International Journal of Gynecology and Infertility
Original Research (ISSN 2998-4831)

Obstetrics and Gynecology Residents' Preparedness to Counsel on Anti-Müllerian Hormone Testing and Planned Oocyte Cryopreservation: A Single-Center Cross-Sectional Survey

Andrea V. Parra Jaimes, MD[1*], Lindsay Hartup, MD[1,2], Ashlyn Parkhurst MD[1], Sarah Chang BS[1], Nicholas Stansbury MD[1]

[1]Department of Obstetrics and Gynecology, University of Texas Health Science Center at San Antonio, USA

[2]Department of Obstetrics and Gynecology, Center for Infertility and Reproductive Surgery, Brigham and Women's Hospital, USA

Citation: Andrea V. Parra Jaimes, Lindsay Hartup, Ashlyn Parkhurst, Sarah Chang, Nicholas Stansbury. Obstetrics and Gynecology Residents' Preparedness to Counsel on Anti-Müllerian Hormone Testing and Planned Oocyte Cryopreservation: A Single-Center Cross-Sectional Survey. Int Jour Gyn Infer. 2026;3(1):1-6.

Received Date: 10 July, 2026; **Accepted Date:** 13 July, 2026; **Published Date:** 16 July, 2026

***Corresponding author:** Andrea V. Parra Jaimes, Department of Obstetrics and Gynecology University of Texas Health Science Center at San Antonio. 7703 Floyd Curl Drive San Antonio, TX 78229, USA

Copyright: © Andrea V. Parra Jaimes, Open Access 2026. This article, published in Int Jour Gyn Infer (IJGI) (Attribution 4.0 International), as described by http:// creativecommons.org/licenses/by/4.0/.

ABSTRACT

Background: Anti-Müllerian hormone testing and elective oocyte cryopreservation are increasingly requested by reproductive-age women, yet formal education during obstetrics and gynecology residency remains inconsistent.

Objective: To assess residents' knowledge, confidence, and reported clinical practices regarding anti-Müllerian hormone and elective oocyte cryopreservation counseling in patients without infertility.

Methods: An anonymous eight-question electronic survey was distributed in 2024 to all obstetrics and gynecology residents (postgraduate years 1–4) at a single academic center. Items assessed knowledge of anti-Müllerian hormone physiology and interpretation, counseling practices regarding anti-Müllerian hormone testing and elective oocyte cryopreservation, and perceived preparedness. Descriptive statistics were used.

Results: Nineteen of 33 residents responded (57.5%). All respondents correctly identified that anti-Müllerian hormone correlates with oocyte yield during in vitro fertilization, and 89% recognized that anti-Müllerian hormone does not predict oocyte quality. Only 42% correctly identified the typical age at which anti-Müllerian hormone peaks. No respondents reported routinely offering anti-Müllerian hormone testing or counseling on elective oocyte cryopreservation for non-infertility indications. All respondents reported inadequate preparedness to counsel patients on these topics and expressed interest in further education.

Conclusion: Residents demonstrated foundational knowledge regarding anti-Müllerian hormone but reported substantial gaps in applying this knowledge to fertility counseling. Structured education on anti-Müllerian hormone interpretation and elective fertility preservation may better prepare residents to guide patients in reproductive decision-making.

Keywords: Counseling; Fertility preservation; Ovarian reserve; Oocyte cryopreservation; Postgraduate medical education; Resident education; Reproductive aging; Reproductive planning; Survey; Women's health

INTRODUCTION

Delayed childbearing has become increasingly common due to educational, economic, and social factors [1]. Elective oocyte cryopreservation is supported by the American Society for Reproductive Medicine as an ethically permissible option to preserve reproductive potential in women without infertility [2].

Anti-Müllerian hormone has emerged as a widely used marker of ovarian reserve. Anti-Müllerian hormone reflects antral follicle count and predicts ovarian response to stimulation during in vitro fertilization [3]. However, anti-Müllerian hormone does not correlate with oocyte quality, natural fertility, or the likelihood of spontaneous conception [4]. Despite these limitations, patients increasingly request anti-Müllerian hormone testing for reproductive planning, which may contribute to misinterpretation or unnecessary anxiety without appropriate counseling [5].

Professional societies emphasize the importance of fertility counseling and education regarding fertility preservation [2,6]. Prior studies suggest that obstetrics and gynecology residents receive limited formal training in ovarian reserve assessment and elective oocyte cryopreservation counseling [7]. As frontline providers for reproductive-age women, residents' preparedness directly influences patient counseling and care.

This study evaluated obstetrics and gynecology residents' knowledge, attitudes, and reported clinical practices regarding anti-Müllerian hormone testing and elective oocyte cryopreservation at a single academic institution.

MATERIALS AND METHODS

Study Design and Participants

This anonymous, cross-sectional survey study was conducted at a single academic obstetrics and gynecology residency program in the United States in 2024. All residents from postgraduate years 1 through 4 (n = 33) were invited to participate voluntarily.

Survey Instrument

An eight-question electronic survey was designed to evaluate: (1) knowledge of anti-Müllerian hormone physiology and interpretation, (2) understanding of elective oocyte cryopreservation, (3) Frequency of counseling and clinical use of anti-Müllerian hormone and elective oocyte cryopreservation in patients without infertility, and (4) self-perceived preparedness and interest in further education. Survey items are provided in Appendix A (Supplementary Material).

Statistical Analysis

Descriptive statistics were used. Categorical variables are presented as percentages.

Ethics

This study was classified as non-regulated research.

RESULTS

Participant Characteristics

Nineteen of 33 eligible residents completed the survey (response rate 57.5%). All postgraduate years (1–4) were represented.

Knowledge Assessment

All respondents correctly identified that anti-Müllerian hormone correlates with oocyte yield during in vitro fertilization. Most respondents (89%) correctly identified that anti-Müllerian hormone does not predict oocyte quality. Fewer respondents (42%) correctly identified the typical age at which anti-Müllerian hormone peaks (mid-twenties).

Reported Clinical Practices

No respondents reported routinely offering anti-Müllerian hormone testing or counseling on elective oocyte cryopreservation to patients without infertility. All residents reported that fertility counseling was typically reactive, occurring primarily when initiated by patients. None reported routinely incorporating discussion of anti-Müllerian hormone testing or elective oocyte cryopreservation into annual gynecologic visits.

Preparedness and Educational Needs

All respondents reported feeling inadequately prepared to counsel patients on anti-Müllerian hormone interpretation or elective fertility preservation. All expressed interest in formal education or workshops on these topics.

DISCUSSION

This study identified a gap between foundational knowledge and reported clinical application of anti-Müllerian hormone interpretation and elective oocyte cryopreservation counseling among obstetrics and gynecology residents. Although residents demonstrated understanding of key limitations of anti-Müllerian hormone, none reported routinely incorporating anti-Müllerian hormone testing or elective oocyte cryopreservation counseling into care for patients without infertility. These findings align with prior work demonstrating limited resident preparedness in ovarian reserve interpretation and fertility preservation counseling [7].

Anti-Müllerian hormone is useful for predicting ovarian response to stimulation but does not predict spontaneous fertility or oocyte quality [3,4]. Misinterpretation of anti-Müllerian hormone results may lead to false reassurance or undue anxiety [5]. As elective oocyte cryopreservation becomes increasingly available, accurate counseling regarding reproductive aging and fertility preservation options is important to support informed reproductive decision-making [2,6].

Multiple studies describe limited resident education in fertility preservation.[7,8] Simulation-based curricula have improved counseling and technical skills in other areas of obstetrics and gynecology education.[9–11] Similar structured educational interventions may strengthen resident confidence and competence in fertility counseling.

Limitations of this study include that it had a modest sample size at a single institution and relied on self-reported practices, which may differ from observed clinical behavior. Objective assessment of counseling skills or knowledge change after an intervention was not performed.

Residents are often the first clinicians to discuss fertility planning with reproductive-age patients. Improving resident comfort with anti-Müllerian hormone interpretation and elective oocyte cryopreservation counseling may enhance patient understanding and support timely, values-concordant reproductive decision-making.

CONCLUSIONS

Obstetrics and gynecology residents demonstrated foundational knowledge of anti-Müllerian hormone but reported limited preparedness and inconsistent incorporation of fertility counseling into routine practice. Residents demonstrated unanimous interest in receiving more education on anti-Müllerian hormone interpretation and elective oocyte cryopreservation in residency training to better meet evolving patient counseling needs.

Appendix A: Survey Instrument

Survey: Utilizing AMH in Patient Counseling

1. How often do you offer your patients AMH testing?
    a. Never
    b. Rarely
    c. Often
    d. Always
2. Is AMH correlated with oocyte yield in IVF?
    a. Yes
    b. No
3. Is AMH correlated with oocyte quality?
    a. Yes
    b. No
4. When is the mean peak of AMH in a patient's lifetime?
    a. 20
    b. 25
    c. 30
    d. 32
    e. 35
5. Do you think you are currently capable of appropriately counseling patients about oocyte cryopreservation and the role of AMH?
    a. Yes
    b. No
6. Would you be interested in learning more about oocyte cryopreservation and how to appropriately counsel patients about oocyte cryopreservation and the role of AMH?
    a. Yes
    b. No

7. How often do you ask your patients if they want to achieve pregnancy within the next year?
    a. Never
    b. Rarely
    c. Often
    d. Always
8. How often do you talk to your patients about oocyte cryopreservation?
    a. Never
    b. Rarely
    c. Often
    d. Always

Appendix B: Survey Results

Survey Question	Most Common Response(s)	Raw Count (n=19)	Percentage (%)
How often do you offer your patients AMH testing?	Never	19	100%
Is AMH correlated with oocyte yield in IVF?	Yes	19	100%
Is AMH correlated with oocyte quality?	No	17	89%
When is the mean peak of AMH in a patient's lifetime?	25	8	42%
Do you think you are currently capable of appropriately counseling patients about oocyte cryopreservation and role of AMH?	No	19	100%
Would you be interested in learning more about oocyte cryopreservation and counseling?	Yes	19	100%
How often do you ask patients if they want to achieve pregnancy within the next year?	Rarely/Often (mixed)	Variable (not fully specified)	—
How often do you talk to your patients about oocyte cryopreservation?	Never	19	100%

REFERENCES

1. Cobo A, García-Velasco JA, et al. Elective oocyte cryopreservation for age-related fertility decline. Hum Reprod Update. 2018;24(6):673-693.
2. Ethics Committee of the American Society for Reproductive Medicine. Planned oocyte cryopreservation. Fertil Steril. 2021;116(2):e1-e7.
3. Practice Committee of the American Society for Reproductive Medicine. Testing and interpreting measures of ovarian reserve. Fertil Steril. 2020;114(6):1151-1157.
4. Rienzi L, et al. Oocyte cryopreservation and clinical outcomes. Reprod Biomed Online. 2017;34(4):353-365.
5. Mesen TB, et al. Patient understanding and interest in elective anti-Müllerian hormone testing. Fertil Steril. 2015;103(6):1467-1473.
6. ESHRE Guideline Group. Female fertility preservation. Hum Reprod Open. 2020;(4):hoaa052.
7. Mendiratta V, et al. Resident knowledge of ovarian reserve testing. Fertil Steril. 2010;94(5):1868-1872.

8. Practice Committee of the American Society for Reproductive Medicine. Fertility preservation in patients at risk. Fertil Steril. 2019;112(6):1022-1033.
9. Tolsgaard MG, et al. Simulation training in obstetric ultrasound. Ultrasound Obstet Gynecol. 2015;46(3):336-343.
10. Hempel MS, et al. Skill retention after simulation training. BMC Med Educ. 2020;20:404.
11. Nicholls J, et al. Simulation improves obstetric ultrasound performance. Aust N Z J Obstet Gynaecol. 2021;61(4):550-557.