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[OJOG](#) > Vol.3 No.1, January 2013



The association of fFN testing on hospital admissions for preterm labor

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ABSTRACT

Objective: To determine if the use of fetal fibronectin (fFN) testing has affected hospital admissions for preterm labor. Methods: ICD-9 and CPT codes from all admissions to Brigham & Women's Hospital between January 1, 1995 and December 31, 2010 were evaluated. Data recorded included total deliveries, admissions for preterm labor (PTL) without delivery, length of stay (days) for PTL admissions, preterm deliveries, and number of fFN tests performed. The data was evaluated using a Wilcoxon test of trend and least squares regression. Results: Fetal fibronectin testing was introduced mid-year 2001. As a percentage of total deliveries, the number of admissions for PTL without delivery decreased from 3.97% in 1995 to 2.16% in 2010 ($p < 0.01$) and the number of preterm births decreased from 7.54% to 6.59% ($p < 0.034$). The number of hospital days for admissions for PTL without delivery per 10,000 births decreased from 1853 days/10,000 births to 903 days/10,000 ($p < 0.001$) births while the number of fFN tests per 10,000 births increased from 0/10,000 births to 1390/10,000 births ($p < 0.0001$). Increased use of FFN was negatively associated with admissions for PTL without delivery ($p < 0.001$). The cost for admissions for PTL without delivery based on hospital charge decreased from \$1,748,796 to \$785,010 while the cost of fFN testing increased from \$0 to \$152,785 per year. Conclusion: The introduction of fetal fibronectin testing was associated with a dramatic decrease in hospital admissions for PTL. In addition, there was saving of almost \$1,000,000 per year in charges associated with these admissions.

KEYWORDS

Preterm Labor; Fetal Fibronectin; Cost

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