RUTGERS
New Jersey Medical School

Department of Obstetrics, Gynecology and Reproductive Health

38th

Annual Resident's Research Day

Wednesday, April 23, 2025

Rosemary Gellene Room
MSB B515

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Preceptors: Alexander Fife, M.D.
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Jessica Greenberg, M.D.

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Preceptors: Lauren Naliboff, D.O.;
Michael Saad-Naguib, M.D.

10:35 A.M. **Break**

10:45 A.M.
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Preceptors: Shauna Williams, M.D.,
Lama Noureddine, M.D.

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Lama Noureddine, M.D.

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Resident: Andrea Simi, M.D.
Preceptors: Anat Chemerinski, M.D.
Alexander Fife, M.D.

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Resident: Ashleigh Pavlovic, M.D.
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Resident: Hannah Purtell, M.D.
Preceptor: Marianne DiNapoli, M.D.

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Resident: Kelsey Spear, M.D.
Preceptors: Lisa Pompeo, M.D.
Scott Richard, M.D.

2:00 P.M.

Honors Lecture

"Trauma Informed Care"

Gloria A Bachmann, MD, MMS,
Professor, Department of Obstetrics, Gynecology, and Reproductive Sciences
Associate Dean for Women's Health Rutgers Robert Wood Johnson Medical School

3:00 P.M.
Closing Remarks
Shauna Williams, M.D.

Please join us in welcoming our 2025 Resident Research Day
distinguished visiting professor:

Gloria Bachmann, M.D., M.M.S.

Professor, Department of
Obstetrics, Gynecology, and Reproductive Sciences,
Associate Dean of Women's Health,
Robert Wood Johnson Medical School
Director, Women's Health Institute

Gloria Bachmann is a nationally and internationally recognized physician who has moved health care to the next level in many areas that include menopause, perinatal issues and obstetrical safety, sexual health, gynecologic pain syndromes, LGBT wellness, and the One Health Initiative. For recognition of her expertise in mentoring and teaching, she was inducted into the Rutgers Biomedical and Health Sciences Master Educators' Guild. At Robert Wood Johnson University Hospital, New Brunswick, she is an attending physician in gynecology and the Medical Director of the PROUD Gender Center of NJ. At Rutgers Robert Wood Johnson Medical School, she is a Professor of Ob/Gyn & Medicine, the Associate Dean for Women's Health and the Co-director of the Women's Health Institute. She is a respected clinician, a valued mentor, a prolific researcher, and a sought-after educator.

She has a long history of being the principal and co-principal investigator on several clinical trials, including federally funded NIH protocols. Data derived from her participation in multiple research trials has added extensively to the literature and to many advances in health care. She strongly advocates, especially in underserved populations, for wellness screening, especially cancer screening through not only clinical practice, but also through the many educational tools that she oversees the development of. For example, for previously incarcerated women, she led in the production of animated videos that educated reentry women on the need for breast, colon and cervical cancer screening.

She is a graduate of Rutgers University and received her MD degree from the Perelman School of Medicine, at the University of Pennsylvania. She also completed her Ob/Gyn residency training at the University of Pennsylvania.

CONGRATULATIONS TO THE GRADUATES

GRADUATING RESIDENTS

Amanda Anderson, D.O.
Kevin Cannavina, D.O.
Robyn D'Agostino, M.D.
Nashali Ferrara, M.D.
Kayla Garner, D.O.
Alexandria Mason, M.D.
Reshma Parikh, M.D.
Celeste Pilato, M.D.
Joshua Santos, D.O.

GRADUATING FELLOWS

Jessica Greenberg, M.D
Michael Saad-Naguib, M.D.

PROGRAM COMMITTEE

Shauna Williams, M.D.
Director, Resident's Research Program

Anat Chemerinski, M.D.
Alexander Fife, M.D.
Peter McGovern, M.D.
Lisa Pompeo, M.D.
Sara Morelli, M.D., Ph.D.

RESIDENT'S ABSTRACTS
Academic Year 2024–2025

Postpartum antihypertensive use in preeclampsia with severe features: Does gestational age matter?

Resident: Megan Crenshaw, M.D.

Preceptors: Alexander Fife M.D.;

Shauna Williams, M.D.
Jessica Greenberg, M.D.

Introduction: Hypertensive disorders in pregnancy are one of the most common complications of pregnancy. Preeclampsia with severe features (PE with SF) affects 5-7 percent of all pregnancies and is the cause of approximately 20% of all preterm deliveries (1). These deliveries can be associated with severe maternal morbidity. Initiation of oral long acting antihypertensives reduces the risk of hypertensive complications and the burden of maternal morbidity and mortality (2). While there are well-defined guidelines for acute management of preeclampsia, there lacks clear oral antihypertensive recommendations for postpartum management. This study aims to examine if gestational age at delivery is associated with the use of antihypertensive agents postpartum in patients with preeclampsia with severe features. Our hypothesis was that patients with PE with SF who deliver preterm would require antihypertensive agents more frequently than patients who delivered at term.

Methods: The study was a retrospective chart review of patients diagnosed with PE with SF who delivered at University Hospital from October 2020 - June 2021 and September 2022 – December 2024. Patients were excluded if diagnosed with chronic hypertension or PE during another hospital encounter. Patients with PE with SF were grouped by gestational age, separated into those who delivered at or after 37w0d gestation (term) versus those who delivered at or before 36w6d gestation (preterm). The patients were then evaluated based on discharge medications: those prescribed one or multiple antihypertensives versus those not on any medication other than furosemide. Statistical analysis was performed using Mann-Whitney U Test and Fisher's exact test to compare patient demographics, intrapartum course, and postpartum outcomes.

Results: A total of 226 patients with PE with SF were included in the study. One hundred fifty-nine patients (70.3%) delivered at term while 67 patients (29.7%) delivered preterm. Twenty-six patients delivered prior to 34w0d gestation. At discharge, 70.1 % of preterm patients were discharged home on an antihypertensive compared to 54% of term patients ($p = 0.027$). History of pregestational diabetes, kidney disease, autoimmune disease, age and ethnicity were similar in the preterm and term groups ($p>0.05$). Preterm patients were more likely to be prescribed labetalol alone or more than one antihypertensive than term patients. Postpartum stay was longer for preterm patients. There was no difference in postpartum follow up between preterm and term patients as well as those prescribed antihypertensives compared with no medication. Diastolic blood pressure at the blood pressure check visit was higher in patients prescribed antihypertensives at discharge (78 mmHg vs.71 mmHg, $p = 0.032$).

Conclusion: PEC with SF has known significant maternal morbidity and mortality, indicating the importance of early intervention. This study highlights preterm patients as a high-risk group who may require antihypertensive agents to achieve postpartum blood pressure control. Early initiation of antihypertensives in this population with close outpatient follow up during the inpatient stay should be considered. Further study is recommended to explore how this affects short- and long-term morbidity associated with this condition.

References:

1. Ford ND, Cox S, Ko JY, et al. Hypertensive Disorders in Pregnancy and Mortality at Delivery Hospitalization — United States, 2017–2019. MMWR Morb Mortal Wkly Rep 2022;71:585–591. DOI: http://dx.doi.org/10.15585/mmwr.mm7117a1

2. Ainuddin J, Javed F, Kazi S. Oral labetalol versus oral nifedipine for the management of postpartum hypertension a randomized control trial. Pak J Med Sci. 2019 Sep-Oct;35(5):1428-1433. doi: 10.12669/pjms.35.5.812. PMID: 31489020; PMCID: PMC6717493.

Postpartum glucose tolerance testing for patients with gestational diabetes: Does in-hospital testing after delivery improve completion rates?

Resident: Mishel Figueroa, M.D.

Preceptor: Theodore Barrett, M.D.

Introduction: Gestational diabetes mellitus (GDM) affects up to 9% of pregnancies each year in the United States. About 33% of those with history of GDM go on to develop type 2 diabetes within 5 years of delivery, but this percentage increases to almost 50% for people of color. Postpartum glucose tolerance testing is recommended by the American College of Obstetricians and Gynecologists (ACOG) and the American Diabetes Association (ADA), however, several studies have shown less than half of patients receive postpartum glucose tolerance screening, with one study showing less than a quarter of patients undergoing any postpartum screening at all within a year. Werner et al. (2020) found that a two-day postpartum glucose tolerance test (GTT) had similar diagnostic value as a 4- to 12- week postpartum GTT in predicting impaired glucose metabolism and diabetes at 1 year after delivery and nearly 100% adherence to the test. Ayala et al. (2024) recently reaffirmed that completion rates with an inpatient early GTT were higher than if the testing was deferred. The inpatient postpartum GTT was implemented as a routine screening option for patients at University Hospital mid-October 2024, and we sought to analyze its impact on our patient population. Our objective was to determine if offering the postpartum GTT inpatient after delivery at University Hospital increases postpartum diabetic screening at our institution.

Methods: This was a retrospective cohort study of patients with GDM who delivered at University Hospital from March 2024 to March 2025. Patients with GDM who delivered at University Hospital in the 6 months preceding implementation of the inpatient postpartum GTT (March 2024-October 2024) served as the pre-intervention group, while patients who delivered in the 6 months following implementation (October 2024-March2025) served as the post-intervention group. The primary outcome was completion of the postpartum GTT. Patients with incomplete records were excluded when pertinent data was missing. Statistical analysis was performed using chi-squared tests.

Results: Of the 37 patients in the pre-intervention group, 7 completed the postpartum GTT, 6 were of unknown completion status, and 24 did not complete the postpartum GTT. Of the 31 patients in the post-intervention group, 24 opted to complete the postpartum GTT inpatient, and all 24 completed the postpartum glucose tolerance test inpatient; 6 opted to defer to the outpatient setting, 5 of which did not complete the postpartum GTT in the outpatient setting and 1 of which was of unknown completion status; 1 was ineligible for the inpatient postpartum GTT and did not complete it in the outpatient setting. The post-intervention group had a significantly higher completion rate (24 out of 30; 80.0%) compared to the pre-intervention group (7 out of 31; 22.6%) ($p < 0.0001$). In the pre-intervention group, 57.1% of patients had normal postpartum GTT results, and 42.9% had results concerning for impaired glucose metabolism. In the post-intervention group, 56.5% of patients had normal results, 34.8% had results concerning for impaired glucose metabolism, and 8.7% had results concerning for overt diabetes. There was no significant difference in postpartum attendance between the groups ($p = 0.572$).

Conclusions: The inpatient postpartum GTT is feasible to implement, and, moreover, an option that patients do choose for their postpartum screening after delivery at University Hospital. The above results suggest that inpatient administration of the postpartum GTT significantly increases the likelihood of test completion, reinforcing the value of offering testing during the postpartum hospitalization. Given suboptimal rates of completion of postpartum screening for overt diabetes mellitus reported in the literature and found at our own institution, offering the inpatient postpartum GTT appears to be a practical way to bridge a large gap and ensure patients complete a test that can have important long-term implications for their health and well-being.

The Impact of Age on Endometrial Thickness in Frozen Embryo Transfer Cycles: A SART CORS Study

Resident: Kristi Blackledge, M.D.

Preceptor: Anat Chemerinski, M.D.

INTRODUCTION: Female age is known to affect the success of assisted reproductive technology (ART) treatment. The decline in oocyte quality and quantity is well-established; less attention has been paid to endometrial aging. The aim of this study was to assess the impact of age on endometrial thickness (EMT) and clinical pregnancy rates in frozen embryo transfer (FET) cycles. Our hypothesis was that older women would achieve less endometrial thickness, suggestive of underlying endometrial dysfunction, and therefore have a decreased clinical pregnancy rate.

METHODS: This retrospective study assessed EMT in FET cycles reported to SART between 2016-2020. Young (age <35) and older (age ≥35) women were compared. To isolate the effect of age on EMT, young nonidentified oocyte donor (NOD) recipients were compared to older NOD recipients; young and older gestational carriers (GCs) served as respective controls for the effects of infertility. For analyses of clinical pregnancy rates (CPR) and live birth rates (LBR), only cycles in which a high-quality blastocyst-stage single embryo transfer was performed, were included. Chi-Square, Fisher Exact, ANOVA, or Kruskal-Wallis tests were used to compare measures across the four study groups. Post-hoc, Bonferroni adjusted pairwise comparisons were also run to identify significantly different outcomes ($p < 0.05$).

RESULTS: A total of 120,578 cycles were included. There was a statistically significant difference in EMT between young and older GCs (10.2 vs 10.4 mm, $p<0.001$) but not between young and older NOD recipients (9.7 vs 9.7 mm, $p=0.081$). The highest cancellation rates were seen in GC cycles (9.1 and 7.7% for those <35 and ≥35 respectively) compared with NOD recipient cycles (5.4 and 7.0% for those <35 and ≥35 respectively). The most common reason for cycle cancellation was inadequate endometrial response. In logistic regression models stratified by GC status there was a decrease in clinical pregnancy rate (CPR) with increasing age in GC (OR 0.98, 95% CI 0.97, 0.99) and non-GC cycles (OR 0.98, 95% CI 0.98, 0.99). There was also a decrease in live birth rate (LBR) with increasing age in GC (OR 0.98, 95% CI 0.97, 0.99) and non-GC cycles (OR 0.98, 95% CI 0.97, 0.98).

CONCLUSION: Despite minimal age-related effects on endometrial thickness (<1 mm), a significant decline in CPR and LBR is noted with age. The age-related decline in pregnancy rates in GCs and NOD recipients, which are groups in which uterine factor infertility is not typically implicated, suggests an important role for uterine aging in the success of IVF. Our novel findings support the importance of further research into the mechanisms of the uterine aging phenomenon.

Improving provider adherence to emergency contraception prescription guidelines in a university clinic

Resident: Erin Cawthorn, D.O.

Preceptors: Lauren Naliboff, D.O., M.P.H
Michael Saad-Naguib, MD

Introduction: According to the American College of Obstetrics and Gynecology (ACOG), “emergency contraception (EC) should be offered or made available to women who have had unprotected or inadequately protected sexual intercourse and who do not desire pregnancy”. University Hospital (UH) in Newark, NJ provides outpatient care to women who are primarily insured through Medicaid or Charity Care. This patient population is at higher risk for having inadequate access to healthcare, especially contraceptive access, for various social and financial reasons. Though patients are offered a variety of contraceptive options, many patients presenting for contraceptive management visits leave with low-efficacy methods by choice. They may not be offered EC as a backup option or counseled about its use. The objective of this study was to determine if prescription rates for emergency contraception increased after provider education regarding the ACOG recommendations.

Methods: This was a retrospective study of patients who presented to University Obstetric Associates who presented for contraception visits, identified by ICD-10 codes relating to contraceptive management. Healthcare providers at University Hospital were educated on the ACOG recommendations for prescribing EC at a faculty and resident wide meeting, and order sets were made in the EMR for easier prescribing for providers. Pre-intervention cohort was identified who presented between September 1st, 2024 to January 22nd, 2025, and a post-intervention cohort was identified who presented between January 23rd, 2025 to April 2nd, 2025. Medical records were reviewed for demographics, contraception prescribed, and if EC prescription was provided. Rates of prescription for EC in the pre- and post-education group were compared. Fisher’s exact test was used.

Results: Fifty patients were identified for the pre-intervention group and 88 charts were included in the post-intervention group. In the pre-intervention group, 7 (14%) patients received a prescription for EC compared to 8 (9%) in the post-intervention group (OR = 1.63, 95% CI 0.55-4.79). In the pre-intervention group, 43 of these patients had received a non-LARC or no contraception, and 7 of these patients received a prescription for EC. Similarly, 81 patients in the post-intervention group received a non-LARC or no contraception, and 7 of these patients received a prescription for EC. Even when excluding patients who received LARC methods of contraception, there was no difference in EC prescriptions for patients who received no contraception or non-LARC methods of contraception before and after teaching (OR = 1.77, 95% CI 0.6-5.28).

Conclusions: Although the education intervention did not improve adherence to ACOG guidelines regarding EC, this suggests the need for additional educational and/or EMR interventions to improve provider adherence to EC guidelines, and potentially decrease the rates of unintended pregnancy in our patient population.

Battling Anemia in Pregnancy: Intravenous vs Oral Iron—Who is the Winner?

Resident: Ashley Haney, M.D.

Preceptors: Lama Noureddine M.D.;
Shauna Williams, M.D.

Introduction: Iron deficiency anemia (IDA) is a common diagnosis in pregnancy with established adverse effects on both maternal and neonatal outcomes. Oral iron supplementation is the first-line treatment, with IV iron utilized in severe cases. IV iron has been shown to increase the rate of hemoglobin (Hg) rise compared to oral regimens, but data is limited regarding change in maternal clinical outcomes postpartum. This study aims to compare the impact of IV iron, PO iron or no treatment in reducing rates of postpartum blood transfusion rates in pregnant patients with iron deficiency anemia.

Methods: This was a retrospective cohort study of patients with IDA who underwent delivery after 20-weeks gestation at University Hospital from June 2020 to October 2024. Patients were included if they had a pre-delivery admission hemoglobin of <10.5 g/dL and ferritin <30. Patients were excluded if they had hemoglobinopathy, contraindications to blood transfusion, or history of malabsorptive disorders/gastric surgery. Cohorts were defined by treatment modality including IV iron, oral iron, and no treatment. The primary outcome was postpartum blood transfusion. Secondary outcomes included Hg levels at admission and postpartum day 1, percent change in Hg (pre-treatment to admission), and symptomatic anemia during postpartum course (composite value of tachycardia, hypotension, and patient reported symptoms). Chi-Squared, Fisher's Exact, Mann-Whitney U and Kruskal-Wallis tests were used for data analysis ($p < 0.05$). A Firth regression model was performed.

Results: Among the 427 patients with IDA, 224 received at least 1 dose of IV Iron (Group 1), 171 were prescribed only PO iron supplementation (Group 2), and 32 patients were not prescribed treatment (Group 3). Pre-treatment hemoglobin (Hg) levels were different between the three groups [8.7 g/dL (8.1-9.3) vs 10.0 g/dL (9.8-10.4) vs 10.2 g/dL (10-10.4), ($p < 0.001$) in Groups 1, 2 and 3 respectively]. The IV iron group had a higher percent change in Hg between pre-treatment and admission levels [17% (7.3-28.3), 6.1% (0-13.8), 1.5% (-5.6-15.7), $p<0.001$]. The admission hemoglobin level was also different [10.3 g/dL (9.5-11), 10.6 g/dL (9.9-11.4), 10.3 g/dL (9.5-10.8), $p=0.004$]. There was no difference found in the primary outcome of blood transfusions rates (8.4% vs 6.4% vs 12.5%, $p = 0.43$). When analyzing the patients who received transfusion vs no transfusion, there were differences in QBL [931 mL(594-1204) vs 300 mL (200-963), $p <0.001$], admission Hg [9.7 g/dL (9.3-10.3) vs 10.5 g/L (9.7-11.2), $p <0.001$), postpartum day 1 Hg [7.3 g/dL (6.5-7.9) vs 9.2 g/dL (8.4-10), $p <0.001$], and rates of symptomatic anemia (64.7% vs 19%, $p <0.0001$).

Conclusion: Treatment with IV iron led to a greater change in Hg and led to a similar admission value compared to the other groups. Despite starting with lower baseline hemoglobin, the IV treatment group did not have an increase in rate of blood transfusion. This supports the use of IV iron for patients with more significant IDA in pregnancy. Further studies are recommended to identify the patients who may benefit the most and the optimal timing of treatment.

Misdated or Just Small: Study of Fetal Growth Restriction Outcomes in Pregnancies with Suboptimal Dating

Resident: Angela Hopf, M.D.

Preceptors: Shauna Williams, M.D.
Lama Noureddine, M.D.

Introduction: Fetal Growth Restriction (FGR) is diagnosed when the estimated fetal weight (EFW) or abdominal circumference (AC) is less than the 10%ile for gestational age. Umbilical Artery Dopplers (UAD) have long been described as a surveillance tool for pregnancies affected by FGR. Abnormal UAD are typically associated with poor neonatal outcomes. The American College of Obstetricians and Gynecologists considers first-trimester ultrasonography to be the best method in establishing or confirming pregnancy dating and considers pregnancies dated after 21 6/7 weeks to be sub-optimally dated. This study aims to assess the incidence of abnormal UAD, and obstetric and neonatal outcome differences in pregnancies affected by FGR when pregnancy dating is suboptimal. Our hypothesis was that the incidence of abnormal UAD and adverse obstetric/neonatal outcomes in pregnancies affected by FGR is higher in pregnancies with optimal dating when compared to pregnancies with suboptimal dating.

Methods: This was a retrospective cohort study of patients who delivered at University Hospital (UH) between January 2020 and March 2025 after 20 weeks gestation. All patients included were diagnosed with FGR by ultrasound criteria of AC <10%ile and/or EFW <10%ile at any ultrasound performed in the Ambulatory Care Clinic Ultrasound Unit. The cohorts were divided into optimally dated (Group 1) with pregnancy dating by first trimester ultrasound (1TU) or second trimester ultrasound (2TU) congruent with LMP and suboptimally dated (Group 2) with pregnancy dating by third trimester ultrasound (3TU) or 2TU incongruent with LMP. Abnormal UAD were defined as elevated systolic to diastolic ratio (S/D), pulsatility index (PI), or resistance index (RI) greater than 95%, or absence or reversal in diastolic flow. The primary outcome was abnormal UAD rate. Secondary outcomes included FGR resolution, neonatal weight, non-congruent Ballard score, small for gestational age (SGA) neonates, NICU admission, and an adverse composite neonatal outcome (CNO). Fisher's exact, chi-squared, and Mann-Whitney U tests were used with an alpha of 0.05. Median and interquartile range are shown.

Results: Among 282 patients, 226 (80.1%) were optimally dated (Group 1) and 56 (19.9%) were suboptimally dated (Group 2). Within Group 1, 123 (54.4%) were dated by1TU and 103 (45.6%) by 2TU congruent with LMP. In Group 2, 36 (64.3%) were dated by 2TU incongruent with LMP, and 20 (35.7%) by 3TU. The rate of abnormal UAD was significantly lower in Group 1 (27 [11.9%] vs 16 [28.6%], p=0.002). However, Group 1 was less likely to have resolution of FGR, (45 [19.9%] vs 44 [78.6%], p=<0.0001). Neonatal weight (2600g [2295-2843] vs 2540g [2181-2871], p=0.66) and Ballard scores (38 [38-39] vs 38 [38-38], p=0.46) were similar. There were no significant differences in the rates of SGA neonates (112 [49.6%] vs 33 [58.9%], p=0.21), NICU admission (62 [27.4%] vs 19 [33.9%], p=0.49), or adverse CNO (62 [27.4%] vs 14 [25%], p=0.49).

Conclusions: Given that the rate of abnormal UAD was significantly higher in pregnancies with suboptimal dating, pregnancies dated by later ultrasounds with a diagnosis of FGR should be treated similarly to patients with optimal dating. Additionally, neonatal outcomes remain similar between both groups, so continuing standard of care surveillance, monitoring, and management remains appropriate regardless of pregnancy dating.

Assessing Barriers to Care: Factors Associated with Cancellation of Gynecologic Surgery at a Tertiary Safety Net Hospital

Resident: Andrea Simi, M.D.

Preceptors: Anat Chemerinski, M.D.
Alexander Fife, M.D.

Introduction: Surgical cancellations can influence hospital efficiency and impact patient outcomes. Understanding the patient-related and systemic factors contributing to case cancellation is essential for optimizing care. Therefore, this study aimed to uncover the incidence of, reasons for and factors associated with gynecologic surgical case cancellations at our institution. We hypothesized that comorbidities and patient age are associated with increased likelihood of surgical case cancellation.

Methods: This case control study included University Hospital Ambulatory Care Center OBGYN patients scheduled to undergo non-emergent, non-obstetric surgery between December 2023 and May 2024. Retrospective chart review was performed using Epic EMR and an existing clinic quality improvement database. Data extraction included patient demographics, surgical factors and clinical details. Descriptive statistics were performed. Patients with and without surgical case cancellation were compared on bivariate analysis, using chi-square, Fisher's exact or Wilcoxon rank sum test as appropriate. Multivariable logistic regression was then performed to identify factors associated with increased likelihood of cancellation.

Results: Of 282 patients who met inclusion criteria, 67 (23.8%) experienced cancellation of their initial surgery. Medical co-morbidities were the most common reason for cancellation, responsible for 15 cancellations (22.4%). The median time of cancellation was 3 days prior to scheduled surgery (0 – 12 days). Twenty patients (29.9%) experienced a same-day surgical cancellation, most commonly due to medical co-morbidities (8 patients, 40%). Of the 67 patients in the cancelled group, 33 (49.3%) ultimately underwent a surgical procedure with median time to completion of 40 days (24 – 64 days). Hospital admission and emergency room visit rate after cancellation was low (2 patients, 3.1%).

On bivariate analysis, those who underwent surgery as scheduled were significantly more likely to have public insurance (71.4% vs. 62.1%, p = 0.02), while those cancelled were more likely to be uninsured (3% vs. 0%, p = 0.02). Cancelled patients were significantly less likely to have completed PATs (30.2% vs. 3.0%, p<0.0001). They were more likely to have been scheduled for laparoscopic bilateral salpingectomy (34.3% vs. 22.3%, p = 0.048) and robotic hysterectomy (10.45% vs. 3.26%, p = 0.03), but less likely to have been scheduled for vaginal hysterectomy (4.48% vs. 14.88%, p= 0.03). Desire for permanent sterilization was a more common surgical indication in the cancellation group (29.9% vs. 15.4%, p = 0.008).

On multivariate logistic regression, undergoing a robotic hysterectomy (OR 3.53 [1.12 – 11.11], p=0.03) or sterilization procedure (OR 3.44 [1.59 – 7.41], p = 0.002) was associated with an increased risk of surgical case cancellation.

Conclusions: Surgical case cancellation in our department is significant, impacting 23.8% of scheduled non-obstetric cases. As anticipated, medical co-morbidities/illness on the day of surgery are most cited as the reason for cancellation, but age and quantified comorbidity scale were not significant predictors of cancellation. Nonetheless, medical optimization must be prioritized to reduce cancellations and barriers to care. Undergoing robotic hysterectomy and surgery for "desire for permanent sterilization" were independently associated with an increased likelihood of cancellation and must be further examined on sub-analysis.

Difference in Gestational Age at Syphilis Screening After Implementation of an Early Pregnancy Assessment Clinic

Resident: Ashleigh Pavlovic, M.D.

Preceptor: Marianne Dinapoli, M.D.

Introduction: The integration of Early Pregnancy Assessment Clinics (EPACs) into prenatal care has been demonstrated in the literature to improve access to early pregnancy care. Early care has been correlated with improved antenatal outcomes. With the recent implementation of an EPAC at our institution, the aim of this study was to evaluate whether obstetric care was initiated earlier in those first seen in EPAC. Using the date of the first syphilis screening (via RPR) as a proxy for the initiation of prenatal care, our hypothesis was that gestational age at first syphilis screen would be earlier in patients who presented to the EPAC compared to patients who did not.

Methods: This was a retrospective cohort study of all deliveries from May 2024 to December 2024 at University Hospital. Patients were identified by the delivery record in the EMR. Patients were divided into two cohorts based on care in EPAC or routine prenatal care. Additionally, we evaluated secondary outcomes known to be correlated with insufficient prenatal care including hypertensive disorders of pregnancy, low birth weight, preterm birth, and intrauterine fetal demise. Chart review was performed to extract data from the electronic medical record. Descriptive statistics, normality/lognormality tests, Fisher's exact and Mann-Whitney U tests were used for data analysis.

Results: 995 deliveries met inclusion criteria with 63 receiving care via an EPAC appointment. There was no difference in race/ethnicity and insurance status at time of delivery between groups. Patients seen in EPAC had an earlier gestational age at time of first RPR test [10.4 weeks (IQR 7.7-14.7) vs 18.1 weeks (13.9-27.1), $p < 0.0001$]. Additionally, the gestational age at the new OB visit was earlier with exposure to EPAC (14.9 weeks (13.1-16.4) vs 18.3 weeks (14.7-24.9), $p < 0.0001$]. There was no difference in low birth weight, preterm birth, or IUFD between groups. While not statistically significant, there was a trend toward lower rates of hypertensive disorders of pregnancy in the EPAC group (20.63% vs 31.65%, $p = 0.067$).

Conclusion: Patients seen in EPAC had earlier syphilis testing compared to those who initiated care in a traditional way. The implementation of an EPAC therefore led to earlier initiation of prenatal care in a high-risk clinic population. While this study does not show the effects in the smaller population size, larger population studies show decreased rates of hypertensive disorders of pregnancy in patients receiving sufficient prenatal care. Therefore, future steps include further study of the effects of EPAC on hypertensive disorders of pregnancy.

Fulfillment of postpartum contraception: a retrospective study

Resident: Hannah Purtell, M.D.

Preceptor: Marianne Dinapoli, M.D.

Introduction: There are several benefits to providing timely and broad access to immediate postpartum contraception, including inpatient long-acting reversible contraception (LARC). Inpatient contraception access allows for increased reproductive autonomy, reduced unintended or short-interval pregnancies, and increased cost-effectiveness as compared to the postpartum period1. The primary objective of this study was to assess our institution's fulfillment of desired postpartum contraception at the time of hospital discharge. We specifically aimed to assess whether there was a difference in contraception fulfillment during two discrete time periods across the span of a year, before and after contraceptive options were limited at our institution. Our secondary outcomes were whether the rate of postpartum contraception fulfillment varied depending on desired method, and identification of systemic barriers to contraception fulfillment.

Methods: This was a retrospective study of all patients who delivered at University Hospital between November 22, 2023 and November 6, 2024. The "early" time frame (11/22/2023 to 5/5/2024) was defined as the period in which complete access to immediate postpartum LARC was offered inpatient. The "late" time frame (5/6/2024 to 11/6/2024) was the period in which etonogestrel implants were no longer available inpatient for immediate postpartum implantation. Exclusion criteria included cesarean hysterectomy and if contraception counseling was not documented. Chart review was conducted and patients' demographic information and desired contraception method following delivery were recorded at time of discharge. Analysis was performed using Chi-square testing to compare rates of fulfillment of each method between the two time periods.

Results: There were 1343 patients who met inclusion criteria, with 597 in the early group and 746 in the late group. The overall rate of postpartum contraception fulfillment was 59.5%. Contraception fulfillment was 75.0% during the early time frame, compared with 47.3% during the late time frame ($p<0.0001$). Overall, the most desired contraceptive method across the entire time period was etonogestrel implant ($n = 338$). During the early period, there was 85.0% fulfillment of those who desired implant compared with 0% fulfillment during the late period ($p < 0.0001$). There was no significant difference between contraception fulfillment across other methods in the early vs late groups. Age, race, insurance method, BMI, parity and gestational age were not different between groups.

Conclusions: Our institution's postpartum contraception fulfillment was high overall, but was significantly lower once inpatient etonogestrel implant access was eliminated. The most desired method of contraception overall across both time periods was the implant. This data reveals our institution's inability to fulfill the contraceptive desires of our patient population when complete access to postpartum LARC is denied, underscoring the importance of access to the full scope of contraceptive options. Future directions include evaluation of immediate and remote outcomes associated with postpartum contraception fulfillment, including rate of fulfillment or pregnancy rate over the course of one year following delivery.

Reference: Moniz, M., Spector-Bagdady, K. , Heisler, M. & Harris, L. (2017). Inpatient Postpartum Long-Acting Reversible Contraception. Obstetrics & Gynecology, 130 (4), 783-787. doi: 10.1097/ AOG.0000000000002262.

Incorporation of Simulation into the Resident Robotics Curriculum: An Opportunity for Growth in Resident Education

Resident: Kelsey Spear, M.D., M.P.H.

Preceptors: Lisa Pompeo, M.D.
Scott Richard, M.D.

Introduction: Robotic-assisted surgery was approved by the FDA in 2005 for gynecologic procedures. Since that time, its use has grown rapidly. Several studies have shown that incorporation of simulation-based training for a variety of GYN surgeries increases technical surgical skills.1-2 Historically, the Rutgers-Cooperman Barnabas OBGYN residency curriculum included a dry-lab in the robotics curriculum, however in recent years this has not been performed. The authors theorize that there is an untapped opportunity in robotic surgery simulation for resident education.

The purpose of this study is to evaluate the educational value of incorporating robotic simulation sessions into the Rutgers-Cooperman Barnabas OBGYN residency robotics curriculum. We wanted to assess the feasibility of incorporating simulation sessions into the curriculum, and whether the simulation sessions improve resident comfort with, and knowledge of, robotic surgery. Our hypothesis is that residents will feel more comfortable after attending the robotics simulation sessions, that residents will feel there is educational value in hands-on training in the OR, and that incorporating simulation during resident didactic time is feasible.

Methods: This is a prospective cohort study to assess the impact of robotic surgery simulation sessions on resident education, comfort with robotic surgery, and skill level. Two planned simulations were scheduled for all residents within the Cooperman Barnabas/Rutgers Health OBGYN program. A fifteen-item survey was disseminated to the residents of the OBGYN program at Cooperman Barnabas/Rutgers Health after the second simulation session. The collected data was analyzed in PowerBI and Python. Spearman Correlation tests, Kruskal-Wallis H tests, and Wilcoxon Signed-Rank tests were performed.

Results: Two robotic surgery simulation sessions were hosted at Cooperman Barnabas, one session in November 2024 and one in March 2025. Thirty-three resident physicians completed the survey. Of the 33 residents who completed the survey, nineteen were able to attend a simulation session, with only two attending both sessions. Thirty-six percent of the attendees felt “very uncomfortable” with robotic surgery prior to the simulation sessions, with a decrease to 3% feeling “very uncomfortable” after attending the simulation sessions ($p=0.03$). Those who reported more practice hours on the robotic practice console felt more comfortable both before and after the simulation sessions ($p=0.006$). Comfort levels after the simulation sessions increased as post-grad year increased and were higher if the resident had completed their GYN oncology rotation prior to the session. Fifteen of the 19 attendees found the sessions to be “highly valuable,” and 31 of 33 survey participants felt the simulations sessions were feasible to schedule during resident didactics time.

Conclusions: Increasing solo practice hours on the robotic simulator, having done the GYN oncology rotation at Cooperman Barnabas, and increasing post-graduate years are factors that positively contribute to resident physician comfort with robotic surgery. The residents of the Cooperman Barnabas/Rutgers Health OBGYN program feel that incorporating simulation sessions into the robotics curriculum is valuable, increases comfort with robotic surgery, and is feasible.

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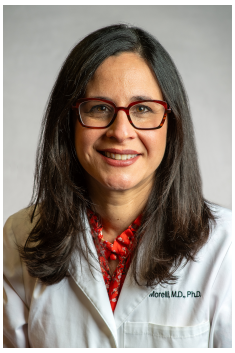

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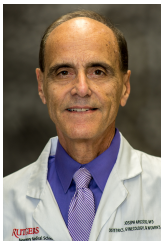

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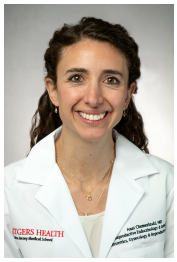

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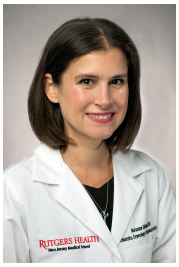

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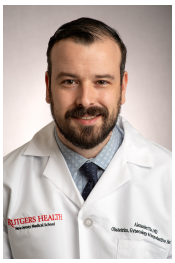

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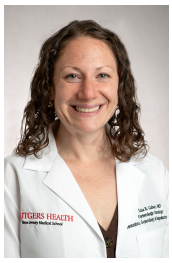

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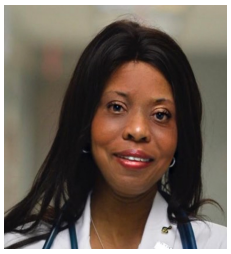

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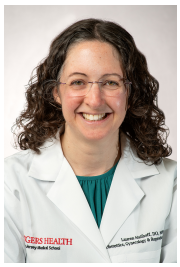

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