

Imaging Economics Article –

New Non-invasive Technology For Uterine Fibroids Can Mean Cost Savings for Employers

Uterine fibroids, benign growths of the uterus, are the most prevalent gynecological disease affecting pre-menopausal women. One in four women age 25 to 50, or up to 13 million women in the US, suffers from symptomatic uterine fibroids. Traditionally women have had only a few options: let the lesions grow and continue to suffer, remove the tumors (myomectomy) or have a hysterectomy to remove the entire uterus. The two latter options usually require invasive surgical procedures associated with hospital stays, long recovery times and decreased quality of life for the patient. In addition to the personal suffering associated with uterine fibroids, the impact of traditional management of uterine fibroids on business in the United States is extremely high. Rand estimates that the number of lost workdays is between 2 to 4 million person days before surgery and an additional 3 to 7 million person days after surgery.

The U.S. National Institutes of Health (NIH) estimates that more than 200,000 women undergo hysterectomy each year as a treatment for their uterine fibroids. According to the Society of Interventional Radiology, hysterectomy, or full removal of the uterus, requires a three- to four-day hospital stay and a recovery time of approximately six weeks. Myomectomy also requires a hospital stay of several days and a recovery time of two to four weeks, while uterine artery embolization requires a day of hospitalization and a week of recovery time. In total, these treatments accounted for more hospital days than AIDS, breast cancer, dementia, cirrhosis, prostate cancer or epilepsy combined annually in the US.

In 2005, Virtua Health, the largest healthcare provider in Southern New Jersey, conducted an internal economic study analyzing the costs of work absences of employees who underwent hysterectomy and other techniques for the treatment of uterine problems. Virtua was motivated to perform the analysis due to the large women's health market position held by the organization and the large number of female employees. The study revealed that during 2004, 17 employees underwent uterine procedures. The time out of the office ranged from two to nine weeks and the cost paid for the actual time away from work was \$86,092 for those 17 patients. As an example, the cost paid for actual time away from work for a registered nurse who earned \$28.68 per hour, worked 35 hours a week and who was out for nine weeks after a hysterectomy, would be \$9,034.

In addition, these numbers do not take into account the amount of money spent on replacing staff while employees are out of the office recovering from these procedures. For example, a patient who gets an abdominal hysterectomy typically misses nine weeks on the job. Even those patients who underwent simpler procedures like abdominal myomectomies or uterine artery embolizations, missed half a month of work. Assuming an average absence of eight weeks for the 17 women, incurred costs to replace these employees would be an additional \$143,233.

With over 7,000 clinical and administrative personnel and 1,800 physicians on staff, Virtua faces the same healthcare costs and challenges as other large employers. In 2004, Virtua became one of the first hospitals to offer ExAblate 2000, a new non-invasive treatment option for uterine fibroids recently approved by the FDA that is changing the treatment paradigm for uterine fibroids. It uses magnetic resonance guided focused ultrasound (MRgFUS) to non-invasively treat uterine fibroids. The ExAblate treatment is an outpatient procedure, conducted with only conscious

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sedation, and patients typically return home and to normal activities within one to two days. This considerably cuts down the recovery days and subsequent days out of work usually associated with the procedures used to treat this condition.

As part of its audit, Virtua analyzed what the cost actually would be had their 17 employees been eligible for and undergone the ExAblate procedure, rather than the other invasive procedures. Assuming a three-day recovery, the estimated costs of work absence would have been \$12,866 rather than \$86,092. The cost to replace these employees during their recovery time, had it been necessary, would have been an additional \$12,866. If all patients had undergone ExAblate treatments, the hospital would have saved \$203,583 in incurred expenses.

This new treatment not only is more patient-friendly, it also could help keep healthcare costs in check, while saving employers dollars in staff replacement. Additional benefits are management time saved by not having to find/ train replacement staff, increased morale in the department when the employees return to work more quickly, and increased productivity of the employee who remains more connected to the department and job because of reduced absence.

Virtua Health 2004 Audit Summary		
Procedure	Number Performed	Total time out of office
Abdominal Hysterectomies	9	9 weeks
Vaginal Hysterectomies	3	6 weeks
Abdominal Myomectomies	1	2 weeks
Uterine Artery Embolizations	4	2 weeks

Consideration should be given to the fact that the analysis did not reveal the underlying reason for the abdominal or vaginal hysterectomy and hence uterine

fibroids may not always have been the reason for the procedure. Additionally, depending on the location of the fibroid, some women may not have been eligible for the procedure.

ExAblate is a new procedure and as such is not yet covered by insurers, but the economic benefits to employers are compelling. With the advent of new, non-invasive technologies, employers are re-examining their coverage policies to assess the economic impact that these new procedures and technologies are having on their health costs. In most cost cases, in spite of the higher price tags of these procedures, employer groups are finding that they are associated with shorter hospital stays, faster recovery time, and less pain and trauma for patients, which translate into lower overall costs to employers.

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