To our residents, congratulations on your research!

To our faculty and staff, thank you for your continued guidance and support!

Save the date:

2024 Research Day

June 2, 2025

CME Continuing Medical Education

THE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY PRESENTS:

Research Day 2024

KEYNOTE SPEAKER

Mary E D'Alton, MD

Obstetrician and Gynecologist-in-Chief

Chair at New York Presbyterian/Columbia University

Irving Medical Center

Monday, June 3, 2024

Physician's Conference Center

7:30 AM—1:30 PM

Program Schedule

Welcome

George L. Maxwell

President

7:30 AM—7:35 AM

Keynote

Mary E D'Alton, MD

"Gaps in Women's Health"

7:35 AM—8:30 AM

Resident Research Presentations

8:30 AM—10:50 AM

10:50 AM—11:00 AM Break

11:00 AM—1:00 PM

Lunch

1:00-1:30pm

Awards, Closing Remarks

1:00-1:30pm

G. Larry Maxwell, MD

President

Samantha Buery-Joyner, MD

Residency Program Director

Rahel Ghenbot, MD, FACOG

Associate Director of Research / Urogynecology

Research Presentations

Each presentation is 8 minutes with 2 minutes for questions.

1	Riley Kraus, MD 8:30 –08:40am	"Training and Implementation of the Jada System to Decrease Morbidity After Postpartum Hemorrhage"
2	Lillian Singer, MD 8:40-8:50am	"Advancing Maternal and Neonatal Health: Evaluating the Efficacy and Safety of Outpatient Intravenous Iron Therapy in Treating Iron-Deficiency Anemia During Pregnancy"
3	Madison Collazo, MD 9:20 -9:30am	"The Effectiveness of a Simulation-Based Menopause Education Program"
4	Shadain Akhavan, MD 9:30-9:40am	"Comparative Analysis of Treatment Modalities for Cervical Ectopic Pregnancy: A BhCG Decline Rate Study"
5	Megan Deyarmond, MD 9:40-9:50am	"Reproductive health, rights and advocacy curriculum to enhance OBGYN' resident training in residencies that are not part of the Ryan Program"
6	Sebastian Nasrallah, MD 9:50-10:00am	"Association between vaginal Ureaplasma spp. infection and length of the latency period in preterm premature rupture of membranes (PPROM)"
7	Bianca Nguyen, MD 10:00-10:10am	"Evaluation of Anxiety and Depression related to Quality of Life across Endometrial and Ovarian Cancer"
8	Alexander Powell, MD 10:10-10:20am	"Pregnancy outcomes in Pregnant Patients of Advanced Maternal Age vs. Adolescents Infected With SARS-CoV-2: Does maternal age matter?"
9	Alicia St. Thomas, MD 10:20-10:30am	"Assessing and addressing OBGYN resident wellbeing at Inova Fairfax Hospital through a System of Wellness: A follow-up."
10	Ali Ayan, MD 10:30-10:40am	"Labor Patterns in Patients Undergoing Trial of Labor after Cesarean"
11	Sofia Girald Berlingeri, MD 10:40-10:50am	"Comparison of two salpingectomy techniques for sterilization at the time of cesarean delivery"
10:50-11:00am		**BREAK**

INOVA FAIRFAX HOSPITAL

Resident Research Day: June 3, 2024

Abstract Title: _____

Author: _____

Judge: _____

ORIGINALITY (original vs confirmatory investigation)		
Score	Description	Your Score
1	Not original "nothing new"	
2	Some originality; been reported before but has some unique feature	
3	Highly unique case: never previously reported	
IMPORTANCE TO SPECIALTY AND DISCIPLINE		
1	No significance, irrelevant	
2	Moderate significance	
3	Highly significant, very relevant	
METHODOLOGY (study design/statistical analysis)		
1	No study design or statistical methodology	
2	True study design	
3	Clear study design	
RESULTS & CONCLUSIONS (clarity, organization, relevance of tables and figures)		
1	No clear results or conclusions	
2	Somewhat clear conclusion	
3	Clear results and conclusion	
ART FORM (quality of slides and oral narrative)		
1	Slides and oral narrative not clear	
2	Slides and oral narrative somewhat clear	
3	Slides and oral narrative very clear	

TOTAL SCORE (max 15)

Evaluation of Patient Insight into Advanced Stage Gynecologic Cancer

Authors: Neil Phippen MD, Larry Maxwell MD, Kathleen Darcy PhD, Biance Nguyen MD, Brittany Gilmore MD, Miranda Newell, Renee Brenner

Background: End of life care is essential in the domain of oncology. Patients with advanced cancer often do not have realistic expectations of their disease process. Improving patient understanding of their disease state is essential to improve quality of life, increase patient compliance, ensure clear advanced directives, and decrease futile interventions. Hospice care has been recommended by major cancer organizations for patients with end-stage cancer to receive better quality of care that is consistent with patient wishes and better family satisfaction with care. Hospice and palliative care services have reduced costs to the patient and the healthcare system. Patients who discuss end of life care with their care provide receive less aggressive therapies at the end of life and were more likely to use hospice for longer periods of time.

Further, Advanced Care Planning (ACP) in oncology is increasingly becoming an expectation in the outpatient oncology setting, and retrospective studies have shown that these discussions are not taking place until the last few months of life. These conversations typically occur in the inpatient setting when symptom burden is significant. There is a gap in the literature regarding the timing and frequency of ACP discussion with patients. There is a need for referral and education to hospice and palliative service earlier in disease progression to provide quality end of life care.

Objective: This study aims to investigate patients' understanding of their current disease state, to compare patient and provider outlooks on disease status, and to highlight the need for increased patient education in those with advanced-stage gynecologic cancer in the span of three years. Demonstrating a discordance between patient and provider understanding of the patient's disease trajectory can trigger further conversations about goals of care and empower patients to make decisions about their care that are well-informed and compassionate towards their goals.

Methods: A 28-question survey will be administered to participants, and a 14-question corresponding questionnaire will be administered to a gynecology oncology provider. Additionally, a six- section 86-question questionnaire will be administered to better understand patients' health related quality of life in relation to their cancer diagnosis. The answers involve a 5- point Likert scale. The subsections include quality of life, global health, pain and fatigue, stress, anxiety, and depression, symptoms, and support. The addition of this questionnaire will be beneficial to further analyzing patient understanding of their disease process.

The total time for questionnaire completion is anticipated to be 30 minutes. The metrics include inquiring about patient diagnosis, current treatment plan, ability to cure disease, knowledge about palliative care services, advanced care directives, living will, quality vs quantity of life, and hospice care. This will be measured on a 5-point Likert scale from "strongly agree" to disagree strongly." The scores of the patient and provider will then be compared and assessed for discrepancies.

Results/Conclusions: In process

Research Presentations

Each presentation is 8 minutes with 2 minutes for questions.

12	Omotomilade (Tomi) Olopoenia, MD 11:00-11:10am	"Understanding the impact of multi-morbidity in pregnancy: a nationwide representative analysis."
13	Mark Kassab, DO 11:10-11:20am	"Using Decreased Uterine Artery Pulsatility Index to Screen for Placenta Accreta Spectrum in the Early Second Trimester."
14	Olivia LeBeau, MD 11:20-11:30am	"Shifting the Paradigm of Birth Control Counseling in High-Risk Populations: Patient Priority Approach"
15	Mariana Moncada Madrazo, MD 11:30-11:40am	"Predicting the vaginal reconstruction approach in pediatric patients undergoing cloacal reconstruction"
16	Brianna Roberts Canales, MD 11:40-11:50am	"Erythromycin versus Azithromycin for Preterm Prelabor Rupture of Membranes: A Cluster Randomized Comparative Effectiveness Trial"
17	Jordyn Tumas, MD 11:50-12:00pm	"Racial Disparities in Survival and Molecular Features in Black vs. White Patients with Uterine Serous Carcinoma: An Integrated Study in Real World Registries and Legacy NRG Oncology/Gynecologic Oncology Group Clinical Trials"
18	Catherine Yang, MD 12:00-12:10pm	"Impact of postpartum hemorrhage intervention timing on maternal outcomes: a study proposal"
19	Elizabeth Levit, MD 12:10-12:20pm	"Assessing the Impact of Zygosity- Based Non-Invasive Prenatal Testing on Maternal and Neonatal Prenatal Outcomes in Twin Pregnancies"
20	Jamie Geraghty, MD 12:20-12:30pm	"Pregnancy Outcomes in Hispanic Women with 1 Abnormal Value on the 3-Hour Glucose Tolerance Test (GTT): A Cohort Study"
21	Mekenzie Wilson, MD 12:30-12:40pm	"Management of postoperative pain after cesarean delivery using Bridge auricular percutaneous nerve field stimulator."
22	Sara Hamade, MD 1240-1250pm	"Difference in Serum Estrogen Level Based on Methods of Vaginal Estrogen Application (Fingertip vs Applicator Use) in Postmenopausal Women"
23	Brittany Gilmore, MD 1250-1300pm	"Evaluation of Patient Insight into Advanced Stage Gynecologic Cancer"

Training and Implementation of the Jada System to Decrease Morbidity After Postpartum Hemorrhage

Authors: Riley Kraus, MD, Danielle Rinaldi, BS, Ryan Antar, BS, Homa K. Ahmadzia, MD, MPH, Emily Marko, MD, Nazaneen Homaifar, MD, Tina Falika-King, MD

Background/Objective: Postpartum hemorrhage (PPH) is the leading cause of maternal and morbidity and mortality worldwide with approximately 80% hemorrhages suspected due to uterine atony. The Jada System is the only FDA-approved suction device for uterine atony in the setting of PPH that has been studied to be 94% effective with an average time to uterine collapse measured at 1 minute and average time to control of hemorrhage in 3 minutes. This study aimed to measure provider and nursing satisfaction and experience with use of the Jada System as a new product available in a tertiary care center experiencing high delivery volumes. A secondary objective measured time to hemorrhage control and efficacy involving the Jada System.

Methods: This was an observational study that occurred from March 2023 to April 2024 at a high volume tertiary care center and two local affiliated hospitals. Providers were personally trained by Organon representatives for Jada use prior to study start. Postpartum hemorrhage was defined as an EBL of greater than or equal to 1000ml, however Jada use is encouraged at the sign of abnormal postpartum bleeding with an EBL >500ml and therefore use was at the discretion of the provider. Following a PPH when a Jada system was used, a two-minute written survey including a Likert scale was disseminated to providers and nursing staff involved. An ordinal regression was performed to assess provider and nurse ratings.

Results: During the time period studied, 61 postpartum hemorrhages occurred through the Inova Health System after which surveys were completed. There was high satisfaction noted between both nurses and providers, with mean of 4.8/5 and 4.5/5 ratings given, respectively. The "time to control bleeding" measure occurred overwhelmingly between 1-5 minutes after identifying PPH. The mean EBL prior to use was 975cc with a mean amount of blood evacuated from the Jada System being 100cc.

Conclusion: The Jada System for uterine tamponade to control postpartum hemorrhage has a high level of satisfaction for users and support staff.

Difference in Serum Estrogen Level Based on Methods of Vaginal Estrogen Application (Fingertip vs Applicator Use) in Postmenopausal Women

Authors: Sara Hamade, MD; S. Abbas Shobeiri, MD

Background: GUSM is diagnosed in 65% of women 1 year after menopause and in 85% of women 6 years after menopause, and this percentage is expected to increase due to the increased expectancy of life. This negatively impacts a women's quality of life and her sexual intimacy and relationship with her partner. Some of the treatments of GUSM include vaginal lubricants, vaginal moisturizers, non-hormonal pharmacological options, and vaginal estrogen application. Laser therapy is another treatment modality; however, it can be costly, not covered by insurance, and not widely accessible to patients. Vaginal estrogen cream is a popular treatment modality due to the ease of its' application. It can be applied using the applicator method technique or using the fingertip application. There are no studies to evaluate the levels of serum estrogen based on methods of application of the vaginal estrogen cream which is particularly important in patients at high risk of breast cancer and DVT. There are also no studies to evaluate the degree of improvement in sexual function as well as the satisfaction of patients with the method of application of the vaginal estrogen cream.

Objective: Study the change in serum estrogen level based on the method of vaginal cream application (applicator vs fingertip application)

Primary hypothesis: The change in the level of serum estrogen based on the fingertip application will not be greater than the change in the level of serum estrogen based on the applicator method.

Secondary outcomes: Measure patient satisfaction with vaginal estrogen cream application based on the method of application using a validated patient questionnaire (Likert scale).
- Measure improvement in sexual dysfunction with application of the vaginal estrogen cream based on the method of application using a validated patient questionnaire (Female sexual function index).

Study Design: This is a non-blinded randomized controlled non-inferiority trial of the fingertip application of the vaginal estrogen cream vs applicator use for the treatment of genitourinary syndrome of menopause. All post-menopausal women with symptoms of genitourinary syndrome of menopause, who qualify for local vaginal estrogen therapy and who are receiving care at Walter Reed National Military Medical Center (WRNMMC) will be eligible for the study. During the enrollment visit, participants will be consented for participation in the study and asked to complete a demographics data sheet and a female sexual function index questionnaire. The statistician will make randomized assignments which will be concealed in sequentially numbered opaque envelopes which will be opened on the day of enrollment by the treatment provider. The envelope will reveal the method of application of the vaginal estrogen cream which will be demonstrated to the patient. Serum estrogen level will be drawn in the lab during this visit as a baseline measure for future comparison. Patients will be instructed to apply the vaginal estrogen cream daily for 2 weeks, followed by 3 times per week for an additional 4-8 weeks. During the follow up visit, the vaginal estradiol cream will be measured by weighing the tube to confirm patient's compliance with the treatment. The patient will be asked to complete a second female sexual function index questionnaire to compare to the baseline questionnaire, as well as a Likert scale questionnaire to evaluate satisfaction with the application method. Serum estrogen levels will be drawn again by having the patient go to the lab to compare to baseline.

Management of Postoperative Pain after Cesarean Delivery Using Bridge™ Auricular Percutaneous Nerve Field Stimulator: A Randomized Control Trial Protocol

Authors: Ellen M. Murrin DO, Mekenzie L. Wilson, MD, Antonio F. Saad, MD

Background: Cesarean delivery, constituting about one-third of all deliveries in the United States, often leads to significant postoperative pain and extensive opioid use. National Institute of Health data suggests a high incidence of opioid over-prescription post-delivery, with notable risks of misuse and subsequent chronic use among new mothers. Furthermore, opioid consumption during breastfeeding poses potential risks to the infant, including central nervous system depression.

Objectives: This study aims to evaluate the efficacy of the Bridge™ auricular percutaneous nerve field stimulator in reducing opioid use and managing postoperative pain in women undergoing cesarean delivery.

Methods: This single-center, double-blinded, placebo-controlled (sham device), randomized prospective trial will include females undergoing cesarean delivery. Participants will be randomized to one of three groups in the post-anesthesia care unit (PACU): a control group (standard of care), a sham placebo control device, and the Bridge device. The primary outcome will be total opioid intake in MME on postoperative day 4 or the day of discharge if earlier. Secondary outcomes include pain levels using the Pain Numeric Rating Scale immediately post-cesarean and daily up to postoperative day 4 and opioid consumption during the same period. Pill counts and quality of recovery surveys will also be conducted on postoperative days 7-10 and by telephone at 30 days post-cesarean.

Hypothesis: It is hypothesized that the use of the Bridge device in the PACU will significantly reduce opioid requirements and lower pain scores compared to traditional pain management methods.

Results and Conclusions: Awaiting IRB submission and approval. Anticipated start date June 2024.

Advancing Maternal and Neonatal Health: Evaluating the Efficacy and Safety of Outpatient Intravenous Iron Therapy in Treating Iron-Deficiency Anemia During Pregnancy

Authors: Lillian Singer MD, Ellen M Murrin DO, Olivia LeBeau MD, Mark Kassab DO, Homa Ahmadzia, MD Scott Sullivan MD, Larry Maxwell MD, Antonio F Saad MD MBA

Background: Anemia affects more than one-third of all pregnant women globally, and iron deficiency anemia (IDA) is estimated to represent about half of these cases. IDA is associated with severe maternal morbidity as well as adverse neonatal outcomes. This condition can be easily mitigated by antenatal iron supplementation. Studies regarding optimal supplementation have demonstrated IV iron infusion as a promising alternative to PO iron, which has poor absorptive capacity and significant gastrointestinal side effects.

Objective: This retrospective chart review aims to evaluate antenatally outpatient IV iron therapy's efficacy, safety, and tolerability. Our primary outcome will be a comparison of pre- and post-infusion hemoglobin and hematocrit levels. We will assess adverse reactions of IV iron infusion and report any maternal and neonatal composites such as postpartum hemorrhage, need for a blood transfusion, maternal ICU admission, neonatal birth weight, gestational age at delivery, and NICU admissions.

Methods: Demographics, pregnancy complications, and pregnancy outcomes will be collected from the Epic EMR on women with IDA who received IV iron transfusion during their pregnancies at Inova Antenatal Testing Centers from 2017 to June 2025. Side effects experienced during IV iron infusions will also be collected. We anticipate a sample size of approximately 3400 pregnancies. Statistical analysis will include Shapiro-Wilk or Skewness tests for normality and descriptive statistics of demographic and obstetric history. Analysis methods such as t-tests, Pearson's chi-square, and Mann-Whitney tests will be utilized as appropriate, with data presented as median +/- IQR or mean +/- SDEV. Outcomes will be analyzed descriptively, focusing on delivery type, gestational age, and adverse events from IV iron infusion. Secondary analysis will stratify results by infusion times, race and ethnicity, and zip code.

Hypothesis: IV iron therapy may be efficacious at increasing hemoglobin levels and well-tolerated in pregnant patients with IDA within the Inova Health System.

Results: Data collection is ongoing.

Conclusion: We anticipate that the initial findings from this retrospective chart review suggest that the current outpatient IV iron infusion protocol employed at INOVA is both safe and efficacious for treating IDA in pregnancy. Given the significant improvement in hemoglobin and hematocrit levels post-infusion with minimal adverse reactions, this treatment protocol could potentially be adopted nationwide. Such an approach may greatly improve maternal and neonatal health outcomes, thereby standardizing care for IDA in pregnant patients across various healthcare settings.

Keywords: IV iron infusion, iron deficiency anemia, maternal health, iron supplementation, outpatient

The Effectiveness of a Simulation-Based Menopause Education Program

Authors: Madison Collazo, MD; Aaliyah Meade, BS; Emily Marko, MD; Amanda Slater, BS; Carolyn Davis, MD

Background/Objectives: Menopause education is often neglected in resident curriculum. Despite lack of exposure, menopausal care is an important part of comprehensive care for aging patients. Many of these patients will continue to rely on their obstetrician-gynecologists to provide their perimenopausal care, while some will turn to their family medicine physicians or internists. A 2013 survey of OBGYN residents showed that only 20.8% reported formal menopause education as part of their residency curriculum. A survey of OBGYN, family medicine, and internal medicine residents in 2017 revealed that over 90% of participants felt it was important to be trained in managing menopause, but only 6.8% felt adequately prepared to do so. The aim of our study is to fill a gap in menopause education for residents training in these specialties through the use of standardized patient encounters.

Methods: This study was conducted in the Inova Center for Advanced Medical Simulation. Residents training in OBGYN, family medicine, and internal medicine were eligible. A didactic session on common menopausal concerns and management was led by an experienced obstetrician-gynecologist followed by standardized patient encounters aimed at teaching core tenants of menopausal care, including hot flashes, dyspareunia, and low bone density. Pre- and post- differences in knowledge, confidence and performance assessments will be compared. Statistical methods will include a comparison of means using a paired t-test and chi-squared analysis with a p-value of <0.05 considered significant. Competence and confidence levels will be correlated. Effectiveness of the curriculum in real life patient counseling will be analyzed in the follow-up survey with Likert scale means. Any open-ended responses will be analyzed qualitatively for themes.

Results: Participants included 13 OBGYN, 13 family medicine, and 8 internal medicine residents from various stages of training. Analysis is ongoing.

Conclusion: Pending

Pregnancy Outcomes in Hispanic Women with 1 Abnormal Value on the 3-Hour Glucose Tolerance Test (GTT): A Cohort Study

Authors: Jamie Geraghty MD; Samantha Buery-Joyner MD; Jean W Thermolice MD

Background: Available data indicate an increased risk of maternal and perinatal adverse outcomes in women with 1 abnormal glucose value on the 3-hour GTT. However, there has not been any recommendation on possible intervention or treatment for women with 1 abnormal glucose value. We hypothesize that participants with 1 abnormal glucose value on the 3-hour GTT might benefit from treatment. We aim to assess whether a program of gestational diabetes mellitus (GDM) teaching, nutrition counseling with lifestyle changes, and tight glycemic control for Hispanic women with 1 abnormal value on the 3-hour GTT is associated with improved outcomes compared to routine care.

Methods: This is an observational retrospective cohort study. This investigation includes Hispanic patients $\geq$ 18 years of age with singleton gestation with a nonanomalous fetus, who received prenatal care at Inova affiliated clinics and private offices, and delivered at Inova Health System from Jan 2015 - Jan 2020, with one abnormal glucose value on the 3-hour OGTT following an abnormal 1 -hour GCT, who have Medicaid insurance or no health insurance. We excluded women < 18 years of age, non-Hispanic origin, privately insured, with multifetal gestation, major congenital malformations, 4 normal values on the 3-hour GTT, GDM, pregestational DM, prenatal care initiation after 28 weeks, delivery at a non-Inova facility. Our exposure of interest was lifestyle modifications, home glucose monitoring, antidiabetic medications as needed. Our control group received routine prenatal care. The primary outcome was neonatal intensive care unit (NICU) admission. Secondary outcomes were length of NICU stay, large for gestational age (LGA), neonatal hypoglycemia, feeding difficulties, neonatal jaundice requiring phototherapy, transient tachypnea of the newborn (TTN), respiratory distress syndrome(RDS), Apnea, 5-minute Apgar score$\leq$ 7) , preterm delivery, hypertensive disorders of pregnancy, cesarean delivery, perineal trauma. The exposed and unexposed groups will be compared according to demographic and clinical characteristics, maternal and perinatal outcomes using descriptive statistics and appropriate statistical tests. Correlational analysis will be used to identify all potential statistically significant independent predictors of NICU admission, as well as those predictors not independent of one another.

Results: Pending. Will have some data to review by research day.

Conclusion: Pending

Assessing the Impact of Zygosity-Based Non-Invasive Prenatal Testing on Maternal and Neonatal Outcomes in Twin Pregnancies

Authors: Elizabeth Levit-Smith MD, Ellen Murrin DO, Havens Howell, Antonio Saad MD

Objective: Twin pregnancies face 4-10 times the risk of perinatal complications compared to singleton pregnancies. Monochorionic twin gestations are especially prone to miscarriage, fetal structural defects, preterm delivery, and fetal growth restriction. Twin-twin transfusion syndrome is responsible for over one-third of perinatal deaths in monochorionic twins. Non-invasive prenatal testing (NIPT) using single-nucleotide polymorphisms (SNPs) to identify zygosity can be a useful tool to aid the identification of higher-risk monochorionic twins at earlier gestations to improve prenatal counseling and surveillance. This retrospective study aims to assess the impact of zygosity-based NIPT on maternal and neonatal outcomes in twin pregnancies.

Methods: All twin pregnancies who received care at Inova Health Systems Antenatal Testing Centers from January 2017 to March 2024 were identified through ViewPoint software and screened for NIPT with zygosity results in our EMR. Vanishing twins and pregnancies with outcomes not available in Epic EMR were excluded. Prenatal screening results such as gestational age at identification of chorionicity, invasive fetal testing results, and placental pathology were collected. Maternal outcomes of interest include postpartum hemorrhage, retained products of conception, sepsis, ICU admission, and hospital readmission. Neonatal outcomes of interest include sepsis, hypoglycemia, hypoxic-ischemic encephalopathy, intraventricular hemorrhage, and neonatal demise. Statistical outcomes between zygosity groups will be performed using multivariate analysis, accounting for confounding variables such as mode of delivery and gestational age at delivery. Sensitivity, specificity, false negatives, and likelihood ratios for NIPT zygosity will be stratified by zygosity. We aim to collect results for approximately 1800 twin pregnancies.

Results: In process.

Conclusions: In process.

Comparative Analysis of Treatment Modalities for Cervical Ectopic Pregnancy: A BhCG Decline Rate Study

Authors: Shadain Akhavan, MD; Luis M. Gomez, MD

Introduction: Cervical ectopic pregnancy (CEP) poses a significant challenge in obstetrics due to the risk of severe hemorrhage and maternal morbidity. Various treatment modalities have been proposed, including transvaginal intragestational sac methotrexate (MTX) injection, intramuscular methotrexate.

(IM-MTX) alone, simultaneous intragestational sac and intramuscular MTX injection (IS-MTX + IM-MTX), intramuscular MTX with backup intragestational sac injection (IM-MTX / backup IS-MTX), and simultaneous uterine artery embolization with intramuscular MTX (UAE + IM-MTX). However, there remains a gap in understanding which modality offers the most favorable outcome in terms of beta human chorionic gonadotropin (BhCG) level decline.

Method: The objective of this study is to compare the rate of BhCG level decline among different treatment modalities for CEP. Specifically, we aim to investigate the efficacy of transvaginal intragestational sac MTX injection, intramuscular MTX alone, IS-MTX + IM-MTX, IM-MTX / backup IS-MTX, and UAE + IM-MTX in managing CEP.

Study Design: We propose a retrospective analysis of CEP cases at INOVA Fairfax Hospital from September 2012 to March 2023. Demographic, medical, and obstetric data will be extracted from patient records. BhCG levels will be trended to assess the rate of decline following various treatment protocols. Treatment modalities will include transvaginal intragestational sac MTX injection, intramuscular MTX alone, IS-MTX + IM-MTX, IM-MTX / backup IS-MTX, and UAE + IM-MTX. In cases of live embryo presence, intragestational sac potassium chloride (KCl) injection will be administered prior to intragestational sac MTX injection.

Results: We anticipate identifying a cohort of CEP cases and extracting relevant data for analysis. BhCG levels will be monitored over time to evaluate the rate of decline following each treatment modality. We expect to observe variations in BhCG decline rates among the different treatment groups.

Conclusion: Upon completion of data analysis, we anticipate drawing conclusions regarding the efficacy of each treatment modality in managing CEP based on BhCG decline rate. This study will provide valuable insights into the optimal approach for the management of CEP, potentially guiding clinical practice and improving patient outcomes.

Reproductive health, rights and advocacy curriculum to enhance OBGyn resident training in residencies that are not part of the Ryan Program.

Author(s): Megan Deyarmond, MD, Samantha Buery-Joyner, MD

Objectives: To assess the baseline knowledge, attitudes, and comfort level of resident physicians training at an institution without a previously established Ryan Program or reproductive health curriculum regarding topics and skills of family planning and care of the LGBTQIA+ community; to create a structured, integrated curriculum for reproductive health and advocacy; to assess the impact of this structured curriculum on resident knowledge, attitudes, and comfort level.

Methods: All Inova Fairfax OBGyn residents (PGY1-4, N= 23) completed a de-identified survey assessing their baseline knowledge, attitudes, and comfort level with family planning and care of the LGBTQIA+ community during the beginning half of the 2022-2023 academic year. After this time, didactic sessions related to these topics were introduced into the formal curriculum, and the PGY2 residents spent one month at an independent family planning clinicand at the Inova Pride Clinic. Following the PGY2 rotation, another de-identified survey is provided assessing for changes in knowledge, attitudes, or comfort level. The entire residency program PGY1-4 completed a follow up survey at the conclusion of this academic year.

Results: In process with GMU statistics team.

Conclusion: Pending

Impact of postpartum hemorrhage intervention timing on maternal outcomes: a study proposal

Authors: Catherine Yang, MD, Homa Ahmadzia, MD, MPH

Objective: To characterize the pattern and timing of uterotonic medication and tranexamic acid use in patients who experienced postpartum hemorrhage at a large community tertiary care center as well as the impact of intervention timing on maternal outcomes.

Methods: A retrospective cohort of patients (n=323) who had births from January 1, 2023 to December 31, 2023 and an estimated blood loss of 1000 mL or more was identified. Patient information will be abstracted through chart review. Various patient demographic factors will be identified, such as race/ethnicity, insurance status, age, and parity. Relevant variables related to the delivery and postpartum hemorrhage will be abstracted through chart review, including mode of delivery, delivery time, time of postpartum hemorrhage, number of interventions, time of interventions, and estimated blood loss. The time to intervention will then be compared across patient subgroups, including race, insurance status, and those who required blood transfusion.

Results: Pending

Conclusion: Pending

Racial Disparities in Survival and Molecular Features in Black vs. White Patients with Uterine Serous Carcinoma: An Integrated Study in Real World Registries and Legacy NRG Oncology/Gynecologic Oncology Group Clinical Trials

Authors: Jordyn Tumas MD1,2, Chunqiao Tian PhD1-3, Zachary A. Kopelman DO1,2, Neil T. Phippen, MD1,2, Christopher M. Tarney MD1,2, Suzanne Jokajtys MD1,2, Calen W. Kucera MD1,2, John K. Chan MD4, Michael T. Richardson MD5, Daniel S. Kapp PhD MD6, Chad A. Hamilton MD7, Charles A. Leath III MD8, Nathaniel L. Jones MD9, Rodney P. Rocconi MD10, John H. Farley MD11, Angeles Alvarez Secord, MD MHSc12 , Casey M. Cosgrove MD13, Matthew A. Powell MD14, Ann Klopp MD15, Joan L Walker MD16, Gini F. Fleming MD17, Nicholas W. Bateman PhD1-3, Thomas P. Conrads PhD1,2,18, G. Larry Maxwell MD1,2,18,*, Kathleen M. Darcy PhD1-3,*

Objective: To investigate disparities between Black and White patients with uterine serous carcinoma (USC) in real-world and clinical trial data and to perform molecular tumor evaluation.

Methods: Black and White USC patients who underwent hysterectomy were studied in SEER, National Cancer Database (NCDB), eight NCI-sponsored randomized control trials (RCTs), and Genomics Evidence Neoplasia Information Exchange (GENIE) project (v.13.0). Hazard ratios (HR) with 95% confidence intervals (CI) for cancer-related death (CRD), non-cancer death (NCD), and all-cause death were estimated using univariate and multivariate Cox modeling.

Results: In SEER, Black patients had increased CRD (HR 1.19, CI 1.08-1.32) and NCD (HR 1.08, CI 0.84-1.39) vs. White patients. In NCDB, Black patients (N=4,228) also had increased hazard of death (HR 1.17, CI 1.11-1.23) vs. White patients (N=11,935) that did not change with propensity-score matching for age, comorbidity, diagnosis year, income, insurance, lymphadenectomy, LVSI, and adjuvant treatment (HR 1.16, CI 1.10-1.23). In RCTs, Black patients had more advanced/recurrent disease (67.9% vs. 50.0%, $p<0.001$) and higher hazard of death (HR 1.40, CI 1.12-1.76) than White patients. However, exact-matching for stage and treatment protocol and balancing by age and performance status eliminated the difference for disease progression (aHR 0.93, CI 0.77-1.12) and death (aHR 1.03, CI 0.85-1.26). In GENIE, Black vs. White patients had similar p53 mutations (94% vs. 89%, p=0.117), more MED12 mutations (8% vs. 2%, p=0.006), and fewer mutations in the PI3K (62% vs. 72%, p=0.038) and DNA repair pathways (16% vs. 25%, p=0.031).

Conclusion: Racial disparities in USC outcomes exist in both real-world registries and RCTs. We must address the multifactorial real-world factors, improve targeted drug therapy, and ensure equitable clinical trial recruitment to eliminate these disparate outcomes.

Association between vaginal Ureaplasma spp. infection and length of the latency period in preterm premature rupture of membranes (PPROM)

Authors: Sebastian Nasrallah, MD, Ellen Murrin, DO, Amber Bowman, BA, Scott Sullivan, MD

Background: Preterm premature rupture of membranes (PPROM) is a significant contributor to preterm births, resulting in considerable neonatal morbidity and mortality. Intraamniotic infection or inflammation is frequently implicated in PPROM and is thought to be due to ascending vaginal colonization. Ureaplasma species is commonly found in pregnancies complicated by PPROM and have been associated with adverse neonatal outcomes. However, the relationship between vaginal Ureaplasma spp. infection and the length of the latency period in PPROM remains unclear.

Objectives: This retrospective cohort study aims to characterize the prevalence of Ureaplasma positivity in PPROM at Inova Health System and to investigate whether Ureaplasma colonization affects the duration between rupture of membranes and delivery (latency period). Additionally, we aim to assess neonatal and maternal outcomes associated with Ureaplasma positivity in PPROM pregnancies.

Methods: This retrospective study will include patients admitted for PPROM between 2013 and 2023 who underwent Ureaplasma testing for vaginal colonization. Subjects are identified through ViewPoint records and data including maternal demographics, infection status, and pregnancy outcomes are abstracted through Epic EMR. The primary outcomes include the prevalence of vaginal Ureaplasma infection in the PPROM population and the latency period in Ureaplasma-positive patients compared to those without infection. Secondary outcomes include neonatal and maternal outcomes stratified by Ureaplasma species and coexisting vaginal infections. Statistical analysis will involve descriptive statistics and comparison tests between Ureaplasma positive and negative groups. The study aims to provide insights into the association between Ureaplasma colonization and PPROM, potentially informing interventions to improve outcomes in affected pregnancies.

Hypothesis: We hypothesize that vaginal colonization with Ureaplasma species will result in significantly shorter latency period.

Results and Conclusion: Pending data collection and analysis

Evaluation of Anxiety and Depression Related to Quality of Life across Endometrial and Ovarian Cancer

Authors: Bianca Nguyen MD, Brittany Gilmore MD, Kathleen Darcy PhD, Neil Phippen MD, George L. Maxwell MD

Objective: To evaluate whether baseline clinical anxiety and depression affects poor health related quality of life (HRQOL) across endometrial and epithelial ovarian cancer patients.

Methods: This is a multi-institutional cross-sectional study involving patients with epithelial ovarian (n=77), and endometrial (n=38) cancer. Patients were invited to complete a voluntary questionnaire related to HRQOL, including anxiety and depression. The validated Functional Assessment of Cancer Therapy General (FACT-G) and an abbreviated Patient-Reported Outcomes Measurement Information System (PROMIS) instrument were utilized to elicit patient reported outcomes and were distributed at five institutions. Demographic and clinical characteristics were compared, and instrument scores were calculated using item-level calibrations. Eligibility criteria included age over 18 years old, diagnosis of endometrial or epithelial ovarian cancer, and ability to provide consent.

Results: 32% of ovarian cancer patients and 29% of endometrial cancer patients reported clinical anxiety and depression. A total of 31% of the cohort reported underlying clinical anxiety and depression. 40% of the cohort were age 60-69 years old, 82% identified as white race, and 74% were married. 57% of the total patients were stage III at diagnosis, and 20% had disease progression. Ongoing analyses are underway to evaluate the difference between clinical anxiety and depression scores in the instruments.

Conclusion: The prevalence of anxiety and depression across all cancer patients is significantly higher than the healthy population and has been found to influence mortality rate and poorer outcomes. Management of survivorship and psychological stress associated with the diagnosis and treatment of cancer has become of increasing interest for providers. Currently, there are no studies evaluating HRQOL measures across different gynecologic cancers, and we aim to evaluate differences in clinical anxiety and depression among epithelial ovarian cancer and endometrial cancer to advocate for additional support services these patients.

Erythromycin versus Azithromycin for Preterm Pre-labor Rupture of Membranes: A Cluster Randomized Comparative Effectiveness Trial (PRACET)

Authors: Ellen Murrin D.O., Brianna Canales M.D., Dr. Antonio Saad, M.D. MBA

Background: Preterm premature rupture of membranes (PPROM) complicates about 2-3% of pregnancies and is a significant contributor to the preterm birth rate in the United States. Treatment with antibiotics to prolong pregnancy, reduce prematurity-related morbidity, and reduce the risk of maternal and neonatal infections is crucial. The American College of Obstetrics and Gynecology (ACOG) suggests a 7-day course of antibiotics, which includes IV Ampicillin and IV Erythromycin for 2 days followed by an oral regimen of Amoxicillin and Erythromycin for 5 days. Azithromycin has been used as a substitute for Erythromycin in some institutions due to ease of administration, better side effect profile, and decreased cost of Azithromycin regimen as compared with erythromycin. Previous observational studies have shown no difference in time from rupture of membranes to delivery (latency period) or maternal or neonatal outcomes between the two regimens. However, no randomized controlled trials have compared the two.

Objective: To examine the difference in time between the two regimens from PPROM to delivery in days. Secondary outcomes include maternal complications like chorioamnionitis, abruption, fetal growth restriction, total blood loss at delivery, rates of postpartum hemorrhage and transfusion, postpartum endometritis, and neonatal outcomes like birth weight, APGAR scores, sepsis, respiratory distress syndrome, and necrotizing enterocolitis.

Methods:
In this multiple-site cluster-randomized comparative effectiveness trial, we aim to enroll 140 women with singleton pregnancies between 22w0d and 32w6d gestation who have confirmed rupture of membranes and are eligible for expectant management. . Each hospital will be randomized to one of two macrolide antibiotic regimens that will change on a monthly basis. In addition to ampicillin and amoxicillin and their usual care, one arm of participants will receive Erythromycin 250 mg IV every 6 hours for 48 hours, followed by 250 mg every 8 hours for 5 days (or 500 mg PO every 8 hours). The other arm of participants will receive Azithromycin 1000 mg by mouth once (or available oral equivalent). Both intention-to-treat and per-protocol analysis will be performed.

Results/Conclusions: 12 enrolled; At the conclusion of this trial, we anticipate demonstrating Level 1 evidence that both antibiotic regimens, involving either Erythromycin or Azithromycin, are noninferior to each other in the management of PPROM. Through this study, we hope to provide clear, evidence-based guidance on the optimal antibiotic treatment for prolonging pregnancy and minimizing complications associated with PPROM, thereby influencing future guidelines and practices.

Keywords: Preterm Premature Rupture of Membranes (PPROM), Antibiotic regimens, Erythromycin, Azithromycin, Latency period, Preterm birth

Predicting the vaginal reconstruction approach in pediatric patients undergoing cloacal reconstruction

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Backgroung / Objective: Use preoperative measurements to predict the need for vaginal augmentation during cloaca repair and to assess the potential for post-operative complications such as vaginal stenosis.

Methods: A retrospective cohort study was conducted of all patients who underwent primary cloaca repair surgery at Children´s National Hospital (2020 to 2023). Data collection consisted of demographic information, standardized preoperative measurements, type of surgery performed, and postoperative examination findings. Data was analyzed utilizing descriptive statistics and Mann-Whitney U for post operative continous variables.

Results: 30 patients with a mean age at surgery of 14 months (range 4-77 months) formed our cohort. For surgical reconstruction 15 underwent total urogenital mobilization (TUM), 13 required total a urogenital separation (TUS), and two patients with Mullerian agenesis underwent reconstructive surgery for the rectum only without vaginal reconstruction. For vaginal reconstruction 24/28 had a native vagina pull-through and 4/28 required a transposition graft. For patients who had native vaginas pull through on cloacagram vaginal length was 4.77 (2.3-4.12) and common channel length was 2.58 (0.8-5.2) vs 3.4 (high vagina-5.2) and 2.66 (no common channel-5.1) for patients who required a graft. Postoperatively there was a statistically significant difference in common channel length on cloacagram for patients without stenosis 2.35 (1.5-4.4) vs. with stenosis 4.10 (1.61-5.2) P 0.026. No difference was observed in vaginal length in the same study 4.45 (3.4-6.5) vs. 5.19 (2.3-9.2) P 0.67.

Conclusions: A tension-free vaginoplasty was able to be performed in both short and long common channel cloacas. Although a tension-free vaginoplasty is most commonly performed when the preoperative evaluation demonstrates a vaginal length of at least 4 cm, a tension-free vaginoplasty can even be achieved in shorter vaginal lengths. In this study, a difference among preoperative common channel length was noted when analyzing postoperative findings.

Pregnancy outcomes in Patients of Advanced Maternal Age Infected With SARS-CoV-2 vs. Non- Infected Counterparts: Does Infection Worsen Outcomes? Infected With SARS-CoV-2

Authors: Alexander Powell MD 1 , Anh Q. Nguyen MD 1 , Ellen Murrin DO 1 , Sebastian Nasrallah MD 1 ,Laura Hitchings B.Sc.M 2 , Jenny Q. Wang MD 1 , G. Larry Maxwell MD 1 , and Luis M. Gomez M.D, M.Sc.E 1 Institutions: 1. Department of Obstetrics and Gynecology, Inova Fairfax Medical Center, Falls Church, VA, USA, 2. Advarra, Columbia, MD, USA

Background/Objectives Pregnancy in older individuals, even in healthy subjects with no other comorbidities, is associated with increased risks of adverse pregnancy and perinatal outcomes that differ from those found in younger pregnant populations. In non-pregnant individuals, infected adults display more severe forms of SARS-CoV-2 infection compared to infected adolescents. Limited information is available about the impact of COVID-19 on pregnant patients at both ends of the fertility spectrum. While for adolescents maternal age does not protect from adverse outcomes related to COVID-19, the direct impact of COVID-19 in pregnancy in selected advanced maternal age cohorts has not been sufficiently evaluated. Therefore, we sought to evaluate and compare obstetric and perinatal outcomes of pregnant patients of advanced maternal age compared to those of pregnant adolescents infected with SARS-CoV-2. We hypothesize that due to the increased prevalence of co-morbidities in pregnant patients of advanced maternal age, infection with SARS -CoV-2 increases the risks for adverse pregnancy outcomes compared to their non-infected pregnant counterparts.

Methods We performed a prospective cohort study of pregnant patients of advanced maternal age (40 years or older) who delivered at 4 hospitals of the Inova Health System in Northern Virginia during the beginning of the pandemic from April 2020 to December 2020 prior to the use of COVID-19 vaccines. Our main cohort was comprised of patients who had a positive PCR test for SARS-CoV-2; controls were the non-infected counterparts. The primary outcome was a composite of preeclampsia with severe features, preterm delivery, cesarean delivery, venous thromboembolism, fetal growth restriction, and stillbirth. Secondary outcomes included a composite of maternal morbidity (ICU admission, mechanical intubation, thrombosis, death) and of neonatal morbidity (5 min Apgar score <7, NICU admission, RDS and neonatal demise).

Results We identified 478 subjects of advanced maternal age of whom 51 tested positive for SARS-CoV2. Median age was comparable for both groups (41y). Infected patients were more likely to be Hispanic (34/51, 66.7% vs. 120/407, 28.5%); P<0.001. There was no significant difference on medical insurance status (uninsured 6/51, 12% vs 29/407 controls, 7.1%; P=0.26). Infected patients had larger BMI (29.6) compared to controls (25.8); P<0.001. Co-morbidities as obesity (24/51, 47.1% vs 87/407, 21.4%; P<0.001) and diabetes mellitus (12/51, 23.5% vs 26/407, 6.4%; P<0.001) were more prevalent in infected patients. Pre-existing hypertension was comparable between cohorts and controls (14/51, 27.4% vs 84/407, 20.6%; P=0.27). The primary composite outcome was comparable among infected cohorts (38/51, 74.1%) and noninfected controls (337/407, 82.8%); P=0.162 (OR 0.61, 95% CI 0.31-1.2). None of the individual components of the composite outcome were more prevalent in AMA infected patients compared to noninfected controls. We observed more CD in noninfected controls compared to infected subjects (24/51, 47% vs 280/407, 68.8%; P=0.003). Maternal non obstetric morbidity was greater in infected elderly pregnant patients (3/51, 5.9%) compared to their noninfected counterparts (2/407, 0.5%); P= 0.022; OR 8.27 (95% CI 1.14-59.99). Of the infected patients, 2 were admitted to the ICU (1 for mechanical intubation and 1 for ECMO who later developed thrombosis), and there was 1 maternal death. No maternal ICU admission or death occurred were recorded in noninfected controls. The composite neonatal morbidity outcome was comparable among groups (10/51, 19.6% vs 76/407, 18.7%; P=0.85; OR 1.06, 95% CI 0.79-2.17). Individually, we observed less RDS cases in newborns of infected patients compared to those of noninfected individuals (2/51, 3.9% vs 44/407, 10.8%) but the difference was nonsignificant. After adjusting for ethnicity, obesity and diabetes, the prevalence of the primary maternal composite outcome and the prevalence of neonatal composite outcome were not significantly different among infected cases and noninfected controls.

Conclusions In our cohort of AMA patients at 40 yo or older, infection with SARS-CoV2 during pregnancy did not seem to increase the underlying risk for adverse obstetric maternal outcomes or neonatal morbidity. COVID-19 was associated with ICU admission and increased maternal morbidity in AMA patients compared to noninfected AMA controls.

Assessing and addressing OBGYN resident wellbeing at Inova Fairfax Hospital through a System of Wellness: A follow-up

Authors: Alicia St. Thomas, MD/MA, Samantha Buery-Joyner, MD

Background/ Objective: Forty nine percent of physicians and 42% of residents report burn out. The specialty of Obstetrics and Gynecology has the second highest burnout rate of all specialties, at 53%. Physician burnout is associated with decreased productivity, worse patient outcomes, and higher rates of medical errors. Through a partnership with the American Medical Association (AMA) and utilization of their Organizational Biopsy Tool ™, this project aimed to identify primary drivers of burnout among Inova Fairfax Hospital (IFH) OBGYN residents and implement a System of Wellness (SOW) program that reduces these drivers while also supporting individual wellness and fostering community.

Methods: The Mini-ReZ—a validated organizational well-being assessment tool developed by the AMA—was administered to IFH OBGYN residents in May 2023. The survey provides a comprehensive wellness assessment across four domains: organizational culture, practice efficiency, self-care, and retention. The AMA provides survey data analytics and comparison data to other residencies across the country. Wellness initiatives for the 2023-2024 year were developed based on the survey results. The survey will be re-administered in the spring of 2024.

Results: There was a 100% response rate (n=24) for the Mini-ReZ administration at IFH. The AMA provided national comparison data to other OBGYN residents across the country (n=95). Burnout rates were slightly higher at IFH (58.4%) compared to national data (55.7%). The most commonly cited areas for improvement to support well-being included reduced frequency of staying late (past sign-out) or work outside of work, and coverage for more wellness retreats. Changes were implemented to address these areas.

Conclusions: Resident burnout is an ongoing problem that requires attention and intervention. We look forward to the 2024 survey data to assess the trend in resident burnout at IFH after implementation of the SOW initiative.

Shifting the Paradigm of Birth Control Counseling in High-Risk Populations: Patient Priority Approach

Authors: Olivia LeBeau MD, Allison Schneider MD, Anna Buabbud, MD

Background: The process of decision-making with regards to family planning and birth control options has a complicated sociopolitical history. Contraceptive coercion describes behavior that interferes with contraceptive use in an attempt to either promote or discourage pregnancy (Brandi, 2018). This practice is associated with an increased risk of STIs, intimate partner violence, and unintended pregnancy (Brandi, 2018). Pregnancies that do occur in this context are associated with an increased risk of poor maternal and fetal outcomes, including depression and low birth-weight (Brandi 2018).

Approaches to birth control counseling have shifted drastically over the past two decades. In the early 2000s, public interest in long-acting reversible contraceptive methods or LARCs, including the hormonal or nonhormonal intrauterine devices (IUDs) or etonogestrel implant (Nexplanon), was exceedingly low with only 2.4% of women using contraception electing for one of these options (Brandi, 2020). Factors contributing to this low rate of use included misinformation among providers and patients about associated risks, high up-front costs, lack of provider training, and backlash related to the failures of the Dalkon shield (Brandi, 2020), an IUD used in the early 1970s and 1980s that was associated with a wide array of negative outcomes including pelvic infection, infertility, undesired pregnancy, and death (Horwitz, 2018).

This attitude began to change as research increasingly posited LARCs as the best method to lower rates of unintended pregnancy and abortion (Morgan, 2006). Studies emphasized the comparatively high rates of unintended pregnancy and elective abortion in the United States compared to other developed nations, framing these as public health issues requiring immediate attention with LARCs as the posited solution (Morgan, 2006). Research assessing women's preferences with regards to different contraceptive methods began to emphasize the importance of efficacy, consistently noting it as the most important aspect of contraception for women (Edwards, 2000). These factors set the stage for the creation of a framework for contraceptive counseling centered around efficacy as the primary concern for both patient and provider. This style of counseling is referred to as the "tiered-effectiveness" approach.

As the name implies, tiered-effectiveness counseling refers to a method of counseling that focuses on the efficacy of contraceptive methods in preventing pregnancy, with the most effective methods (LARCs including Nexplanon and intrauterine devices, female sterilization, vasectomy) posited as the most ideal methods of birth control. Less effective methods (Depo, combined OCPs, hormonal patches and rings, condoms, diaphragm, fertility awareness, spermicide, withdrawal) are typically described as less desirable alternatives. Visual aids in OB/GYN office tend to reflect . These visual aids typically consist of a chart with the LARCs placed at the top of the chart adjacent to a "five star" rating and other options positioned towards the bottom of the page with subsequently lower "ratings."

While such charts have the advantage of being easily understood by patients, further research over the years has raised concerns about the impact of these visual aids on patient autonomy. In one such study from 2018 assessing the experiences of mostly young, minority women receiving contraceptive counseling at the time of first trimester abortion (Brandi, 2020), researchers found that 42% of patients reported feeling pressured into choosing some form of contraception with 26% sensing a "LARC-specific agenda" being pushed by the counseling providers. Patients felt that providers placed excessive emphasis on efficacy when describing the different contraceptive options and explicitly stated feeling that there were "right" and "wrong" options, with LARCs being the "right" option in the eyes of the provider (Brandi, 2020). Such experiences directly contradict the patient-centered contraceptive counseling framework that ACOG advocates for.

Models of shared decision-making are described as patient-centered, individualized approaches that involve the discussion of the risks and benefits of available treatment options in the context of patient values and priorities (ACOG Practice Bulletin 819). This in turn allows the patient to be a more active participant in the decision-making process, improves their knowledge regarding their care, and ultimately improves patient outcomes and satisfaction with their choices (ACOG Practice Bulletin 819). In order to facilitate these kinds of conversations in the context of contraceptive counseling, there is a need for visual aids that promote the direct elicitation of patient preferences. This will in turn provide further support for the paradigm shift in contraceptive counseling that is required to truly change the culture of these conversations in the clinic and hospital.

Methods: We will first conduct a survey to assess how residents and attending physicians at Inova structure their birth control counseling. This survey will assess the values that providers use to guide their counseling, how they typically structure their counseling, and what resources they tend to use if any to help explain options to patients. We will then organize a teaching session, likely to be done during resident didactic time, to discuss the history of birth control counseling and how this shapes provider approaches to structuring options discussions. If needed, a second session will be organized for clinic staff to attend as well. At that meeting, we will go over a new visual aid designed to be used in the Inova Cares Clinic for Women to help patients pick a method of contraception. After the teaching session, a second survey will be administered to see if the provided information provided convincing enough evidence to persuade providers to rethink their method of birth control counseling. Finally, several months later, providers and residents will be assessed to see how their attitudes changed over time and whether or not they were able to use the visual aid designed as part of this initiative in clinic.

Results: N/A
Conclusion: N/A

Using Decreased Uterine Artery Pulsatility Index to Screen for Placenta Accreta Spectrum in the Early Second Trimester.

Authors: Mark Kassab DO, Sebastian Nasrallah MD, Luis Gomez MD

Objective: To determine if Uterine Artery Pulsatility Index measured in the early second trimester during Nuchal Translucency Scan has any predictive value for development of placenta accreta spectrum disease.

Methods: This is a case control pilot study using pregnant patients who presented to the Antenatal Testing Center (ATC) for Nuchal Translucency between 2010 and 2020, had uterine artery pulsatility indices in their chart, had their delivery at an Inova Facility, do not have a previous history of accreta, who went on to have a diagnosis of accreta time of delivery. Primary outcome measures will be presence of accreta at time of delivery or not with secondary outcomes being C-section rates, NICU admission, ICU admission, and need for blood transfusion. Patients will be compared to patients with placenta previa but no accreta, as well as patients with neither. Analysis of Variance Test followed by a Tukey Test will be performed to detect a difference in mean between groups. Paired T-tests will also be conducted between groups for all outcomes as well. Due to lack of data on what constitutes a meaningful or clinically significant change in pulsatility index values between two individuals in the early second trimester, sample size and power calculation was difficult. It was determined that a change of 0.5 between pulsatility indices would be a meaningful change based on preliminary data collected and studies regarding pulsatility index and placenta previa later in pregnancy. Using these methods, sample size has been calculated at 63 participants in each arm for 80% power to detect a difference of 0.5 between two means. Therefore, we will aim for a total sample size of 189. Data collection is being done through Slicer Dicer on Epic

Results: Currently in data collection phase.

Conclusion: There is no to little data regarding uterine pulsatility indices in the early second trimester and their utility as predictors of obstetric outcomes, much less placenta accreta spectrum. While this study remains in the data collection phase, the prospect of elucidating this data for the first time may yield significant future implications in the area of antenatal testing.

Labor Patterns in Patients Undergoing Trial of Labor after Cesarean

Authors: Rebecca Chornock, MD; Ayan Ali, MD; et al.

Objective: To compare labor curves between patients that had a successful vaginal birth after cesarean (VBAC), failed trial of labor after cesarean (TOLAC), or complicated VBAC.

Methods: This was a secondary analysis of the Consortium of Safe Labor (CSL), focusing on term pregnant patients undergoing TOLAC. Length of labor was compared between patients with an uncomplicated VBAC, complicated VBAC, and failed TOLAC. A Weibull-based accelerated failure time regression model examined the interval censored time of cervical dilation from 1 cm to the next. A Cox regression model was used to evaluate the length of the second stage of labor.

Results: An uncomplicated VBAC occurred in 26.5% of patients, a complicated VBAC occurred in 3.7% of patients, and a failed TOLAC occurred in 72.2% of patients. There was no significant difference in the labor curves between patients that had an uncomplicated VBAC and complicated VBAC (p=0.93).
Patients that had an uncomplicated VBAC tended to have shorter laboring time with progression from 1-6 cm taking 8 hours (IQR 2.4-15.9) compared to 13.7 hours (IQR 4.1-27.1) in complicated VBAC or failed TOLAC cases (p=.10). Patients that had a complicated VBAC or failed TOLAC (HR 0.67, 0.95% CI 0.57-0.79), older patients (HR 0.97; 0.95% CI 0.96-0.98), and patients that used an epidural (HR 0.71; 0.95% CI 0.62-0.81) had a longer second stage compared to patients with uncomplicated VBAC.

Conclusion: A standardized point at which repeat cesarean should be offered to laboring TOLAC patients is still unclear, as it is difficult to predict a time interval at each cervical dilation that is associated with a complicated VBAC or failed TOLAC. Of note, patients that had a complicated VBAC or failed TOLAC had a longer second stage of labor.

Comparison of Two Salpingectomy Techniques for Sterilization at the Time of Cesarean Delivery

Authors: Bianca Nguyen, MD; Sofia Girald-Berlingeri, MD ; Catherine Kim, MD; and Jean W Thermolice, MD

Introduction: Complete salpingectomy for the purpose of permanent sterilization at the time of cesarean birth is increasingly being performed worldwide. Recently, emerging data has deemed bilateral salpingectomy at the time of cesarean delivery a safe and cost-effective approach for patients desiring permanent sterilization. The uptake and preference of complete salpingectomy over tubal ligation in the obstetrics community are explained by additional non-contraceptive advantages including decreasing the risk of ovarian cancer. However, a preferred complete salpingectomy technique at the time of cesarean delivery has not emerged in current practice. We aim compare short-term clinical outcomes and cost of complete salpingectomy using a hand-held bipolar energy instrument with those of traditional suture ligation. We hypothesize that bipolar energy instrument use will not significantly improve clinical outcomes.

Methods: This single site retrospective cohort study will be conducted from 2017-2023 at Inova Fairfax Hospital. The participants are patients desiring permanent sterilization via complete salpingectomy performed by Inova obstetrics and gynecology resident service providers. Inclusion criteria will include patients at 24 weeks gestation or greater, 21 years and older, with Medicaid sterilization consent for those with Medicaid insurance. Exclusion criteria will be patients who had a vaginal delivery, history of prior adnexal surgery, placenta accreta spectrum, or history of bleeding diathesis. The primary outcome is postoperative changes in hemoglobin levels on postoperative day one for bilateral salpingectomy with bipolar energy instrument and for traditional suture ligation at the time of scheduled or unscheduled cesarean delivery. Secondary outcomes will include completion rate of sterilization, intraoperative and postoperative complications.
The Kruskal-Wallis test will be used to compare surgical outcomes. In evaluating the primary outcome of changes in hemoglobin, logistic multinomial regression will be employed to evaluate the odds between the two groups and comparison to other variables.

Results: Pending

Conclusion: Pending

Understanding the impact of multi-morbidity in pregnancy: a nationwide representative analysis

Authors: Omotomilade Olopoenia MD., Abisola Olopoenia PhD

Background: The increase in prevalence of chronic conditions in US and worldwide has been well documented. Patients with multimorbidity typically require higher level of care and incur more significant health care costs when compared with patients with zero or one chronic condition. These findings are concerning for the health of the general population, but also for the pregnant population. Though many studies have sought to understand the burden of multimorbidity on the general population, there is still limited literature pertaining to the impact of multimorbidity on a pregnant or perinatal population. Further still, though some studies have demonstrated the impact single chronic conditions have on maternal morbidity, not enough research has been done regarding the burden of multimorbidity on this population. Most studies addressing multi-morbidity in pregnancy primarily observe the impact it has on maternal and fetal morbidity and mortality. Very limited research is available on the health care burden these conditions may pose during the perinatal course. Furthermore, no studies have explored the burden of medication use in the context of multi-morbidity in pregnancy. The goal of our study is to estimate the prevalence of multi-morbidity in pregnancy. We will also evaluate the association of multi morbidity with healthcare resource utilization and medication burden in pregnancy. Using the MEPS database will allow evaluation of a more nationally representative population than prior studies that have been conducted.

Methods: We are utilizing a population-based survey data source that is comparable to the current US population. We are identifying all participants (18 years and older) who were pregnant and completed the Medical Expenditure Panel Survey Household Component (MEPS-HC) between the years of 2015-2019. Health conditions are being coded for using ICD codes. We are using a modified Hwang et al. classification method (previous validated) to measure multi-morbidity. The primary outcomes of interest are healthcare resource utilization and medication burden.

Results: Pending

Conclusion: We believe this study will contribute to scant existing literature regarding the impact of multimorbidity in pregnancy outside of well-established maternal and fetal morbidity and mortality. It is especially important to highlight this burden to allow increased emphasis on prenatal health care optimization and overall preventative care.