

DEPARTMENT OF OBSTETRICS & GYNECOLOGY

21st Annual RESIDENT RESEARCH DAY
& JOHN ROCK LECTURE



MAY 10, 2024

ARTHUR H. RUBENSTEIN AUDITORIUM
THE SMILOW CENTER FOR TRANSLATIONAL RESEARCH

Welcome



Welcome to the 21st Annual John Rock Lecture and Department of Obstetrics and Gynecology Resident Research Day. Resident Research Day is an opportunity for our trainees to present their research projects to their colleagues with the goal of challenging current thinking to improve reproductive health care. This experience inspires our young physicians to engage in basic science, translational, and clinical research opportunities in their future careers in order to benefit patients and advance our specialty.

We are honored to welcome our speaker Dr. Erica E. Marsh, Professor of Reproductive Medicine and Chief of the Division of Reproductive Endocrinology and Infertility in the Department of Obstetrics and Gynecology at the University of Michigan Medical School.

A special thank you to the Women's Health Clinical Research Center, Women's Health Center for Clinical Innovation, The Penn Ovarian Cancer Research Center, The Center for Research on Reproduction and Women's Health and all mentors for supporting our trainees.

We thank you all for your attendance and hope you will join us in congratulating all participants on their achievements.

RESEARCH LEADERSHIP TEAM

Anuja Dokras, MD, MCHI, PhD
Director, Resident Research Program

Stefanie Hinkle, PhD
Associate Director, Resident Research Program

Catherine R. Salva, MD, MEd
Director, Residency Program

Elizabeth A. Howell, MD, MPP
Chair, Department of Obstetrics and Gynecology

JOHN ROCK LECTURER



Erica E. Marsh, MD, MSCI, FACOG

Dr. Erica E. Marsh is the University Diversity and Social Transformation Professor and the S. Jan Behrman Collegiate Professor of Reproductive Medicine in the Department of Obstetrics and Gynecology at the University of Michigan Medical School and Chief of the Division of Reproductive Endocrinology and Infertility in the Department of OBGYN. She also serves as the Associate Director of the Michigan Institute of Clinical and Health Research (MICHR) and she is the founder and director of Health and Reproductive Disparities (onWHARD!) Collaborative. Dr. Marsh

attended Harvard College from which she graduated magna cum laude, and Harvard Medical School where she graduated cum laude. She then completed her residency at the Integrated OBGYN Residency at the Brigham and Women's Hospital, and Massachusetts General Hospital followed by a Reproductive Endocrinology and Infertility fellowship at the Feinberg School of Medicine at Northwestern University. After completing fellowship in 2008, Dr. Marsh joined the faculty at Feinberg. In 2016, Dr. Marsh joined the University of Michigan.

Dr. Marsh has received millions of dollars in funding to support her research which focuses on health disparities in reproductive medicine. She takes a 360° approach to her research with a focus on leveraging the strengths and expertise of community and community engagement to investigate research questions. Dr. Marsh has published significantly in the areas of fibroids, abnormal uterine bleeding, infertility, and most recently COVID-19. Her work is currently funded by the NICHD, NIMHD, and the Chan Zuckerberg Foundation.

AGENDA

7:30 - 8:00 am

CONTINENTAL BREAKFAST

8:00 - 8:05 am

WELCOME REMARKS

Elizabeth A. Howell, MD, MPP

8:05 - 8:10 am

INTRODUCTION

Anuja Dokras, MD, MCHI, PhD

8:10 - 10:10 am

PGY4 RESIDENT RESEARCH PRESENTATIONS

Safety of Same-Day Discharge Versus Hospital Admission After Minimally Invasive MyomectomyPage 5
Jeremy Applebaum, MD | Mentor: Divya K. Shah, MD, MME

Oophorectomy at Time of Gender Affirming Hysterectomy in Young Adults.....Page 6
Jourdin Batchelor, MD | Mentor: Monica A. Mainigi, MD

Telehealth Follow-Up After Medical Management of Early Pregnancy Loss.....Page 7
Jessica Chen, MD | Mentor: Andrea H. Roe, MD, MPH

Patient-Level Predictors of Accessing Care for Vaginal Bleeding in Early PregnancyPage 8
Efe Cudjoe, MD | Mentor: Courtney A. Schreiber, MD, MPH

Lack of Adequate Counseling About Pregnancy Complications in Patients with PCOS.....Page 9
Anne E. Kim, MD | Mentor: Anuja Dokras, MD, MHCI, PhD

Spinal Muscular Atrophy (SMA) Linked-Variant: A Cross-Sectional Survey to Evaluate Provider Knowledge, Comfort, Practice Patterns, and a Retrospective Cohort Study to Assess Patient Clinical Follow-Up.....Page 10
Melissa Riegel, MD | Mentor: Lorraine Dugoff, MD

Risk-Appropriate Care Receipt Among Higher-Risk Rural Birthing People (To be presented on May 23rd).....Page 11
Madison Sharp, MD, MMS | Mentor: Sara Handley, MD, MSCE

10:10 - 10:30 am

BREAK

10:30 - 11:10 am

JOHN ROCK LECTURE

Uterine Fibroids: A Journey of Patients, Pearls, and Promise
Erica E. Marsh, MD, MSCI, FACOG

11:10 am - 12:20 pm

PGY2 RESIDENT RESEARCH PROPOSALS

Fetal Fraction of Cell-Free DNA in Fresh and Frozen IVF Cycles and Associations with Adverse Pregnancy Outcomes
Milana Bochkur Dratver, MD, MS | Mentor: Monica A. Mainigi, MD

A Qualitative Study of Patients' Experiences and Needs Using a Texting Platform in Early Pregnancy
Elizabeth Critchlow, MD, MPH | Mentor: Alice Abernathy, MD, MSHP

Post Trigger E2, LH, P4, and HCG: Association with Oocyte Maturity, Yield, Blast Progression, and Birth Outcomes
Joshua Ewy, MD | Mentor: Clarisa R. Gracia, MD, MSCE

Management of Abnormal Pap Smear Results After Implementation of a Centralized Natural Language Processing Care Delivery Mode
Alexander Acker, MD | Mentors: Danielle Burkland, MD, Anuja Dokras, MD, MHCI, PhD

Predictors of Medication Abortion Success: A Retrospective Single Center Study
Caroline Antonacci, MD | Mentor: Sarita Sonalkar, MD, MPH

Assessing the Impact of Informational Videos on Preoperative Education, Surgical Satisfaction, and Postoperative Communication
Nayla Labban, MD | Mentor: Nawar Latif, MD, MPH, MSCE

Examining the Impact of Xenobiotics on Immune Response at the Placental Membrane
Emilie Stylli, MD | Mentor: Kristin Gerson, MD, PhD

Comparison of Symptom Profiles in Patients with Endometriosis, Adenomyosis, and Comorbid Pain Conditions
Meridith Pollie, MD | Mentor: Suneeta Senapati, MD, MSCE

12:20 pm - 12:45 pm

AWARDS

12:45 pm

RESIDENT LUNCH

MFM Conference Room, 2 Silverstein



SAFETY OF SAME-DAY DISCHARGE VERSUS HOSPITAL ADMISSION AFTER MINIMALLY INVASIVE MYOMECTOMY

Authors

Jeremy Applebaum, MD | Edward K. Kim, MD, MPH | Margaret Rush, MD
Divya Shah, MD, MME

Background

Prior studies have demonstrated that same-day discharge (SDD) after minimally invasive hysterectomy is safe, reduces hospital costs, and decreases iatrogenic complications. There is a paucity of data on the risk profile of SDD compared to admission after minimally invasive myomectomy. The objective of this study was to identify demographic and perioperative factors associated with admission and to compare 30-day postoperative complication rates between SDD and admitted patients following minimally invasive myomectomy.

Methods

This is a retrospective cohort study using the National Surgical Quality Improvement Program database of all female patients aged ≥ 18 years undergoing minimally invasive myomectomy between January 2015 and December 2019. Patients were categorized into SDD and admitted cohorts. Statistical analyses were stratified by lower fibroid burden (one to four fibroids and ≤ 250 grams, CPT 58545) and higher fibroid burden (\geq five fibroids or > 250 grams, CPT 58546). Univariable comparisons of demographics, perioperative variables, and 30-day postoperative complication rates between the SDD and admitted cohorts were performed. Multivariable logistic regression was then performed to examine the relationship between these variables and admission.

Results

8,100 patients were captured during the study period. The overall SDD rate was 57.2% in 2015 and 65.0% in 2019. The SDD rate was 64.6% for patients with a lower fibroid burden and 56.8% for higher fibroid burden. Black race, American Society of Anesthesiologists classification three or four, preoperative anemia, hypertension, diabetes, bleeding disorder, and increasing operative time were associated with admission. After adjusting for these variables, composite postoperative complication rates were similar between SDD and admitted patients regardless of fibroid burden (adjusted OR 0.66; 95% CI 0.18-2.47 for lower fibroid burden and aOR 0.91; 95% CI 0.18-4.63 for higher fibroid burden). Odds of blood transfusion were higher in admitted patients with both lower (aOR 9.17; 95% CI 2.27-37.04) and higher (aOR 8.24; 95% CI 1.59-42.49) fibroid burdens.

Conclusion

Compared to hospital admission, SDD after minimally invasive myomectomy is relatively low risk regardless of fibroid burden. This can inform the shared decision making between the surgeon and the patient for optimal discharge planning.



OOPHORECTOMY AT TIME OF GENDER AFFIRMING HYSTERECTOMY IN YOUNG ADULTS

Authors

Jourdin Batchelor, MD | Nia Bhadra-Heintz, MD | Nathanael Koelper, MPH
Holly W. Cummings, MD, MPH | Peter J. Vasquez, MD | Monica A. Mainigi, MD

Background

In recent years, there has been an increase in patients accessing gender affirming care. Many patients decide to undergo gender affirming surgery, including hysterectomy with or without oophorectomy. However, there is minimal data regarding bilateral oophorectomy rates in gender diverse young adults. Recommendations regarding ovarian removal are lacking and in light of evolving political restrictions, the decision to proceed with an oophorectomy can have far reaching implications on long-term health. In this study we aimed to identify factors associated with choice of bilateral oophorectomy or ovarian conservation at the time of gender affirming hysterectomy.

Methods

This was a retrospective cohort study of all patients aged 18 to 30 and assigned female at birth who have undergone total hysterectomy with primary or secondary indication of gender affirmation at the Hospital of the University of Pennsylvania between January 2016 and January 2024. Data was abstracted from the electronic medical record. Patient demographics, gynecologic comorbidities, mental health diagnoses, preoperative factors, surgical characteristics, and pathology were collected and stored in a REDCap database. Patient characteristics were compared using t-test and Wilcoxon rank sum tests for continuous variables and Chi-square or Fisher's exact tests for categorical variables as appropriate.

Results

Of 91 unique patients who met inclusion criteria for this study, 31 (34%) retained a single ovary or both ovaries, while 60 (66%) underwent a bilateral oophorectomy. Patients were predominantly white (76%) and privately insured (74%). There were no significant differences in race/ethnicity, insurance type, mental health diagnoses, or BMI between the two groups. Individuals 22 years of age and younger underwent bilateral oophorectomy more frequently than those between 23 and 30 years of age (80% vs 55%; $p=0.012$). Patients identifying as male were more likely to undergo bilateral oophorectomy than patients identifying as nonbinary or genderfluid (81% vs 11%; $p<0.001$). All patients who underwent bilateral oophorectomy were using testosterone preoperatively, compared with 77% of those who retained one or both ovaries ($p<0.001$). Length of preoperative testosterone use was not significant between the groups ($p=0.780$).

Conclusion

The majority of young adults pursuing gender affirming surgery via hysterectomy opt for concomitant bilateral oophorectomy. This decision may have significant implications on reproductive and overall health as well as ethical and financial implications, as these patients will require decades of hormone replacement therapy. Future research is necessary to examine additional factors driving this decision.



TELEHEALTH FOLLOW-UP AFTER MEDICAL MANAGEMENT OF EARLY PREGNANCY LOSS

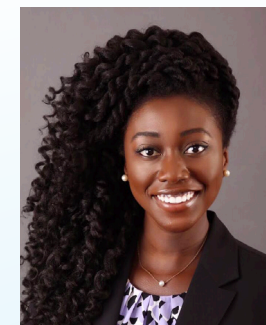
Authors Jessica Chen, MD | Sally Nijim, BA | Nathanael Koelper, MPH | Anne N. Flynn, MD, MSHP
Sarita Sonalkar, MD, MPH | Courtney A. Schreiber, MD, MPH | Andrea H. Roe, MD, MPH

Background Early pregnancy loss is a common complication of pregnancy, and medication management is a highly effective treatment strategy. Medication abortion, which utilizes the same medication regimen of mifepristone and misoprostol, has well-established telehealth follow-up options. Telehealth assessment has been proven to be a safe and acceptable alternative to in-person follow-up. Despite the treatment parallels in medication management of early pregnancy loss and medication abortion, telehealth follow-up has not been investigated for early pregnancy loss. We evaluated the feasibility of a new protocol for telehealth follow-up after medication management of early pregnancy loss.

Methods We conducted a retrospective cohort study comparing patients initiating medication management of early pregnancy loss <13w0d gestation and medication abortion ≤10w0d with a combination of mifepristone and misoprostol between April 1, 2020, and March 28, 2021. As part of a new clinical protocol initiated during the COVID-19 pandemic, patients could opt for telehealth follow-up one week after treatment and a home urine pregnancy test 4 weeks after treatment. Our primary outcome was successful follow-up per clinical protocol. We also examined safety outcomes.

Results Of patients reviewed, 181 were eligible for inclusion; 75 had medication management of early pregnancy loss and 106 had medication abortion. In each group, 36/75 (48%) of early pregnancy loss and 69/106 (65%) of medication abortion patients chose telehealth follow-up. Of patients undergoing medication management of early pregnancy loss who chose telehealth follow-up, 29/36 (81%, 95% CI 64-92) achieved successful follow-up per protocol. We compared follow-up per protocol for patients with medication management of early pregnancy loss who chose telehealth follow-up to that of patients undergoing medication abortion who chose telehealth follow-up. In the medication abortion group, follow-up rates were similar with 64/69 (93%, 95% CI 84-98) successfully following up per protocol (p=0.06). Loss to follow-up was also similar among patients undergoing medication management of early pregnancy loss who chose in-person follow-up (3/39, 8%). Complications were rare and did not differ across early pregnancy loss and medication abortion groups.

During the COVID-19 pandemic, telehealth services expanded for management of medication management of early pregnancy loss. These changes have the potential to improve care by removing logistical, emotional, and financial barriers to follow-up ultrasounds and in-person visits. This study indicates that remote follow-up is a safe and feasible alternative to in-person follow-up after medication management of early pregnancy loss.



PATIENT-LEVEL PREDICTORS OF ACCESSING CARE FOR VAGINAL BLEEDING IN EARLY PREGNANCY

Authors Efe Cudjoe, MD | Emma Gilmore, MD | Alice Abernathy, MD, MSHP
Nathaniel C. Koepler, MPH | Courtney A. Schreiber, MD, MPH

Background Patients in the United States commonly seek care for bleeding in early pregnancy, and must be assessed for Rhesus antigen negativity as a part of their evaluation. Since the patient-level motivations for care-seeking for early pregnancy-bleeding are not well documented, we sought to assess the role that concerns about Rh incompatibility plays in this decision. We hypothesized that patients with a known Rh negative blood type would be more likely to seek care as compared to those with an Rh-positive blood type when accounting for other variables that are associated with healthcare access and heightened pregnancy concerns.

Methods We conducted a planned secondary analysis of a large cohort study of patients who ultimately sought abortion care. We surveyed participants about vaginal bleeding in the current pregnancy and their knowledge of Rh sensitization. We computed the association between clinical, demographic, and neighborhood characteristics as measured by Area Deprivation Index (ADI) and seeking care for bleeding in the current pregnancy.

Results We analyzed data for 506 racially diverse participants, of whom 121 (24%) reported prior vaginal bleeding during this pregnancy. Of those who reported vaginal bleeding, thirty-six (30%) sought care. Rh status was not significantly associated with seeking care. However, a history of prior miscarriage or ectopic pregnancy was associated with increased odds of seeking care for bleeding in the current pregnancy (aOR 3.10 95% CI 1.22-7.85 p=0.017) and patients were more likely to seek care if they lived in a neighborhood with greater disadvantage (aOR 1.02 95% CI 1.01-1.04 p=0.004).

Conclusion Patient blood type may not be a motivation for care-seeking for a vaginal bleeding episode, but personal risk factors for adverse pregnancy events are associated with seeking care. Neighborhood socioeconomic disadvantage may lead to higher healthcare utilization in this population.



LACK OF ADEQUATE COUNSELING ABOUT PREGNANCY COMPLICATIONS IN PATIENTS WITH PCOS

Authors Anne E. Kim, MD | Iris Lee, MD | Sasha Ottey, MHA | Anuja Dokras, MD, MHCI, PhD

Background Polycystic ovary syndrome (PCOS) is associated with an increased risk of obstetric complications including miscarriage, gestational diabetes, hypertensive disorders of pregnancy, cesarean section, and preterm birth. International guidelines recommend prepregnancy counseling and optimization of such risks. It is unknown whether physicians are providing preconception counseling and how patients perceive the counseling on these topics. We sought to assess the counseling experiences of patients with PCOS related to obstetric complications and preconception management of comorbidities.

Methods We performed a cross-sectional survey study of patients with PCOS aged 18-64 years and history of or attempt at pregnancy. We collected demographic characteristics, medical history, and counseling experiences. Pearson's χ^2 tests were performed to compare the counseling experiences by age, race, body mass index, provider type, and use of fertility medications.

Results Of the 302 respondents, 72.9% had a prior pregnancy with 66.8% reporting pregnancy complications. 52.7% of the entire group received preconception counseling on PCOS-related obstetric complications and 41.5% were satisfied with their counseling experience. Miscarriage (67.3%) and gestational diabetes (67.3%) were most frequently discussed, while preeclampsia (40.9%), gestational hypertension (34.0%), preterm birth (24.5%), and cesarean section (24.5%) were discussed less frequently. Only 5.0% were counseled on postpartum complications related to PCOS. Of the 43.4% (131/302) who received counseling about pre-pregnancy weight management, 38.1% were satisfied with the information received. Only 25.5% (28/110) of patients with hypertension and 47.1% (64/135) of patients with prediabetes or diabetes received counseling about the respective preconception management. Although 83.1% reported a history of anxiety or depression, 59.8% were not provided with pregnancy-specific mental health information and 43.6% were neutral or dissatisfied with the counseling. Although there were no racial disparities in overall counseling of complications, more Black patients were counseled about preeclampsia ($p=0.009$), cesarean section ($p=0.03$), and preterm birth ($p=0.005$) compared to White patients. Among patients who had a single provider managing their PCOS care ($n=128$), 78.6% who saw a reproductive endocrinologist, 53.2% who saw a general gynecologist, and 35.0% who saw a primary care physician reported receiving preconception counseling on pregnancy complications.

Conclusion Despite the high prevalence of obstetric complications associated with PCOS, our study revealed inadequate patient counseling about such complications and the preconception management of existing comorbidities. Patients who were counseled were mostly neutral or dissatisfied with their counseling experience. Our findings highlight the urgent need to increase provider education and patient awareness to optimize maternal and neonatal outcomes.



SPINAL MUSCULAR ATROPHY (SMA) LINKED-VARIANT: A CROSS-SECTIONAL SURVEY TO EVALUATE PROVIDER KNOWLEDGE, COMFORT, PRACTICE PATTERNS, AND A RETROSPECTIVE COHORT STUDY TO ASSESS PATIENT CLINICAL FOLLOW-UP

Authors Melissa Riegel, MD | Whitney Bender, MD | Elizabeth Critchlow, MD
Lorraine Dugoff, MD

Background The American College of Obstetricians and Gynecologists (ACOG) recommends that carrier screening for spinal muscular atrophy (SMA) be offered to all pregnant patients. SMA linked-variant incurs an increased but not absolute risk of being a carrier. The objectives of this study were 1) to determine baseline provider knowledge and practice patterns regarding SMA testing, and 2) to ascertain clinical follow-up data in patients who test positive for SMA linked-variant.

Methods Objective 1: Cross-sectional survey of UPHS obstetric providers on SMA screening knowledge, result interpretation, and practice patterns.

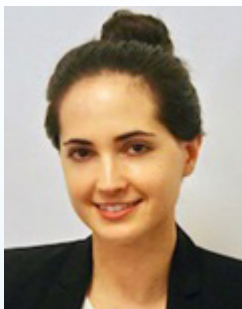
Objective 2: Retrospective cohort study of patients with SMA linked-variant test result reported between March 2017 and November 2021. Chart review was performed to obtain patient demographic and obstetric characteristics, provider recommendations, and clinical follow-up.

Data was categorized and summarized with descriptive statistics.

Results Objective 1: The survey completion rate was 64.6% (97/150 obstetric care providers). The mean knowledge score was 3.8/8 (47.5%). Although 91.3% of providers offer SMA screening, <25% reported complete comfort discussing screening and results. Comfort discussing screening and results was correlated with role and years in practice. Providers who felt completely comfortable discussing SMA screening were more likely to score $\geq 75\%$ or $\geq 50\%$ on SMA knowledge ($p < 0.005$). Comfort interpreting SMA results, however, was only correlated to a score $\geq 50\%$ on SMA knowledge ($p = 0.007$).

Objective 2: 856 patients screened positive for the SMA linked-variant. Results were communicated in 62.6% (536/856) of cases. Of results not communicated, the majority (73.4%) were not acknowledged by the ordering provider. Resident physicians (19.1%) and advanced practice providers (57.5%) most frequently disclosed results. Importantly, resident physicians and certified nurse midwives also had the lowest mean scores (3.3 and 1.9, respectively) on SMA knowledge survey. Genetic counseling (88.8%) and partner testing (62.5%) were the most frequent clinical recommendations. At least one clinical recommendation was completed by 29.1% of patients: 162 patients (30.2%) received genetic counseling and 61 (11.4%) underwent partner testing.

Conclusion Although most providers offer SMA testing, provider knowledge regarding SMA is low. Most providers are not comfortable discussing SMA testing or interpreting test results. SMA result disclosure was documented in only 2/3 of cases, and patient completion of clinical recommendations occurred in only 1/3 of cases. Additional research is needed to determine whether lack of provider knowledge and comfort contributes to suboptimal result review and follow-up.



RISK-APPROPRIATE CARE RECEIPT AMONG HIGHER-RISK RURAL BIRTHING PEOPLE

Authors Madison Sharp, MD, MMS | Molly Passarella, MS | Maggie Thorsen, PhD
 Katy Kozhimannil, PhD, MPA | Sara Handley, MD, MSCE

Background Access to obstetric care in rural areas is limited. Sparse distribution of facilities, increased travel distances, and limited availability of specialized services pose challenges for rural-residing birthing people. The goal of risk-appropriate care is to match patient characteristics with hospital capabilities to meet clinical needs. This study examined receipt of risk-appropriate care during childbirth among higher-risk rural patients.

Methods Utilizing linked vital statistics and inpatient administrative data merged with American Hospital Association data, we performed a retrospective observational cohort study examining births among higher-risk rural people. The primary outcome was childbirth at a hospital with an inappropriate level of maternal care. This determination was based on birthing person’s condition(s) necessitating a minimum level of care: basic care (level I), specialty care (level II), subspecialty care (level III), and regional perinatal health care (level IV). Bivariate analyses were used to explore associations between level of maternal care and patient/hospital characteristics.

Results The analysis included 210,846 rural birthing people with higher-risk conditions who gave birth at 425 hospitals during the study period, of which 48.6% delivered at a level I facility, 28.5% at level II, 5.4% at level III, and 17.5% at level IV. Patients 35 years or older and those with higher educational attainment more commonly gave birth in hospitals with higher level care. Hispanic rural residents and rural residents with public insurance were more likely to give birth at lower levels of care. Patients with higher-risk conditions more often gave birth at level IV facilities, except for patients with substance use disorder or obesity. There were 72,368 birthing people determined to be risk-appropriate for level II care, 9,772 for level III care, and 7,231 for level IV care, yet 48%, 52%, and 75% of these birthing people gave birth at hospitals with an inappropriately lower level of care, respectively. From 2010 to 2020, receipt of risk-inappropriate care increased from 18% in 2010 to 23% in 2020, with a peak of 28% in 2017.

Conclusion We found that more than half of high-risk rural residents do not have access to risk-appropriate obstetric care at the time of childbirth, with those who are the highest risk being the most likely to receive risk-inappropriate care. This highlights the need for resources and policies supporting obstetric services in rural communities and utilizing enhanced triage, transportation, social support, and regionalized referral systems to improve access and ultimately outcomes.

ACADEMIC YEAR PUBLICATIONS JULY 2023 TO PRESENT

PGY-4

Applebaum J, Mulugeta-Gordon L, Mokkarala S, Salva CR. Perioperative considerations for hysterectomy in second-trimester molar pregnancy. *Obstet Gynecol.* 2023 Jul 1;142(1):211-214. doi: 10.1097/AOG.0000000000005214. Epub 2023 Jun 7. PMID: 37348096.

Smith AJB, Puttaraju T, Applebaum J, Fader AN. Long-term impact of the Affordable Care Act’s dependent coverage mandate on young women with gynecologic cancer. *Gynecol Oncol.* 2023 Aug;175:121-127. doi: 10.1016/j.ygyno.2023.06.014. Epub 2023 Jun 23. PMID: 37356312.

Applebaum J, Humphries LA, Kravitz E, Taberski S, Koelper N, Gracia C, Berger DS. Impact of coronavirus disease 2019 vaccination on live birth rates after in vitro fertilization. *Fertil Steril.* 2024 Mar;121(3):452-459. doi: 10.1016/j.fertnstert.2023.11.033. Epub 2023 Dec 1. PMID: 38043842.

Boulware A, Wascher J, Wong Z, Hasselbacher L, Chen J, Freedman L, Stulberg D. Missed opportunities in postpartum contraception: bridging the gaps for patients who deliver at Catholic hospitals in Illinois. *Reprod Female Child Health.* 2024;3:e75. doi:10.1002/rfc2.75BRIDGING GAPS IN POSTPARTUM CONTRACEPTION|9of9

Kim AE, Anderson-Bialis J, Citro L, Gracia CR. Patient satisfaction with telemedicine and in-person visits in reproductive endocrinology and infertility clinics. *Reprod Biomed Online.* 2023 Oct;47(4):103286. doi: 10.1016/j.rbmo.2023.103286. Epub 2023 Jul 16. PMID: 37619518.

Kim AE, Simoni MK, Nadgauda A, Koelper N, Dokras A. Elevated antimüllerian hormone levels are not associated with preterm delivery after in vitro fertilization or ovulation induction. *Fertil Steril.* 2023 Nov;120(5):1013-1022. doi: 10.1016/j.fertnstert.2023.07.011. Epub 2023 Jul 24. PMID: 37495009.

Zafman KB, Riegel ML, Levine LD, Hamm RF. An interactive childbirth education platform to improve pregnancy-related anxiety: a randomized trial. *Am J Obstet Gynecol.* 2023 Jul;229(1):67.e1-67.e9. doi: 10.1016/j.ajog.2023.04.007. Epub 2023 Apr 11. PMID: 37054807; PMCID: PMC10330277.

PGY-3

Apple A, Mulugeta-Gordon L, Zafman K, Leitner K. An unusual cause of small bowel obstruction: Case report of spontaneous uteroenteric fistula. *Int J Gynaecol Obstet.* 2024 Jan;164(1):349-351. doi: 10.1002/ijgo.15122. Epub 2023 Sep 18. PMID: 37723887.

Smith AJB, Apple A, Hugo A, Haggerty A, Ko EM. Prior authorization for FDA-approved PARP inhibitors in ovarian cancer. *Gynecol Oncol Rep.* 2024 Feb 13;52:101335. doi: 10.1016/j.gore.2024.101335. PMID: 38390624; PMCID: PMC10878851.

Bromwich KA, McCoy JA, Cahill AG, Sciscione AC, Levine LD. Association between intracervical Foley balloon and clinical chorioamnionitis among patients with group B streptococcus colonization undergoing induction with standardized labor management. *Am J Obstet Gynecol MFM.* 2023 Nov;5(11):101167. doi: 10.1016/j.ajogmf.2023.101167. Epub 2023 Sep 22. PMID: 37741625.

McCoy JA, Bromwich K, Gerson KD, Levine LD. Association between intrapartum antibiotic prophylaxis for Group B Streptococcus colonization and clinical chorioamnionitis among patients undergoing induction of labor at term. *Am J Obstet Gynecol.* 2023 Dec;229(6):672.e1-672.e8. doi: 10.1016/j.ajog.2023.06.038. Epub 2023 Jun 21. PMID: 37352908; PMCID: PMC10733553.

Saucedo AM, Bromwich K, Alvarez M, Ghartey J, Harper LM, Levine L, Raghuraman N, Cahill AG. Group B streptococcus colonization and risk of infection with Foley catheter inductions. *Am J Obstet Gynecol MFM*. 2024 Feb 10;6(3):101311. doi: 10.1016/j.ajogmf.2024.101311. Epub ahead of print. PMID: 38342308.

Applebaum J, Humphries LA, Kravitz E, Taberski S, Koelper N, Gracia C, Berger DS. Impact of coronavirus disease 2019 vaccination on live birth rates after in vitro fertilization. *Fertil Steril*. 2024 Mar;121(3):452-459. doi: 10.1016/j.fertnstert.2023.11.033. Epub 2023 Dec 1. PMID: 38043842.

Wang-Koehler E, Kern-Goldberger AR, Srinivas SK. Complications of lymphangioliomyomatosis in pregnancy: a case report and review of the literature. *AJOG Glob Rep*. 2024 Jan 10;4(1):100309. doi: 10.1016/j.xagr.2024.100309. PMID: 38327672; PMCID: PMC10848140.

PGY-2

Acker A, Senapati S, Dokras A. Barriers to access: findings from an implementation study of an artificial intelligence-augmented 2-way chatbot for fertility care. *Fertil Steril*. 2023 Jul;120(1):199-201. doi: 10.1016/j.fertnstert.2023.04.016. Epub 2023 Apr 20. Erratum in: *Fertil Steril*. 2024 Feb 1; PMID: 37085095.

Critchlow E, Wodoslawsky S, Makhamreh MM, Rice SM, Turan OM, Firman B, McLaren R Jr, Araji S, Al-Kouatly HB. Maternal outcomes of a cohort of pregnancies affected by non-immune hydrops fetalis. *Int J Gynaecol Obstet*. 2023 Oct 27. doi: 10.1002/ijgo.15207. Epub ahead of print. PMID: 37897049.

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