiphene citrate, and four cycles of gonadotropins.

In line with standard practice, all invasive procedures (including hysterosalpingograms, laparoscopy, hysteroscopy, laparotomy, or IVF) must be precertified, but office procedures do not require precertification. All IVF procedures must be performed at facilities certified by the Society for Assisted Reproductive Technology (SART) and must comply with the minimum standards established by ASRM and SART. The Southwest Airlines plan excludes reversal of male or female sterilization. However, ancillary services (defined as complications that arise from infertility treatment) and additional medical treatments incurred as a result of infertility treatment are covered under the basic medical plan. This would include treatment of ectopic pregnancy and dilation and curettage after a miscarriage.

Figure 1 shows the net costs of the infertility benefit to Southwest Airlines. The medical costs ranged from \$126,000 to \$188,000, and the cost of drug treatment ranged from \$83,500 to \$154,400. Medical service utilization data are available from 2003 to 2005. During this period, 203, 242, and 226 employees filed claims for medical infertility costs during 2003, 2004, and 2005, respectively. From 2005, data are also available on the number of drug treatment claimants. In this year, 403 employees filed claims relating to drug treatment for infertility. Of these, 177 employees filed claims only for the cost of drugs (with no associated medical treatment). Between 2003 and 2005, costs relating to medical and drug treatments for infertility represented less than 0.5% of the total health-care spending.

The proportion of employees who used the infertility benefit was small—less than 1% of the total workforce, despite the fact that the workforce is predominantly made up of reproductive age employees. Based on the incidence of infertility among the general population, this rate of uptake is lower than expected. The reasons for the limited uptake of the infertility benefit are unclear but may

be due to a small proportion of employees with medically indicated conditions or the requirement for copayment that discourages employees from seeking treatment. Further investigation into access or barriers to the uptake of infertility benefits is encouraged.

Overall, implementation of the infertility benefit did not generate substantial extra costs for Southwest Airlines. These findings support those of earlier investigators who found that infertility coverage represents only a small proportion of the total health benefit costs (10, 11). Infertility-related costs were only 0.85% of the total cost of an insurance benefit over a 7-year period (11). Furthermore, in the aforementioned employer survey, 91% reported no measurable increase in the cost of the health-care plan as a result of providing infertility coverage, regardless of whether IVF was included (8). The costs of IVF fall within the range of other treatments, and, as a result, the public remains willing to pay for these treatments as part of an insurance policy (11).

Multiple pregnancy is associated with a high incidence of maternal and neonatal morbidity (12–15). However, the transfer of multiple embryos could make economic sense for couples who are paying out of pocket for ART cycles, as the costs related to multiple pregnancy are borne primarily by insurance providers (16, 17). Responsibly managed ART can limit the incidence of high-order multiple pregnancies and births (12, 18). There is early evidence to suggest that mandated insurance coverage for infertility has led to fewer embryos being transferred per cycle, a lower incidence of high-order multiple gestation pregnancies, and a reduced multiple birth rate per cycle (16, 19). It has been estimated that the total cost of treatment (related to IVF and multiple pregnancy) for young patients (<35 years) could be reduced by \$15,000 by encouraging the transfer of one embryo per IVF cycle rather than the average of three that was correct during the time of this study (savings per woman over five cycles) (17).

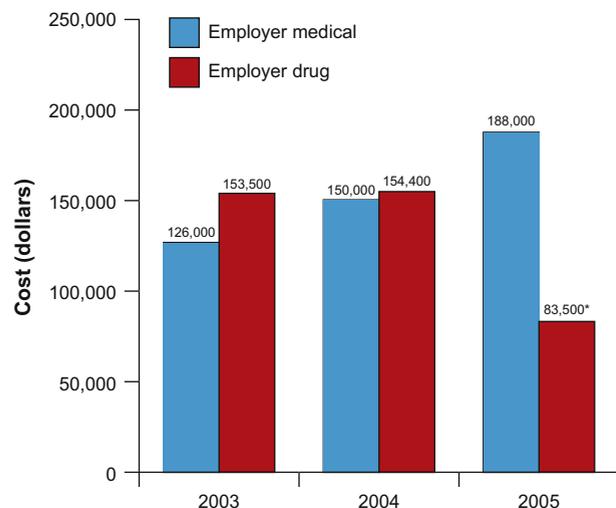
The key objectives of managed care are to optimize clinical outcome, minimize cost, and control resource usage (4, 20). Blue Cross/Blue Shield of Illinois (BC/BS-I) is a large health insurance company that has successfully developed and implemented infertility coverage (21). A study of the outcomes of patients insured by BC/BS-I showed that infertility treatment supplied by a provider-restricted health maintenance organization (in which subspecialists provided the majority of care and patient choice was restricted to those subspecialists) led to higher quality and more cost-effective care than did an unrestricted preferred provider organization (22).

The development of an infertility insurance benefit is logical and straightforward because treatment has a clearly defined end point; the prognosis is relatively well-established; and individual factors that are known to affect outcome, such as smoking habit and female age (23), can be taken into account when devising a benefit plan (20). A commercial infertility health-care plan must clearly specify policies and definitions to avoid misunderstandings by patients, insurance companies, or physicians (20). The financial responsibilities of the employer and the infertile couple must be determined, and the employer may choose to exclude certain procedures or implement age restrictions to treatment (20).

Once these basic criteria are established, an appropriate management algorithm can be developed based on current practice (20). This is a critical step, which may require discussion between

FIGURE 1

The cost to the employer of medical and drug treatment for infertility. Net paid, 2003–2005.



*Employer drug costs reduced in 2005 following a change to the pharmacy benefit manager.

Silverberg. Correspondence. *Fertil Steril* 2009.

the employer, the managed-care entity, and often a consultant who specializes in the design of infertility plans (20). Cost analyses using appropriate economic modeling can then be performed to enable the employer to make an informed decision about the type and extent of benefit to purchase. Additionally, employers can design a benefit that will match their budget by altering basic plan assumptions such as copayments, maximum allowances, and procedures covered.

Although employers will face challenges when setting up any new benefit, the Southwest Airlines plan and other successful

models should provide guidance to employers who wish to ensure that their employees have access to high-quality, cost-effective infertility services in a managed-care environment. By promoting the use of single-embryo transfer, insurance companies could benefit from covering infertility treatment via a reduction in downstream costs related to the decreased incidence of multiple births.

Acknowledgments: The authors thank Joanna Brown and Hannah Wills of Caudex Medical (supported by Merck Serono S.A., Geneva, an affiliate of Merck KGaA, Darmstadt, Germany) for assistance in the preparation of this manuscript.

REFERENCES

1. Practice Committee of American Society for Reproductive Medicine. Definitions of infertility and recurrent pregnancy loss. *Fertil Steril* 2008;90: S60.
2. Stephen EH, Chandra A. Declining estimates of infertility in the United States: 1982–2002. *Fertil Steril* 2006;86:516–23.
3. Collins J. Cost-effectiveness of in vitro fertilization. *Semin Reprod Med* 2001;19:279–89.
4. Bates GW, Bates SR. Infertility services in a managed care environment. *Curr Opin Obstet Gynecol* 1996;8:300–4.
5. Schmidt L. Effects of infertility insurance mandates on fertility. Program of the Annual Meeting of the Population Association of America, Philadelphia, PA; March 31–April 2, 2005.
6. Schmidt L. Effects of infertility insurance mandates on fertility. *J Health Econ* 2007;26:431–46.
7. Mercer Human Resources Consulting. 2005 National Survey of Employer-Sponsored Health Plans. Washington, DC: Mercer Health and Benefits LLC, April 3, 2006.
8. Mercer Health and Benefits LLC. Employer experience with, and attitudes toward, coverage of infertility treatment. May 31, 2006. Accessed June 10, 2009. Available at: http://www.resolve.org/site/DocServer/Mercer_-_Resolve_Final_Report.pdf?docID=4361
9. ASRM Practice Committee. Guidelines, statements and opinions. Accessed June 9, 2008. Available at: <http://www.asrm.org/Media/Practice/practice.html>
10. Collins JA, Bustillo M, Visscher RD, Lawrence LD. An estimate of the cost of in vitro fertilization services in the United States in 1995. *Fertil Steril* 1995;64:538–45.
11. Van Voorhis BJ, Stovall DW, Allen BD, Syrop CH. Cost-effective treatment of the infertile couple. *Fertil Steril* 1998;70:995–1005.
12. Pandian Z, Bhattacharya S, Ozturk O, Serour GI, Templeton A. Number of embryos for transfer following in-vitro fertilisation or intra-cytoplasmic sperm injection. *Cochrane Database Syst Rev* 2004;4: CD003416.
13. Wood L. Costs of multiple pregnancy. *BJOG* 2008;115:416.
14. Land JA, Evers JL. Risks and complications in assisted reproduction techniques: Report of an ESHRE consensus meeting. *Hum Reprod* 2003;18:455–7.
15. ESHRE Campus Course Report. Prevention of twin pregnancies after IVF/ICSI by single embryo transfer. *Hum Reprod* 2001;16:790–800.
16. Henne MB, Bundorf MK. Insurance mandates and trends in infertility treatments. *Fertil Steril* 2008;89:66–73.
17. Little SE, Ratcliffe J, Caughey AB. Cost of transferring one through five embryos per in vitro fertilization cycle from various payor perspectives. *Obstet Gynecol* 2006;108:593–601.
18. The ESHRE. Capri Workshop Group. Multiple gestation pregnancy. *Hum Reprod* 2000;15:1856–64.
19. Jain T, Harlow BL, Hornstein MD. Insurance coverage and outcomes of in vitro fertilization. *N Engl J Med* 2002;347:661–6.
20. Bates GW, Bates SR. The economics of infertility: developing an infertility managed-care plan. *Am J Obstet Gynecol* 1996;174:1200–7.
21. Pratt D, Vanderlaan BF, Dudkiewicz A, Karande V, Widen AL. A managed care provider's approach toward mandated infertility coverage: the Illinois Family Building Act. *J Assist Reprod Genet* 1994;11:433–8.
22. VanderLaan B, Karande V, Krohm C, Morris R, Pratt D, Gleicher N. Cost considerations with infertility therapy: outcome and cost comparison between health maintenance organization and preferred provider organization care based on physician and facility cost. *Hum Reprod* 1998;13: 1200–5.
23. ESHRE Capri Workshop Group. Diagnosis and management of the infertile couple: missing information. *Hum Reprod Update* 2004;10:295–307.