US Medical Schools Provide Limited Information and Coverage for Fertility Treatment and Preservation

Micaela Stevenson Wyszewianski, MD; Eliyah Stevenson, BS; Sarah Okeke, BS

ABSTRACT

Introduction: Female physicians experience high rates of infertility and report barriers to accessing treatment, including lack of health insurance coverage and limited knowledge of available benefits. Given the extended duration of training, medical school may be an optimal time for fertility preservation or treatment. However, whether medical schools provide information or coverage for these services in unclear. This study aimed to assess (1) whether US medical school websites provide information on health insurance coverage for fertility preservation and treatment and (2) whether medical schools offer health insurance coverage for these services.

Methods: Accredited allopathic and osteopathic medical school websites were reviewed for information on fertility coverage available. Summary-of-benefits documents were examined for coverage of in vitro fertilization (IVF), intrauterine insemination (IUI), elective oocyte cryopreservation, fertility medications, and infertility evaluation. Chi-squared tests assessed differences by school type, funding source, and geographic region.

Results: Of 108 medical school websites reviewed, 48.2% provided information on elective fertility preservation and 52.7% on IVF coverage. Osteopathic schools more frequently provided information on IVF coverage (48.71% vs 24.51%; *P*= .006) and fertility preservation coverage (43.58% vs 22.58%; *P*= .014). Only 8.33% of schools offered coverage for IVF or elective fertility preservation. Publicly funded schools more often offered coverage for IUI (23.3% vs 3.57%; *P*= .027), fertility medications (23.33 % vs 0%; *P*= .005), and infertility evaluation (31.03% vs 3.57%; *P*= .006). Schools in the Northeast most frequently offered coverage for these services.

Conclusions: US medical schools provide limited information and health insurance coverage for fertility preservation and treatment. Publicly funded and Northeastern schools more frequently offer coverage, which may influence prospective students' decisions.

INTRODUCTION

Infertility is a common diagnosis, with approximately 14% of female patients experiencing infertility in the United States.[1] Infertility among female physicians is even more common than in the general population, with rates as high as 33% depending on physician subspeciality.[2,3] This high rate of infertility frequently has been attributed to female physicians' decision to delay childbearing compared with nonphysicians, which is often required to complete training and achieve promotions in their respective fields.[4-5]

Given this high rate of infertility among female physicians, access to fertility treatment and fertility preservation is often warranted. This is supported by calls from the American Medical Women's Association for access to fertility services for all female physicians.[6]

Prior studies have called for increased access to infertility treatment for physicians;[6] however, given that many physicians report that they may have accessed fertility preservation earlier had they known that infertility might be an issue in the future,[3] earlier access to oocyte preservation and potentially fertility treatment is warranted. Many medical schools in the United States require enrolled students to hold active health insurance coverage during training and provide plans through the institution that can be purchased by medical students.[7] Many medical students also express interest in fertility preservation while in medical school but perceive high financial barriers and limited access to health insurance coverage for these services.[8-10] Although medical students may perceive that

• • •

Author affiliations: Department of Obstetrics and Gynecology, Medical College of Wisconsin, Milwaukee, Wisconsin (Stevenson Wyszewianski); Eastern Michigan University, Ypsilanti, Michigan (Stevenson); Michigan State University, East Lansing, Michigan (Okeke).

Corresponding author: Micaela Stevenson Wyszewianski, MD, Department of Obstetrics and Gynecology, Medical College of Wisconsin, 9200 W Wisconsin Ave, Milwaukee, WI 53226; email Micaelastevenson1@gmail.com.

they are unable to access fertility services for financial and insurance reasons, it remains unknown how frequently medical schools provide any information regarding fertility preservation or infertility coverage for medical students through offered health plans. Additionally, it remains unknown how frequently the plans used across the country by various osteopathic and allopathic medical schools provide coverage for infertility and fertility preservation.

Given that medical school may be the most optimal time to undergo fertility preservation or initiate fertility treatment depending on the patient's age and other reproductive factors or goals, many students may be interested in seeking infertility treatment or fertility preservation during this time. However, in the absence of knowing what is covered by medical school health plans, students are unable to use this information to make decisions about purchasing or enrolling in health insurance plans or enrolling at different medical schools based on services they may or may not provide.

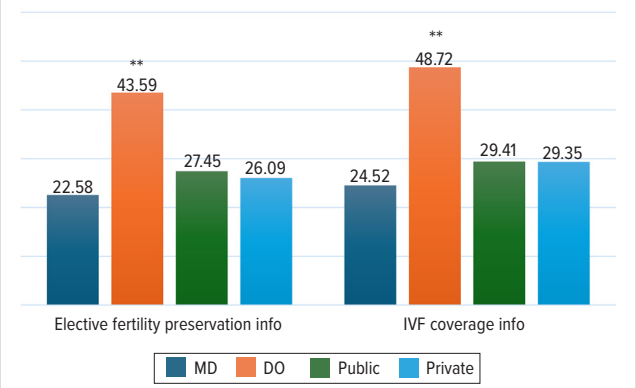
The primary objective of this study was to assess how frequently medical schools provide prospective and current medical students with information regarding coverage for infertility and fertility preservation. The secondary objective was to assess the frequency with which medical schools provide coverage for infertility and fertility preservation through health plans made available to medical students. We hypothesized that, considering the knowledge that medical students regularly report limited knowledge about fertility and fertility preservation, medical school websites would likely provide limited information. Additionally, we hypothesized that there would be limited, if any, coverage offered by health insurance plans that are offered to medical students for fertility preservation or treatment.

METHODS

No institutional review board approval was required because this study contained no human or animal subjects. A complete list of accredited allopathic and osteopathic medical schools was obtained through the Association of American Medical Colleges and American Osteopathic Association websites. Medical school websites were identified and accessed independently by 2 authors from December 17, 2024, through December 31, 2024. Authors were allotted 2.5 minutes to access the website and assess whether any health insurance information sponsored by the medical school was listed by searching "health insurance" in the respective search bars. If a health plan was found and benefits could be accessed, these were assessed by reading the benefits plans to determine whether they contained any information regarding coverage for infertility services or fertility preservation.

For medical schools that were found to have a health plan sponsored by the institution whose benefits could be reviewed, 2 authors then independently assessed health plans and determined whether coverage was provided for in vitro fertilization (IVF), intrauterine insemination (IUI), elective oocyte cryopreservation, medications used for ovulation induction or ovarian hyperstimulation, and fertility evaluation. No time limit was placed on assessment of the summary of benefits. There was 100% concordance between what information was available on each website and what was present in summary of benefits documents.

Figure 1. Differences in Information Provided on Elective Fertility Preservation and In vitro Fertility



Abbreviation: IVF, in vitro fertilization.
**$P < .05$.

Analyses were performed in R version 4.4.2 (R Core Team; R Foundation for Statistical Computing, Vienna, Austria) to assess whether medical schools in different regions of the country were more likely to provide information using chi-squared analyses. Additionally, differences were assessed using chi-squared analyses for likelihood of providing any information based on the presence of state-based insurance mandates for fertility coverage, whether the school was an osteopathic or allopathic medical school, and whether the schools were publicly or privately funded.

Medical schools that had previously been identified as providing information regarding coverage of infertility and fertility preservation were then analyzed using chi-squared analyses to assess regional differences in whether coverage was provided for IUI, IVF, fertility preservation through oocyte cryopreservation, fertility medications, IUIs, and evaluation for infertility. Additionally, we examined differences in provision of these services based on whether the school was an osteopathic or allopathic medical school, regional location of the medical school, and whether the schools were publicly or privately funded.

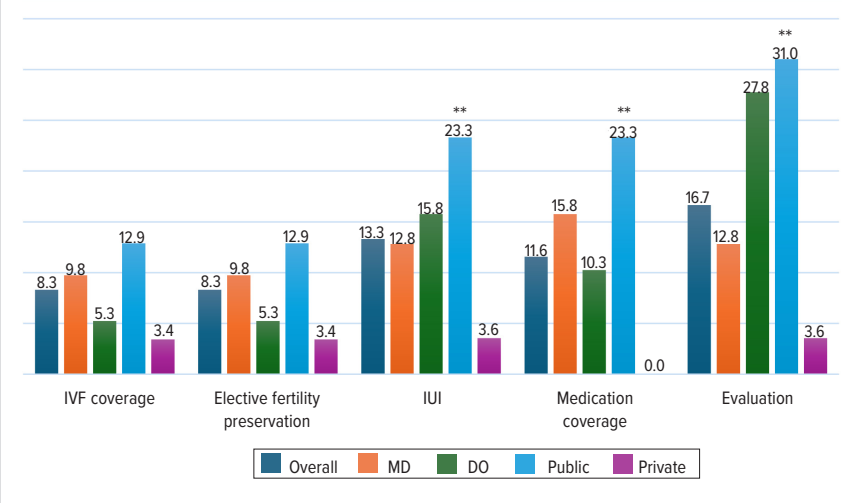
RESULTS

A total of 108 medical school websites were reviewed. Overall, 48.2% of medical schools provided information on elective fertility preservation, and 52.7% provide information on elective IVF coverage. Osteopathic medical schools more frequently provided information on IVF coverage (48.72% vs 24.52%; $P = .006$) (Figure 1) and fertility preservation coverage (43.59% vs 22.58%; $P = .014$) (Figure 1). There were no differences in information provided based on geographic region. Additionally, there were

no differences in whether states provided information based on the presence of state mandates for fertility treatment (25% vs 27.47%; $P = 1$).

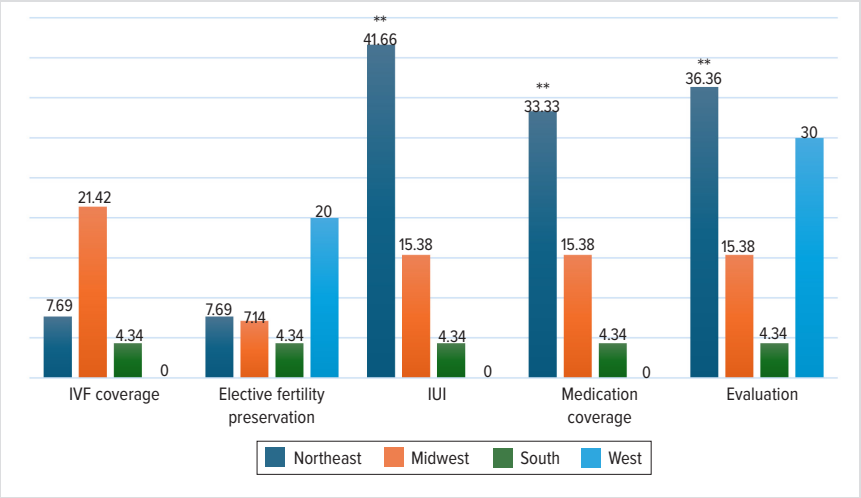
Sixty medical schools contained explanation-of-benefits pages that could be assessed for possible coverage for infertility services and fertility preservation. Only 8.33% of medical schools offered coverage for IVF or elective fertility preservation (Figure 2). There were no differences in coverage for IVF or elective fertility preservation based on public versus private funding or by allopathic versus osteopathic school (Figure 2). Publicly funded medical schools more frequently offered coverage for IUI (23.3% vs 3.57%, $P = .027$) (Figure 2), fertility medications (23.33 % vs 0%, $P = .005$) (Figure 2), and fertility evaluation (31.03% vs 3.57%, $P = .006$) (Figure 2). Medical schools in the Northeast most frequently offered coverage for IUI (41.66%), fertility medications (33.33%), and fertility evaluation (36.36%) and were more likely than other regions to offer coverage for these services (Figure 3). However, there were no regional differences in coverage for IVF or fertility preservation ($P = .021$ and $P = .531$, respectively) (Figure 3).

Figure 2. Differences in Coverage for Fertility Preservation and Treatment Based on MD vs DO Program vs Private Funding Status



Abbreviations: IVF, in vitro fertilization; IUI, intrauterine insemination.
**$P < .05$.

Figure 3. Regional Differences in Coverage for Infertility Services



Abbreviations: IVF, in vitro fertilization; IUI, intrauterine insemination.
**$P < .05$.

DISCUSSION

This study demonstrates that almost half of all medical schools frequently provide no information to medical students for fertility preservation and fertility treatment. Additionally, schools that do provide information on fertility preservation and treatment frequently do not provide coverage for these services. Osteopathic medical schools more frequently provided information on fertility treatment and fertility preservation. However, among schools that did provide information, health insurance coverage was extremely limited, with the majority of MD, DO, public, and private schools providing no coverage for fertility preservation or treatment. Public medical schools and those in the Northeast were more likely to provide coverage for IUIs, infertility medication, and infertility evaluation, as documented by summary-of-benefits pages provided by medical schools. These findings are similar to prior studies demonstrating that graduate students have limited access to fertility coverage through graduate health insurance plans,[11,12] thereby adding to the available knowledge regarding fertility treatment coverage for students pursuing higher education.

This study significantly adds to the literature by documenting what health insurance coverage is available to a significant population of patients at risk for infertility. As indicated by our study, prospective medical students hoping to use infertility services during medical school who will not have alternative health insurance coverage may seek to attend medical schools that are publicly funded and located in the Northeast. However, given the very limited fertility preservation coverage offered by medical schools, students may have limited access to elective oocyte preservation regardless of where they attend medical school. Additionally, given that prior studies have shown that only 25% of health insurance

plans offer coverage for infertility[13] and that insurance coverage for fertility services increases access to these services,[14,15] this study demonstrates that, compared to the general population, medical students may be an extremely underserved population at risk for infertility who need further attention.

Strengths of this study include that we assessed 100% of active websites for all accredited medical schools in the United States. Additionally, a significant but not excessive amount of time was spent on each website attempting to adequately gather information, simulating the time students may spend assessing available information. Another strength is that more than one author assessed each website and verified what benefits were available. Given that there was 100% concordance between authors examining each website, these conclusions are likely sound. This strengthens our claims that if the information was absent, it was after 2 different authors had looked for it.

Limitations of this study include that this is based solely on health plan information available on or associated with medical student websites. It is possible that additional information regarding student health plans is available at the time of an interview, enrollment, or upon direct request to the school. Additionally, these findings are based on information available in the summary of benefits on the website without logging in and assessing the plans in detail after enrollment. This information may be outdated, as it relies upon regular updates and therefore may not be reflect current coverage. However, given that this information is what a prospective or enrolled medical student would have access to when deciding to enroll in the plan, the authors believe this is an adequate representation of the knowledge used to make decisions regarding health plan purchase. Additionally, only 2 medical schools provided information with explanation-of-benefits plans that could only be accessed after providing login information. Therefore, we likely have a complete assessment of publicly available information. While all explanation-of-benefits plans were reviewed, it is possible that additional coverage is available to medical students that may not have been captured in summary of benefits documents.

Future studies should assess why medical schools provide limited information and coverage on fertility preservation and treatment. Additionally, efforts should be made to improve access to information for these services for medical students and assess whether these efforts improve student uptake of fertility services.

CONCLUSIONS

American medical schools provide limited information regarding health insurance coverage for fertility preservation and treatment. Osteopathic medical schools more frequently provide information about coverage for these services. Additionally, American medical schools generally provide limited coverage for fertility preservation and treatment. Publicly funded schools and those in the Northeast more often offer coverage for these services. Prospective students hoping to utilize fertility preservation or treatment may prefer to consider publicly funded medical schools and those in the Northeast United States.

Financial disclosures: None declared.

Funding/support: None declared.

REFERENCES

1. Nugent CN, Chandra A. Infertility and impaired fecundity in women and men in the United States, 2015–2019. *Natl Health Stat Report.* 2024;(202):1–19. Accessed April 24, 2024. https://www.cdc.gov/nchs//data/nhsr/nhsr202.pdf

2. Lee A, Kuczmarska-Haas A, Dalwadi SM, et al. Family planning, fertility, and career decisions among female oncologists. *JAMA Netw Ope*n. 2022;5(10):e2237558. doi:10.1001/jamanetworkopen.2022.37558

3. Stentz NC, Griffith KA, Perkins E, Jones RD, Jagsi R. Fertility and childbearing among American female physicians. *J Womens Health (Larchmt).* 2016;25(10):1059–1065. doi:10.1089/jwh.2015.5638

4. Cusimano MC, Baxter NN, Sutradhar R, et al. Delay of pregnancy among physicians vs nonphysicians. *JAMA Intern Med*. 2021;181(7):905–912. doi:10.1001/jamainternmed.2021.1635

5. Stack SW, Jagsi R, Biermann JS, et al. Childbearing decisions in residency: a multicenter survey of female residents. *Acad Med*. 2020;95(10):1550–1557. doi:10.1097/ACM.0000000000003549

6. Marshall AL, Arora VM, Salles A. Physician fertility: a call to action. *Acad Med.* 2020;95(5):679–681. doi:10.1097/ACM.0000000000003079

7. Diekema DJ, Albanese MA, Densen P, Doebbeling BN. Student health policies of US medical schools. *Acad Med.* 1996;71(10):1090–1092. doi:10.1097/00001888-199610000-00016

8. Ikhena Abel DE, Confino R, Shah NJ, Lawson AK, Klock SC, Robins JC, Pavone ME. Is employer coverage of elective egg freezing coercive?: a survey of medical students' knowledge, intentions, and attitudes towards elective egg freezing and employer coverage. *J Assist Reprod Genet*. 2017;34(8):1035–1041. doi:10.1007/s10815-017-0956-9

9. Armstrong AG, Woods M, Keomany J, Grainger D, Shah S, Pavone M. What do female medical students know about planned oocyte cryopreservation and what are their personal attitudes? *J Assist Reprod Gene*t. 2023;40(6):1305–1311. doi:10.1007/s10815-023-02845-5

10. King Z, Zhang Q, Liang JW, et al. Barriers to family building among physicians and medical students. *JAMA Netw Ope*n. 2023;6(12):e2349937. doi:10.1001/jamanetworkopen.2023.49937

11. Wagi CR, Ali NA, Santiago Datil WL, Rickloff MA, Corvin JA. Suffering in silence: graduate student infertility. *J Am Coll Healt*h. 2022;70(8):2295–2302. doi:10.1080/07448481.2020.1851233

12. Mirick RG, Wladkowski SP. Infertility and pregnancy loss in doctoral education: understanding students' experiences. *Affilia*. 2023;38(3):503–524. doi:10.1177/08861099221084974

13. Schmidt L. Effects of infertility insurance mandates on fertility. *J Health Econ.* 2007;26(3):431–446. doi:10.1016/j.jhealeco.2006.10.

14. Peipert BJ, Chung EH, Harris BS, Jain T. Impact of comprehensive state insurance mandates on in vitro fertilization utilization, embryo transfer practices, and outcomes in the United States. *Am J Obstet Gynecol*. 2022;227(1):64.e1–64.e8. doi:10.1016/j.ajog.2022.02.014

15. Hamilton BH, McManus B. The effects of insurance mandates on choices and outcomes in infertility treatment markets. *Health Econ.* 2012;21(8):994–1016. doi:10.1002/hec.1788

advancing the art & science of medicine in the midwest

WMJ

WMJ (ISSN 2379-3961) is published through a collaboration between The Medical College of Wisconsin and The University of Wisconsin School of Medicine and Public Health. The mission of *WMJ* is to provide an opportunity to publish original research, case reports, review articles, and essays about current medical and public health issues.

Visit www.wmjonline.org to learn more.