



University of Nebraska
Medical Center
Nebraska Medicine

Graduate Medical Education
Research Journal

Volume 2 | Issue 1

Article 22

September 2020

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Recommended Citation

Mathes, M., , Gustin, S. Total Motile Sperm Count Effect on Pregnancy Outcomes in Intrauterine Insemination. Graduate Medical Education Research Journal. 2020 Sep 29; 2(1).
<https://digitalcommons.unmc.edu/gmerj/vol2/iss1/22>

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Total Motile Sperm Count Effect on Pregnancy Outcomes in Intrauterine Insemination

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How Many Emergency Medicine Rotations Are Students Completing?

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Program: Emergency Medicine

Type: Original Research

Background: The CORD Advising Students Committee in Emergency Medicine (ASC-EM) recommends EM-bound medical students complete two EM clerkships. In recent years, the number of VSAS applications per applicant has increased, leading to increased demand for rotation slots.

Methods: Fourth-year medical students (n=132) attending the Emergency Medicine Residents' Association Medical Student Forum at the 2018 Scientific Assembly were asked to complete a 24 question survey. Response rate was 80.2%. Students who were IMGs, couples or military matching, had not taken Step 1, or had not completed or received their grade from at least one EM rotation were excluded (leaving n=72). Descriptive, summary statistics were used.

Results: The mean number of EM rotations scheduled was 3.30. The mean for MD and DO students was 2.93 (95% CI 2.75-3.11) and 3.82 (95% CI 3.57-4.07), respectively. Figure 1 shows that 15% of allopathic students limited themselves to two EM clerkships, compared to 0% of osteopathic students. The

Number of EM Rotations Students Have Scheduled During Fourth Year

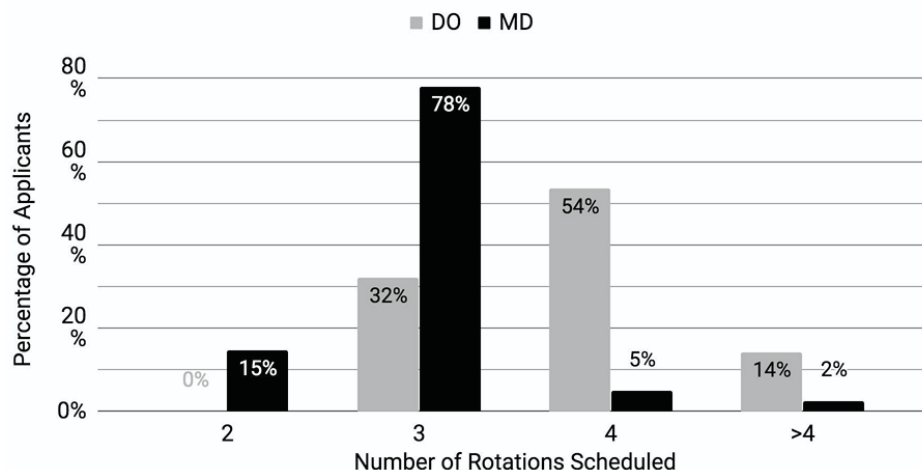


Figure 1. Number of EM rotations medical students have scheduled during their fourth year. (n=72)

most frequently reported number of clerkships for MD applicants was three. More than two-thirds (68%) of DO applicants scheduled four or more rotations, compared to only 7% of MD applicants. There was no statistical difference in the mean number of clerkships scheduled when groups were broken down by self-rating of competitiveness (p=0.712), confidence in evaluating self-competitiveness

(p=0.553), or by step 1 score ranges (p=0.728). Means were compared with t-test and one way ANOVA.

Conclusions: The students in our sample scheduled more than two EM clerkships, with DO applicants completing more rotations than MD applicants. ■

<https://doi.org/10.32873/unmc.dc.gmerj.2.1.020>

Total Motile Sperm Count Effect on Pregnancy Outcomes in Intrauterine Insemination

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Type: Original Research

Background: Intrauterine insemination (IUI) is a frequently used method to treat couples with infertility. There is evidence of decreased pregnancy rates with total motile sperm count (TMSC) less than 5 and 10 million (1,2), yet there has been efficacy of reported IUI success with TMSC under 1 million (2). As such, there remains to be a consensus on semen parameters for which to recommend IUI in the infertile population.

Methods: This is a retrospective cohort study of all IUI cycles at an infertility center from June 2014 to May 2018. We obtained female characteristics including age, gravida,

parity, and number of dominant follicles. The following semen parameters were collected: post wash TMSC, concentration, motility, and wet mount morphology. Our primary outcome of interest was the presence or absence of serum and clinical pregnancy after each cycle. Serum pregnancy was defined as an elevation of serum beta-human chorionic gonadotropin and clinical pregnancy by fetal cardiac activity on ultrasound.

Results: A total of 1052 women underwent 2180 IUI cycles during this four-year period. The overall clinical pregnancy rate was 19.8% per cycle. There was an increase in cycle fecundity with increasing TMSC, OR 0.46 for TMSC ≤1M, 0.64 for TMSC 2-5M, and 0.85 for TMSC 6-10M, compared to TMSC >10M. Using receiver operating characteristic curves, we did not identify a TMSC threshold to offer IUI.

Conclusion: Although no distinct threshold of TMSC was identified to offer IUI versus a more aggressive therapy, there is a positive correlation between TMSC and IUI success. ■

<https://doi.org/10.32873/unmc.dc.gmerj.2.1.021>

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