

2022-2023
RESEARCH
IS CLINICAL CARE

Department of Obstetrics and Gynecology

Department of Obstetrics and Gynecology Research

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Department of Obstetrics and Gynecology Research

Research Is Clinical Care

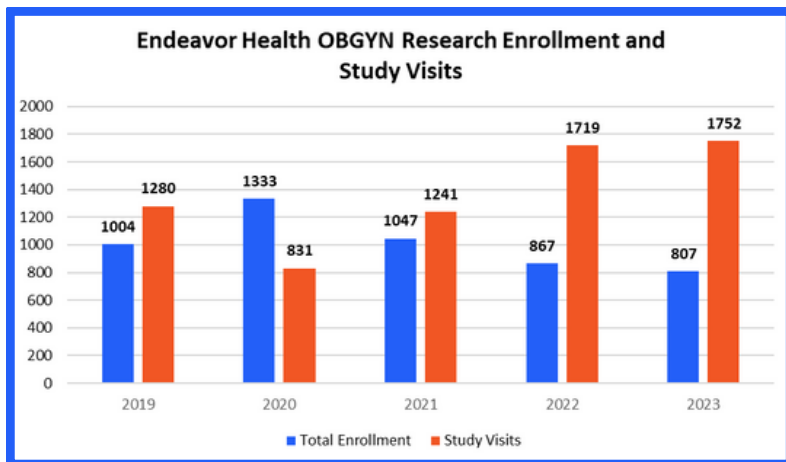


Figure 1: Endeavor Health OBGYN Research Enrollment and Study Visits 2019-2023

	2021	2022	2023	Total
Publications	98	91	47	236
Presentations	112	69	42	223
New grants	31	12	11	54
Grant \$ awarded	\$6,642,560	\$2,345,299	\$7,885,965	\$16,873,824
Grant \$ distributed	\$5,595,590	\$4,956,588	\$4,523,357	\$15,075,535
# of research staff	33	37	44	-

Figure 2: Publications, Presentations, New Grants, Grant Amount Awarded and Distributed, and the Number of Researchers 2021-2023

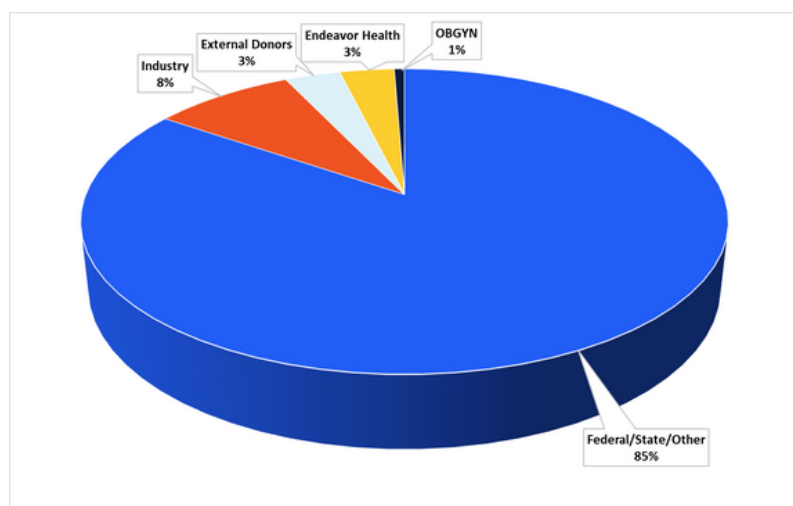


Figure 3: Grant Awards by Funding Source: Industry, Donors, Endeavor Health, OBGYN, and Federal/State/Other, Fiscal Years 2022 and 2023 combined

The overarching goal of the Division of Reproductive Biology Research in the Department of Obstetrics and Gynecology is to improve the lives and health of our patients and their children through research and quality initiatives. We believe that Research Is Clinical Care. Our investigational portfolio spans the breadth of the field of obstetrics and gynecology and includes topics such as gynecologic pain, gynecologic cancer, maternal and fetal health, preterm birth, perinatal stress and mood disorders, urinary incontinence, as well as the quality and equity of care we deliver.

We believe that through scientific inquiry we can both improve our care and extend our impact to patients that might not otherwise have access to our department, but for the availability of unique clinical trials. By designing and engaging in studies that are translational and clinical, we also create the potential to shorten the transition from new knowledge to implementation.

The study enrollment and visit numbers (Figure 1) support the concept that research IS clinical care and our funding success speaks to the caliber of our teams (Figures 2, 3). You will note that we are intentional in our pairing of physician-scientists with PhD investigators, thus blending clinical and scientific expertise to compete and succeed at the highest level of grant acquisition. In sharing this summary we hope that it inspires others to pursue inquiry as a foundational aspect of clinical care. – **Richard Silver, MD**

Obstetrics and Gynecology Research

Perinatal Depression Program



Richard Silver, MD



Jo Kim, PhD

Perinatal depression impacts one in seven women, making it one of the most prevalent complications of pregnancy. According to the CDC, mental health is the leading underlying cause of pregnancy-related deaths. Despite screening recommendations and efficacious treatments, as few as 20% of affected women are adequately treated. Barriers include childcare needs, costs, lack of transportation, and stigma. These barriers are exacerbated for Black, Indigenous, and other people of color (BIPOC). Richard Silver, MD, Clinical Chair of Obstetrics and Gynecology; and Jo Kim, PhD, Director of the Perinatal Depression Program are committed to identifying, researching, and reducing those barriers. Since 2003, the Perinatal Depression Program (PDP) has provided proactive universal screening for depression in both pregnancy and postpartum. The program features the MOMS Perinatal Depression Hotline – an immediate, live telephone response to at-risk women by licensed professionals 24/7/365 for education, support and mental health referral. This clinical commitment to identify and treat perinatal mood disorders goes hand in hand with the research focus on evaluating low-cost, innovative solutions to improve access to psychological treatments for perinatal depression.

MOMS Perinatal Depression Hotline; Illinois Department of Public Health; \$100,000 (annual grant). First in the US, the 24/7 live Hotline has received over 15,000 calls from 47 states and 7 countries. Calls have led to 549 ED referrals, 11,023 referrals; 230 diagnoses of psychosis and assisted 1,142 people with suicidal ideation. (2023–2024)

Scaling Up Maternal Mental Healthcare by Increasing Access to Treatment; PIs: Dr. Daisy Singla, PhD, Patient Centered Outcomes Research Institute/Sinai Health System, University of Toronto, Dr. Samantha Meltzer-Brody, MD, MPH, UNC– Chapel Hill; Site PI: Dr. Richard Silver, MD; \$2,305,817.

The purpose of this study is to conduct a pragmatic, multi-center randomized non-inferiority trial to compare the safety and efficacy of psychotherapy provided by trained nurses as compared to licensed therapists and the delivery of care virtually as compared to in-person, implementing a brief, evidence-based, psychological treatment of behavioral activation for perinatal depression and anxiety. (2019–2025) Silver

Responsive eHealth Intervention for Perinatal Depression in Healthcare Settings (Mom Mood Booster); National Institute of Mental Health/Small Business Innovation Research; PI: Dr. David Smith, PhD, University of Oregon, Site PI: Dr. Richard Silver; \$391,000. The purpose of this randomized controlled trial was to evaluate the efficacy of a web app-based cognitive behavioral therapy for perinatal depression compared to treatment as usual in a large healthcare setting. (2018–2020) Silver

Mobile MOMS (Moms Overcoming Mood Symptoms); Chicago Biostatistics; NorthShore Research Institute/Medical Group Pilot Grant funding, PI; Dr. Jo Kim, PhD; \$40,000. The purpose of this study was to deploy and evaluate a computerized adaptive test to screen for perinatal mood disorders. (2018–2019) Kim

Advancing Translational Science in Metropolitan Chicago; UChicago Emergency Medicine; National Institute of Mental Health, PI: Dr. Julian Soloway, MD, University of Chicago; Site PI: Dr. Richard Silver; \$24,688. The purpose of this study was to develop and validate a chatbot-mediated approach for implementing measurement-based care. (2017–2021) Silver

Stress and Pregnancy & Health Disparities



Ann Borders, MD, MSc, MPH

Ann Borders, MD, MSc, MPH, Executive Director and Obstetric Lead, Illinois Perinatal Quality Collaborative; Ian Bernard Horowitz Chair of Obstetrics, Division of Maternal-Fetal Medicine, Endeavor Health; Lauren Keenan-Devlin, PhD, MPH, Research Scientist; and Alexa Freedman, PhD, Research Scientist focus their research on health disparities and the impact of stress on pregnancy. Their multi-centered studies investigate the relationship between stress during pregnancy and postpartum in relation to maternal inflammation and breastfeeding outcomes.

Furthering Equity Through Infant Feeding Education and Support (FEEDS); PCORI; \$3,937,251; Supplement: \$794,851. The goal of the study is to evaluate whether the addition of clinically integrated breastfeeding peer counseling to standard lactation care is associated with a reduction in disparities in breast/chest feeding intensity and duration for Black and Latinx families. The goal of the supplement is to expand to a third site at the University of Chicago (UCM) and includes an analysis of patient-centered economic outcomes. (2021-2027) Borders/Keenan-Devlin



Lauren Keenan-Devlin, PhD, MPH

Psychosocial Intervention, Maternal Inflammation, and Birth Outcomes: Centering vs. Routine Prenatal Care (PIINC); 1R01HD092446-01A1; \$2,688,209; Supplement: \$744,238. This project examined biological pathways of inflammation and birth outcomes through a psychosocial intervention of participating in group prenatal care in Greenville, SC. (2018-2023) Borders

Understanding Socioeconomic Disparities in Perinatal Risk: The Role of Epigenetic and Transcriptional Regulation in the Placenta: The Stress Pregnancy and Health Study (SPAH); R01MD011749; \$3,020,868. This project examined the pathways connecting socio-economic status with placental gene regulation through a multi-level framework. (2017-2023) Borders



Alexa Freedman, PhD

Optimizing Utilization of Lay Health Workers to Address Maternal and Child Health Disparities: A Comprehensive Evaluation of a Clinically-Integrated Breastfeeding Peer Counseling Program; 1K01HS027906-01A1; AHRQ; \$551,684. This project is assessing the implementation of the Evanston Hospital Breastfeeding Peer Counseling program that has been serving NorthShore Community Health Center (NSCHC) patients since 2016. Critical to reproducing and scaling the intervention is implementation research that can identify the key components of the program, barriers and facilitators to implementation, and the associated costs and cost reductions. (2022-2027) Keenan-Devlin

Obstetrics and Gynecology Research

Stress and Pregnancy & Health Disparities, continued

Breastfeeding Peer Counselor Program for the Henrietta Johnson Louis ISCU; Associate Board; \$150,000. The purpose of this study was to understand whether the program reduces breastfeeding disparities for Black and low-income families, evaluate the implementation of the intervention, and conduct an economic analysis of the program to inform ongoing sustainability. (2021–2023) Keenan–Devlin

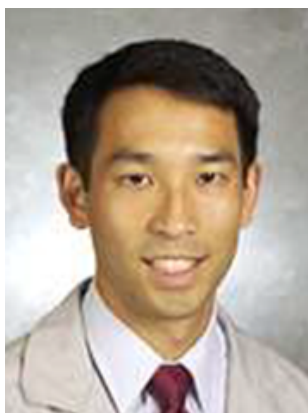
Placental contributions to offspring cardiovascular health disparities across the life course; (1K01HL165038–01A1); NHLBI; \$655,164. This project is based on growing evidence that indicates the perinatal period is a critical window for intergenerational transmission of disparities in cardiovascular disease and will examine associations between measures of placental function and offspring cardiovascular outcomes from childhood to adulthood. (2023–2028) Freedman

miRNA in Maternal Circulation During Pregnancy and Chronic Placental Inflammation; Pilot grant; \$40,000. Current methods for evaluating placental function during pregnancy are limited. The project will leverage stored serum samples from the Stress Pregnancy and Health (SPAH) Study to investigate whether placental miRNA in maternal circulation during pregnancy can be used as a biomarker of placental function. (2023–2024) Freedman

Racial disparities in fetal growth: mediation by social determinants of health and underlying biological processes; Society for Pediatric Pathology; \$25,000. This study investigated how race, as an indicator of race-patterned social disadvantages, impacts fetal growth through changes in fetal gene expression, and how this relates to placental development and function. (2021) Freedman

Obstetrics and Gynecology Research

Chronic Pelvic Pain



Frank Tu, MD, MPH

Frank Tu, MD, MPH, Vice Chair, OB Quality and Kevin Hellman, PhD, Senior Clinical Research Scientist have been collaborating within the Division of Gynecological Pain and Minimally Invasive Surgery for over a decade and have recently been joined by post-doc Natalie Osborne, PhD. Together, they run the Gynecologic Research Laboratory, which seeks to identify the mechanisms that cause pelvic pain, including painful periods, to ultimately prevent these pain conditions.

Cross Organ Mechanisms in Chronic Pelvic Pain (CRAMPP2);

2R01DK100368-06A1; \$3,382,074. This extension study from CRAMPP1, which ran between 2014-2020, assesses pelvic pain and sensory sensitivity progression in dysmenorrhea sufferers over two years while assessing their overall pain sensitivity and inflammatory reactivity profiles. Identifying an at-risk group and associated mechanisms is crucial to initiating relevant chronic pelvic pain prevention strategies. The goal of this study is to understand the risk factors and mechanisms responsible for menstrual and pelvic pain. (2023-2028) Tu

Deciphering the mechanisms of visceral pain with novel spinal functional imaging;

Pilot grant; \$40,000. The purpose of this research was to use brain-based spinal fMRI to determine if brain regions involved in spinal cord modulation process pain stimuli differently in people with menstrual pain and CPP than pain-free controls. (2023) Hellman

Non-Steroidal Anti-Inflammatory Drug (NSAID) Response and Central Sensitization of Pain in Women with Dysmenorrhea;

Subcontract DOD/McLean Hospital- Harvard Medical School, Site PI: Dr. Kevin Hellman; \$26,948. The goal of this study was to see if optimized use of naproxen for the treatment of dysmenorrhea will improve pain report from baseline. In addition, to determine whether cross-organ influences from the uterus on bladder pain sensitivity change from baseline after reduced menstrual pain experience. (2023) Hellman

Early Menstrual Pain Impact of Multisensory Hypersensitivity (EMPATHY);

1R01HDO96332-01; \$3,289,567. The purpose of this study is to learn more about how menstrual pain affects pain sensitivity development, including at bladder and muscle sites, in adolescents pre-menarche and for 2 years following menarche. (2018-2024) EMPATHY Supplement; \$324,052. (2023-2024) Tu

Mechanistic Characterization of Uterine Pain to Improve Diagnosis and Treatment for Dysmenorrhea (MCUP);

5R01HDO98193-04; \$3,289,567. The purpose of this research is to discover the causes of menstrual pain. Additionally, why a common over-the-counter NSAID helps or may not help with cramping pain. (2019-2024) Hellman



Kevin Hellman, PhD



Natalie Osborne, PhD

Obstetrics and Gynecology Research

Urogynecology



Roger Goldberg, MD, MPH

Roger Goldberg, MD, MPH, Division Head, Urogynecology; Ghazala Rostami Nia, MD, MSc; Sonia Dutta, MD, and post doc Alireza Hadizadeh, MD are dedicated to improving the care of women with a variety of pelvic floor abnormalities, including bladder and bowel incontinence, pelvic organ prolapse, lower urinary tract pain and infection disorders, voiding dysfunction, and female bowel and defecatory dysfunction.

Prospective RCT of Obstructed Defecation (OD) Surgery: Comparing Transvaginal Rectopexy, Ventral Mesh Rectopexy and POP Repair (PROD Trial); 1R01DK133328-01A1; \$2,181,821. PROD is a multi-center prospective clinical trial to test the hypothesis that patients presenting with vaginal prolapse with OD symptoms undergoing our new diagnostic evaluation and surgical treatment will have improved outcomes relative to the current standard of care two years after surgery. (2023-2028) Goldberg/Rostami Nia



Ghazaleh Rostami Nia, MD, MSc

Feasibility of a deep learning-based method for automated localization of pelvic floor landmarks using Pelvic Floor Ultrasound; This retrospective cohort imaging analysis study aims to investigate the feasibility of developing and evaluating a deep learning-based technique for the automated localization of pelvic organ prolapse-related landmarks in collaboration with the University of Tehran. (2022-2024) Rostami Nia

NorthShore Auxiliary; \$150,000. For the Urogyn research program to develop novel surgical techniques to improve patient outcomes. (2021-2023) Rostami Nia



Sonia Dutta, MD

A prospective study to assess the efficacy and safety of the BlueWind RENOVA iStim™ System for the treatment of patients diagnosed with overactive bladder (OASIS – OverActive bladder Stimulation System study); BlueWind Industry; \$14,337. This study used a new implantable stimulator with a separate wearable device that assists patients with overactive bladder (OAB) symptoms, called the RENOVA iStim™ System. (2021-2022) Rostami Nia

Pivotal Study of Subcutaneous Tibial Nerve Stimulation with eCoin for Urgency Urinary Incontinence (eCoin); Valencia Technologies; \$95,394. This study tests the safety and effectiveness of the eCoin (electroceutical Coin) system for the treatment of urgency urinary incontinence. (2019-2024) Dutta



Alireza Hadizadeh, MD

Preterm Birth Prevention



Emmet Hirsch, MD

Emmet Hirsch, MD, OB Hospitalist Program Director, and Chandrashekara Kyathanahalli, PhD, Research Scientist, focus on the investigation of infectious and inflammatory processes, with special emphasis on the underpinnings of preterm labor. The investigators' insights and expertise have led to better practices for safe vaginal delivery and prevention of surgical site infections.

In 2021, the Hirsch lab presented five abstracts at the Society for Reproductive Investigation's Annual Meeting, the premier conference for reproductive health research. Collectively, these abstracts enhance our understanding of how hormones impact inflammation in pregnancy-relevant tissues and allow investigators to reduce experimental error through better planning and new methods. The Hirsch Lab published a recent review that examined evidence linking parturition and inflammation in order to address whether inflammation is a cause of labor, a consequence of labor, or a separate but related phenomenon. The investigators identified and suggested ways to reconcile inconsistencies regarding definitions of labor onset in published research, which may contribute to the variability in conclusions regarding the genesis and maintenance of parturition.



Prevention of Preterm Birth Using the Collectin Surfactant Protein A (SP-A); RO1HD096209-03; \$1,468,172. The purpose of this study was to determine the mechanisms by which surfactant protein A (SP-A), a protein produced by the fetal lung, engages the toll-like receptor (TLR) 2 and its downstream signal transduction mechanisms and prevents pre-term birth. The ultimate goal was to establish SP-A as a potential preventive therapeutic agent for pre-term birth. (2019-2023) Hirsch

Surfactant Protein A (SP-A): A Novel Agent to Prevent Preterm Birth; NS Associate Board; \$130,000. This study aimed at investigating the mechanisms by which surfactant protein A (SP-A) interacts with the toll-like receptor (TLR) 2 and its downstream signal transduction pathways in order to prevent pre-term birth. SP-A, which is produced by the fetal lung, has shown promising results as a potential therapeutic agent for preventing pre-term birth. (2019-2021) Hirsch

Obstetrics and Gynecology Research

Gynecologic Cancer Prevention



Gus Rodriguez, MD

Gustavo Rodriguez, MD, Division Head, Gynecologic Oncology; and Omar Nelson, PhD, Research Scientist focus their research program on pharmacologic approaches to prevent fallopian tube, endometrial, and ovarian cancers. They aim to understand how combining progestins and vitamin D or other agents can enhance their efficacy for preventing ovarian and fallopian tube cancer.

Investigation of Progesterone-mediated Mechanisms of Cancer Prevention in the Fallopian Tube: Comparison of Molecular/Genetic Changes Relevant to Cancer Prevention and Carcinogenesis in the Fallopian Tubes from Postpartum Women, Non-gravid Women, Women with BRCA1/2 Mutations at Increased Risk of Ovarian Cancer, and Women Diagnosed with Ovarian Cancer supplement; Lauder Foundation; \$75,000. This study aimed to determine whether chemopreventive markers are activated in the fallopian tube in the setting of a high progestin milieu typical of pregnancy. (2020) Rodriguez



Omar Nelson, PhD

Exploring the Role of Progestin and Vitamin D on Inflammation and Oxidative Stress in in-vitro and in-vivo Models of Ovarian Cancer; NIH/NCI Supplement; \$268,082. This study aimed to test the efficacy of vitamin D and progestin as a chemo-preventive strategy against most ovarian cancers. (2020-2022) Rodriguez

Vitamin D and Progestins for the Chemoprevention of Fallopian Tube/Ovarian Cancer; 5R01CA214606-05 NIH; \$1,789,030; Bears Care; \$650,000. This study aimed to test the efficacy of vitamin D and progestin as a chemopreventive strategy against most ovarian cancers. (2017-2023) Rodriguez

Immortalization of Human Fallopian Tube Epithelial Cells Using Conditional Reprogramming; This study characterized the primary FTE cell library and immortalized FTE cell lines in terms of morphology, proliferative capacity, and gene expression as well as examine pharmacologic interventions in-vitro with the goal of cancer prevention. Additionally, it aimed to screen the library of FTE cell lines in search of novel biomarkers for ovarian/fallopian cancer screening. (2015-2024) Rodriguez

Obstetrics and Gynecology Research

Gynecologic Cancer Studies



Tilley Jenkins Vogel, MD

Tilley Jenkins Vogel, MD, oversees the Gynecologic Oncology treatment trials at the Kellogg Cancer Center. She is highly involved in multiple studies funded by the Gynecologic Cancer Group(GOG) Foundation. Some of the studies funded by the GOG foundation include A Phase 3 Study of Relacorilant in Combination with Nab-Paclitaxel versus Investigator's Choice in Advanced, Platinum-Resistant, High-Grade Epithelial Ovarian, Primary Peritoneal, or Fallopian-Tube Cancer and A Phase 2 Open-Label, Multicenter Study to Evaluate Efficacy and Safety of ZN-c3 in Subjects with Malignant Tumors Harboring DNA Repair and Cell Cycle Gene Alterations among many other clinical trials.

Identifying the Wolf in Sheep's Clothing: An Analysis of Outcomes in p53-Mutated, low-grade Endometrioid Adenocarcinoma of the Uterus;

The Auxiliary and the Breast and Ovarian Research Program; \$50,000. The study aimed to determine whether low-grade endometrioid endometrial cancers with p53 mutations had similar survival outcomes to high-grade endometrial cancers such as uterine papillary serous carcinoma and whether these tumors would benefit from the addition of adjuvant therapy for these patients. (2022) Jenkins Vogel



Elena Moore, MD

A Randomized Controlled Study of a Fasting Mimicking Diet (FMD) in Conjunction With Combination Carboplatin and Paclitaxel in the Treatment of Patients With Advanced or Recurrent Ovarian, Fallopian Tube and Primary Peritoneal Cancer;

NS Breast and Ovarian Research Program; \$40,000. This study tested whether platinum-taxane chemotherapy combined with an FMD in advanced and recurrent ovarian, fallopian tube, and primary peritoneal cancer patients is associated with decreased toxicity and/ or improved tumor response to therapy. (2021) Jenkins Vogel

Preoperative Uterine Evaluation for Cancer in Women with Atypical Hyperplasia;

This study aimed to identify the rate of concurrent endometrial cancer on final pathology for patients diagnosed pre-operatively with EIN/atypical hyperplasia based on different preoperative sampling methods as well as histologic and patient characteristics that may predict the likelihood of endometrial cancer on final pathology. (2022-2024) Moore

Pilot Study of the Impact of Early Palliative Care on Quality of Life in Recurrent Ovarian, Fallopian Tube, and Primary Peritoneal Cancer;

NS Breast and Ovarian Cancer Research; \$40,000. The purpose of the study was to determine if early introduction of palliative care will result in an improvement of quality of life for these cancer patients and their caregivers as well as a decrease in serum levels of stress-related biomarkers that have been associated with poor prognosis in ovarian, fallopian tube, primary peritoneal cancer. (2021) Moore

Maternal-Fetal Medicine Units



Endeavor Health Maternal-Fetal Medicine, in partnership with Northwestern, is a participating member in the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)-sponsored Maternal-Fetal Medicine Unit (MFMU) Network. With only 14 centers nationwide, the MFMU provides patients access to important clinical trials to advance evidence-based care of perinatal populations. Beth Plunkett, MD, MPH, Vice Chair of Reproductive Health Research is the Endeavor Health site PI.

Maternal Fetal Medicine Units Network; NIH SubAward Agreement with Northwestern University 2UG1HDO40512-24/60065184NSUH, \$343,952. (2023-2030)

Beth Plunkett, MD, MPH

- **A trial of pessary and progesterone for preterm prevention in twin gestation with a short cervix (PROSPECT);** The purpose of this study is to determine whether pessary or vaginal progesterone lowers the risk of babies being born preterm to women who are carrying twins and have a short cervix.
- **A Randomized Trial of Continuous Positive Airway Pressure (CPAP) for Sleep Apnea in Pregnancy (SLEEP);** The purpose of this study is to evaluate if CPAP for sleep apnea in pregnancy decreases the risk of hypertensive disorders of pregnancy and other complications, such as gestational diabetes.
- **Prematurity Registry: An Observational Cohort Study of Obstetrical Determinants of Preterm Delivery and Neonatal Outcomes;** The purpose of this study is to examine the obstetrical determinants of neonatal morbidity and mortality. Secondary objectives include examining postpartum maternal outcomes and neonatal outcomes, as well as describing the maternal burden of prematurity.
- **COVID-19: Maternal Morbidity and Mortality During COVID-19 Pandemic;** The purpose of this study is to evaluate the association between COVID-19 infection during pregnancy or immediately postpartum, and adverse obstetric outcomes.

NIH RECOVER: A Multi-site Observational Study of Post-Acute Sequelae of SARS-COV-2 Infection in Adults (PASC); A Multi-Site Observational Study of Post-Acute Sequelae of SARS-CoV-2 Infection Pediatric Cohort Study (PASC-Peds); Dr. Stuart Katz, NIH SubAward Agreement with Northwestern University, Miller OT2HL161847-01/ 60062013NSU, \$1,032,810. In collaboration with MFMU, these studies are enrolling individuals with and without SARS-CoV2 infection during pregnancy, and with or without PASC symptoms, along with their congenitally exposed infants to identify risk factors and occurrence of PASC. (2021-2024)

In addition to the MFMU studies, Dr. Plunkett has been the principal investigator of a number of other studies focused on improving maternal and perinatal health.

Preeclampsia Risk Assessment: Evaluating Cut-offs to Improve Stratification (PRAECIS); Dr. S Ananth Karumanchi, Cedars-Sinai Medical Center, Site PI: Dr. Beth Plunkett; \$19,490. The purpose of this study was to identify a cut-off of the ratio of angiogenic mediators (sFlt-1/PIGF) to predict the onset of preeclampsia with severe features within the next 2-weeks among pregnant patients hospitalized with a hypertensive disorder of pregnancy. (2020-2022)

MARANI PRENATAL CONNECTED CARE (M•care) Safety and Effectiveness Study; Marani; \$70,294. This study tested the ability of the Marani M-Care System to provide antenatal monitoring of pregnant patients at or above 32 weeks of gestation through a head-to-head comparison of fetal heart rate, maternal heart rate, and uterine contractions by the M-Care System as compared to the standard cardiotocography (CTG) device. (2019-2023)

Automated Electronic Maternal Morbidity Surveillance (SAVE MOMS)

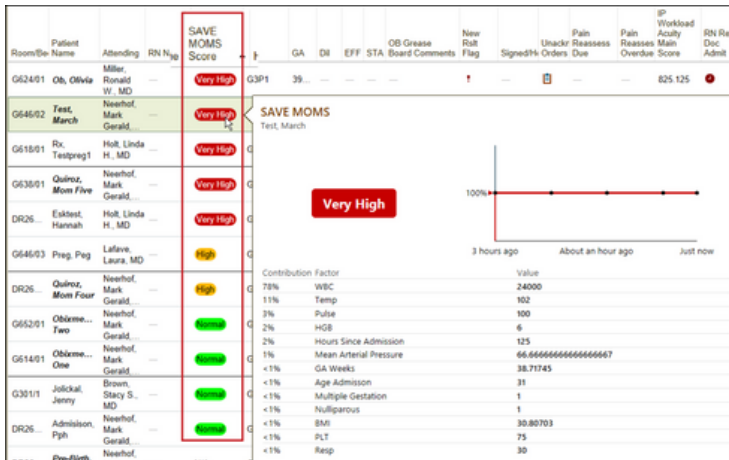


Figure 4: Image of what appears in Epic to alert care teams on patient status

As the recipients of proceeds from the 2020–2022 American Craft Exhibition (ACE) Fundraising Events (\$726,030), Drs. Beth Plunkett and Richard Silver are leading the Department’s commitment to an invigorated quality and safety journey with the SAVE MOMS project. SAVE MOMS is an innovative program that harnesses the power of the electronic medical record (Epic) to identify pregnant and post-partum people who are at the greatest risk for severe maternal morbidity and alert care teams (Figure 4), so they can provide timely and efficient care. The SAVE MOMS program uses an algorithm that draws data from Epic and runs behind the scenes to identify birthing patients at high risk for severe maternal morbidity during their delivery admission. The model was prospectively validated from July through December 2022 and found to be highly predictive of severe maternal morbidity (SMM) with an area under the receiver operator curve (AUROC) of 0.76 (confidence interval of 0.7–0.82) (Figure 5). The model was able to accurately predict SMM, as defined by the Centers for Disease Control along with minor SMM (transfusion of 3 or fewer units of blood) or major SMM (all other SMM or transfusion of 4 or more units of blood). The sensitivity of the model was approximately 70% when the top 30% of risk scores were flagged (Figure 5). The SAVE MOMS team recently launched an update to the model and is currently evaluating the implementation and effectiveness outcomes to optimize the care of all birthing patients during their delivery admission.

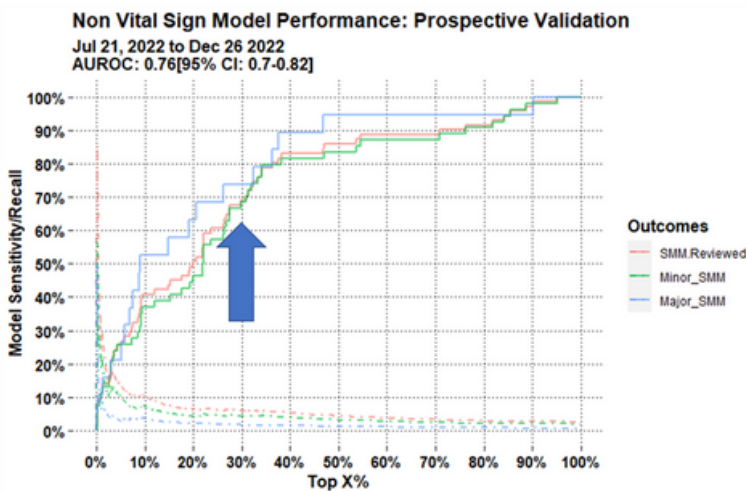


Figure 5: SAVEMOMS Model: Prospective Validation
 SMM: Severe maternal morbidity
 Minor SMM: Transfusion of 3 or less units of blood
 Major SMM: All other SMM or transfusion of 4 or more units of blood.

The Illinois Perinatal Quality Collaborative (ILPQC)

Severe Maternal Morbidity Rate Deliveries with Hypertension, Hospital Discharge Data, All Illinois Hospitals

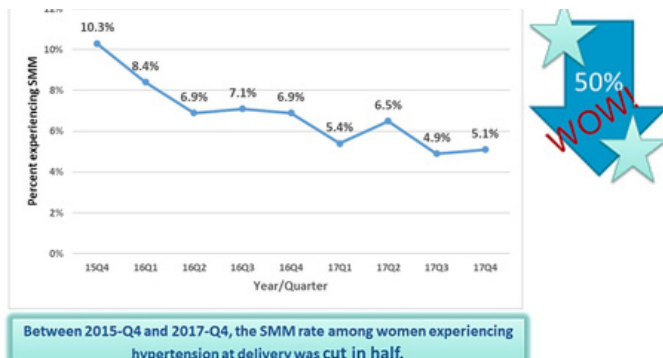


Figure 6: Hypertension Initiative

Since its inception in 2012, the Illinois Perinatal Quality Collaborative (ILPQC) has had great success in improving the lives of mothers and their babies across Illinois. The ILPQC is a statewide network of perinatal clinicians, nurses, hospitals, patients, community stakeholders, and public health leaders that aims to equitably improve outcomes and reduce disparities for mothers and babies across Illinois.

The Hypertensive Initiative sought to standardize care for all pregnant patients with severe hypertension and institute life-saving treatment within 60 minutes of the first severe-range blood pressure. Implementation of this initiative occurred from 2015–2017 and was associated with a 50% decrease in severe maternal morbidity (SMM) in patients with severe-range blood pressure across the state (Figure 6).

Medication Assisted Treatment By Race and Ethnicity

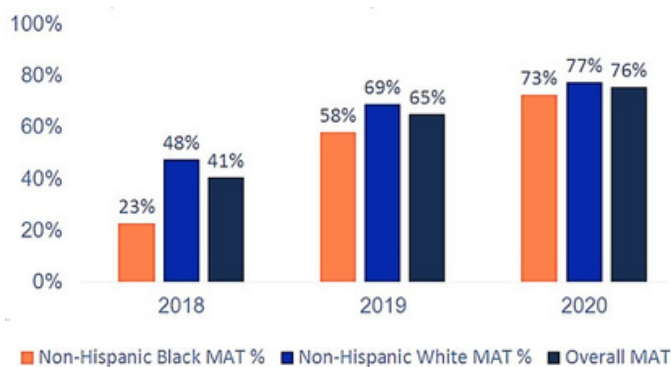


Figure 7: Mothers and Newborns Affected by Opioids Initiative

The Mothers and Newborns Affected by Opioids (MNO) initiative took place from 2018–2020 and aimed to first, universally utilize a validated screening tool to assess all pregnant patients for opioid use disorder (OUD) and second, to link patients with OUD to medication-assisted treatment (MAT). Through the implementation of universal screening procedures and linkage of care, the MNO initiative resulted in improvement in linkage to MAT for all patients with OUD and, importantly, removed the racial and ethnic disparities gap that previously existed. These two initiatives are currently in sustainability phase.

Nulliparous, Term, Singleton, Vertex (NTSV) Cesarean Section Rates By Race and Ethnicity

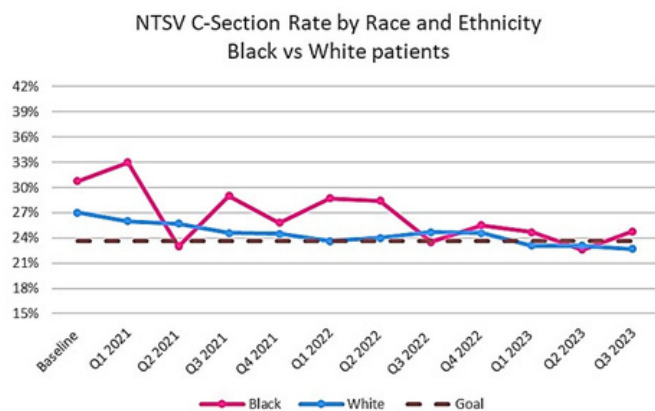


Figure 8: Promoting Vaginal Birth Initiative

The ongoing ILPQC Promoting Vaginal Birth (PVB) Initiative aims to first, safely increase the number of vaginal births by using checklists to ensure that care teams can easily follow best practice guidelines for laboring patients and second, to reduce the equity gap between Black and White cesarean deliveries among nulliparous, term, singleton, vertex (NTSV) pregnancies. Implementation of PVB has demonstrated great success in achieving these two aims (Figure 9).

The Illinois Perinatal Quality Collaborative (ILPQC)

Hospital Team Data Submission

Structure Measures	Baseline (% In Place)	August 2023 (% In Place)
SDOH Screening (L&D)	17%	90%
Optimize Accurate Self-Reported Race and Ethnicity Data Collection	7%	88%
Review Maternal QI Data Stratified by Race, Ethnicity & Insurance	6%	85%
Engage Patients and Community in QI Work	4%	48%
Sharing Respectful Care Strategies with Healthcare Team and Patients	9%	80%
PREM Implementation	9%	75%
Postpartum Safety Patient Education	54%	93%

Figure 9: Birth Equity Initiative

Further work to address disparities in maternal health care is driven by the current ILPQC Birth Equity initiative which entails a multi-pronged approach to accurately identify patient race and ethnicity, identify and address social determinants of health needs, universally provide respectful care and ask patients to report their experiences during their delivery admission regarding respectful care (Table 1).

Dr. Ann Borders is the Executive Director and Obstetric Lead for ILPQC. Currently, ILPQC is leading a statewide Birth Equity Initiative with 75

hospitals, and a Promoting Vaginal Birth Initiative with 85 hospitals. A statewide initiative on Mothers and Newborns affected by Opioids is now in sustainability mode. In addition, ILPQC is launching a neonatal equity initiative titled: Equity and Safe Sleep in Infants to address unacceptable disparities in infant mortality in Illinois.

Expanding birthing hospitals' capacity for equitable implementation and sustainment of Quality Improvement (QI) through maternal safety bundles; HRSA-23-066; \$265,380. The Alliance for Innovation (AIM) Capacity Program will provide partial support for the Promoting Vaginal Birth Initiative and future maternal mental health initiatives to facilitate their implementation, with input from stakeholders, including patient advisors and clinical leads; implement a data collection and reporting system, and provide Quality Improvement (QI) support to implement key actionable strategies to improve perinatal outcomes. (2023-2027) Borders

Working together to reduce disparities and improve outcomes for all birthing people and newborns across Illinois; CDC-RFA-DPP22-22017; \$560,536. The CDC Perinatal Quality Collaborative Cooperative Agreement will provide partial support for the Birth Equity Initiative and future OB statewide QI Initiatives to support the implementation with input from stakeholders, including patient advisors and clinical leads, implementation of the data collection and reporting system, and provide QI support to implement key actionable strategies to improve birth equity. (2022-2027) Borders

ILPQC- IL DHS; Illinois Department of Human Services; \$76,715. The DHS ILPQC project will facilitate collaborative learning opportunities for 90 birthing hospitals and state and national perinatal stakeholders, engagement of patient, community, and clinical advisors to statewide obstetric and neonatal QI initiatives, and the implementation of QI support activities for initiatives in sustainability. (2023-2024) Borders

ILPQC Title V; Illinois Department of Public Health Title V; \$355,996. The IDPH Title V project will provide support for ILPQC collaborative learning events, OB and Neonatal Advisory Meetings, partnerships and collaborations, and statewide QI initiatives with a focus on the development and implementation of the Equity and Safe Sleep Infants statewide Quality Improvement Initiative, to reduce infant mortality and disparities in infant mortality, and equitable care in alignment with key strategies from the obstetric Birth Equity Initiative. Initiative activities will include monthly collaborative learning webinars, a rapid-response data system, and focused QI support for hospital teams. (2022-2024) Borders

Building a causal pathway framework to identify interventions to eliminate racial/ethnic disparities in severe maternal morbidity; Stanford/NIH; \$7,612. The objectives of this funding are to create and test a causal pathway framework to elucidate how social determinants and more proximal clinical and healthcare-related factors together lead to SMM and its disparities, and to use this framework to identify actionable strategies that will reverse the current trends and eliminate inequities. (2022-2023) Borders

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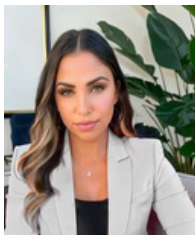


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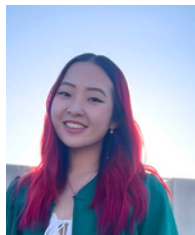


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Alshiek, J., Murad-Regadas, S. M., Mellgren, A., Glanc, P., Khatri, G., Quiroz, L. H., Weinstein, M. M., **Rostaminia, G.**, Oliveira, L., Arif-Tiwari, H., Ferrari, L., Bordeianou, L. G., Shobeiri, S. A., & Members of the Expert Panel on Dynamic Ultrasound Imaging of Defecatory Disorders of the Pelvic Floor (2023). Consensus Definitions and Interpretation Templates for Dynamic Ultrasound Imaging of Defecatory Pelvic Floor Disorders: Proceedings of the Consensus Meeting of the Pelvic Floor Disorders Consortium of the American Society of Colon and Rectal Surgeons, the Society of Abdominal Radiology, the International Continence Society, the American Urogynecologic Society, the International Urogynecological Association, and the Society of Gynecologic Surgeons. *Diseases of the colon and rectum*, 66(2), 200–216. <https://doi.org/10.1097/DCR.0000000000002651>

Alshiek, J., Murad-Regadas, S. M., Mellgren, A., Glanc, P., Khatri, G., Quiroz, L. H., Weinstein, M. M., **Rostaminia, G.**, Oliveira, L., Arif-Tiwari, H., Ferrari, L., Bordeianou, L., Shobeiri, S. A., & Members of the Expert Panel on Dynamic Ultrasound Imaging of Defecatory Disorders of the Pelvic Floor (2023). Consensus Definitions and Interpretation Templates for Dynamic Ultrasound Imaging of Defecatory Pelvic Floor Disorders. *Urogynecology (Philadelphia, Pa.)*, 29(3), 327–343. <https://doi.org/10.1097/SPV.0000000000001332>

Alshiek, J., Murad-Regadas, S. M., Mellgren, A., Glanc, P., Khatri, G., Quiroz, L. H., Weinstein, M. M., **Rostaminia, G.**, Oliveira, L., Arif-Tiwari, H., Ferrari, L., Bordeianou, L., Shobeiri, S. A., & Members of the Expert Panel on Dynamic Ultrasound Imaging of Defecatory Disorders of the Pelvic Floor (2023). Consensus definitions and interpretation templates for dynamic ultrasound imaging of defecatory pelvic floor disorders : Proceedings of the consensus meeting of the pelvic floor disorders consortium of the american society of colon and rectal surgeons, the society of abdominal radiology, the international continence society, the American urogynecologic society, the international urogynecological association, and the society of gynecologic surgeons. *International urogynecology journal*, 34(3), 603–619. <https://doi.org/10.1007/s00192-022-05414-z>

Battarbee, A. N., Mele, L., Landon, M. B., Varner, M. W., Casey, B. M., Reddy, U. M., Wapner, R. J., Rouse, D. J., Thorp, J. M., Chien, E. K., Saade, G., **Plunkett, B. A.**, Blackwell, S. C., & Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units (MFMU) Network (2023). Long-Term Maternal Metabolic and Cardiovascular Phenotypes after a Pregnancy Complicated by Mild Gestational Diabetes Mellitus or Obesity. *American journal of perinatology*, 40(6), 589–597. <https://doi.org/10.1055/a-1970-7892>

Butler, M. S., **Smart, B. P.**, Watson, E. J., Narla, S. S., & **Keenan-Devlin, L.** (2023). U.S. Breastfeeding Outcomes at the Intersection: Differences in Duration Among Racial and Ethnic Groups With Varying Educational Attainment in a Nationally Representative Sample. *Journal of human lactation : official journal of International Lactation Consultant Association*, 8903344231186786. Advance online publication. <https://doi.org/10.1177/08903344231186786>

Chill, H. H., Martin, L. C., Abramowitch, S. D., & **Rostaminia, G.** (2023). Quantifying the effect of an endo-vaginal probe on position of the pelvic floor viscera and muscles. *International urogynecology journal*, 10.1007/s00192-023-05557-7. Advance online publication. <https://doi.org/10.1007/s00192-023-05557-7>

Chill, H. H., Martin, L. C., Abramowitch, S. D., & **Rostaminia, G.** (2023). Multimodal measurements of levator bowl volume in nulligravid asymptomatic women: endovaginal ultrasound versus MRI. *International urogynecology journal*, 34(7), 1627–1633. <https://doi.org/10.1007/s00192-022-05441-w>

Chill, H. H., **Moss, N. P.**, Chang, C., **Winer, J.**, & **Goldberg, R. P.** (2023). Risk factors for unplanned admission following surgical repair of apical prolapse. *International urogynecology journal*, 34(7), 1377–1383. <https://doi.org/10.1007/s00192-022-05358-4>

Danaher, B. G., Seeley, J. R., **Silver, R. K.**, Tyler, M. S., **Kim, J. J.**, **La Porte, L. M.**, Cleveland, E., Smith, D. R., Milgrom, J., & Gau, J. M. (2023). Trial of a patient-directed eHealth program to ameliorate perinatal depression: the MomMoodBooster2 practical effectiveness study. *American journal of obstetrics and gynecology*, 228(4), 453.e1–453.e10. <https://doi.org/10.1016/j.ajog.2022.09.027>

De Los Reyes, S., Dude, A., Doll, J., & **Plunkett, B. A.** (2023). The association between a single abnormal glucose and fetal c-peptide. *Acta diabetologica*, 60(10), 1359–1363. <https://doi.org/10.1007/s00592-023-02123-x>

Docheva, N., Heimberger, S., Mueller, A., **Bisson, C.**, Arenas, G., Perdigo, J. L., Kordik, A., Stewart, K., Goodall, P., Lengyel, E., & Rana, S. (2023). A Comparison of Obstetric Interventions and Outcomes Between Black and White Patients at an Urban Tertiary Medical Center. *Reproductive sciences (Thousand Oaks, Calif.)*, 30(7), 2313–2323. <https://doi.org/10.1007/s43032-023-01174-3>

Docheva, N., Woelkers, D., Yao, W., Jin, Y., Espinoza, J., Kunz, L., Amegashie, C., Gencay, M., Harris, J., & Rana, S. (2023). Racial differences in healthcare utilization among patients with suspected or diagnosed preeclampsia: A retrospective cohort study. *Pregnancy hypertension*, 33, 8–16. <https://doi.org/10.1016/j.preghy.2023.05.001>

Ernst, L. M., Basic, E., **Freedman, A. A.**, Price, E., & **Suresh, S.** (2023). Comparison of Placental Pathology Reports From Spontaneous Preterm Births Finalized by General Surgical Pathologists Versus Perinatal Pathologist: A Call to Action. *The American journal of surgical pathology*, 47(10), 1116–1121. <https://doi.org/10.1097/PAS.0000000000002111>

Ernst, L. M., **Freedman, A.**, Price, E., & **Franklin, A.** (2023). Anatomy of the Ductus Arteriosus in Fetal Autopsies: Correlations With Placental Pathology and Cause of Death. *Pediatric and developmental pathology : the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society*, 10935266231178151. Advance online publication. <https://doi.org/10.1177/10935266231178151>

Franklin, A. D., **Freedman, A.**, & **Ernst, L. M.** (2023). Association of placental histology and neonatal hematologic outcomes. *Journal of perinatology : official journal of the California Perinatal Association*, 43(2), 155–161. <https://doi.org/10.1038/s41372-022-01595-z>

Freedman, A. A., Price, E., **Franklin, A.**, & **Ernst, L. M.** (2023). Measures of Fetal Growth and Cardiac Structure in Stillbirths With Placental Maternal Vascular Malperfusion: Evidence for Heart Weight Sparing and Structural Cardiac Alterations in Humans. *Pediatric and developmental pathology : the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society*, 26(3), 310–317. <https://doi.org/10.1177/10935266231166548>

Garvin, S. E., **Kyathanahalli, C.**, Soha, S., Condon, J. C., & Jeyasuria, P. (2023). Preimplantation apoptotic endometrial caspase-3-mediated phospholipase A2 activation: a potential component in programming uterine receptivity. *F&S science*, 4(2), 141–150. <https://doi.org/10.1016/j.xfss.2022.12.003>

Harriett, L. E., Eary, R. L., Prickett, S. A., **Romero, J.**, Maddrell, R. G., **Keenan-Devlin, L. S.**, & **Borders, A. E. B.** (2023). Adaptation of Screening Tools for Social Determinants of Health in Pregnancy: A Pilot Project. *Maternal and child health journal*, 27(9), 1472–1480. <https://doi.org/10.1007/s10995-023-03732-2>

Horwitz LI, Thaweethai T, Brosnahan SB, Cicek MS, Fitzgerald ML, Goldman JD, Hess R, Hodder SL, Jacoby VL, Jordan MR, Krishnan JA, Laiyemo AO, Metz TD, Nichols L, Patzer RE, Sekar A, Singer NG, Stiles LE, Taylor BS, Ahmed S, Algren HA, Anglin K, Aponte-Soto L, Ashktorab H, Bassett IV, Bedi B, Bhadelia N, Bime C, Bind MC, Black LJ, Blomkalns AL, Brim H, Castro M, Chan J, Charney AW, Chen BK, Chen LQ, Chen P, Chestek D, Chibnik LB, Chow DC, Chu HY, Clifton RG, Collins S, Costantine MM, Cribbs SK, Deeks SG, Dickinson JD, Donohue SE, Durstenfeld MS, Emery IF, Erlandson KM, Facelli JC, Farah-Abraham R, Finn AV, Fischer MS, Flaherman VJ, Fleurimont J, Fonseca V, Gallagher EJ, Gander JC, Gennaro ML, Gibson KS, Go M, Goodman SN, Granger JP, Greenway FL, Hafner JW, Han JE, Harkins MS, Hauser KSP, Heath JR, Hernandez CR, Ho O, Hoffman MK, Hoover SE, Horowitz CR, Hsu H, Hsue PY, Hughes BL, Jagannathan P, James JA, John J, Jolley S, Judd SE, Juskowich JJ, Kanjilal DG, Karlson EW, Katz SD, Kelly JD, Kelly SW, Kim AY, Kirwan JP, Knox KS, Kumar A, Lamendola-Essel MF, Lanca M, Lee-Lannotti JK, Lefebvre RC, Levy BD, Lin JY, Logarbo BP Jr, Logue JK, Longo MT, Luciano CA, Lutrick K, Malakooti SK, Mallett G, Maranga G, Marathe JG, Marconi VC, Marshall GD, Martin CF, Martin JN, May HT, McComsey GA, McDonald D, Mendez-Figueroa H, Miele L, Mittleman MA, Mohandas S, Mouchati C, Mullington JM, Nadkarni GN, Nahin ER, Neuman RB, Newman LT, Nguyen A, Nikolich JZ, Ofotokun I, Ogbogu PU, Palatnik A, Palomares KTS, Parimon T, Parry S, Parthasarathy S, Patterson TF, Pearman A, Peluso MJ, Pemu P, Pettker CM, **Plunkett BA**, et al. (2023). Researching COVID to Enhance Recovery (RECOVER) adult study protocol: Rationale, objectives, and design. *PloS one*, 18(6), e0286297. <https://doi.org/10.1371/journal.pone.0286297>

Keenan-Devlin, L. S., **Borders, A. E. B.**, **Freedman, A.**, Miller, G. E., Grobman, W., Entringer, S., Simhan, H., Wadhwa, P., & Buss, C. (2023). Maternal exposure to childhood maltreatment and adverse birth outcomes. *Scientific reports*, 13(1), 10380. <https://doi.org/10.1038/s41598-023-36831-9>

Keenan-Devlin L, Miller GE, **Ernst LM**, **Freedman A**, **Smart B**, Britt JL, Singh L, Crockett AH, **Borders A.** (2023) Inflammatory markers in serum and placenta in a randomized controlled trial of group prenatal care. *Am J Obstet Gynecol MFM*. Dec;5(12):101200. doi: 10.1016/j.ajogmf.2023.101200. Epub 2023 Oct 22. PMID: 37875178

Keenan-Devlin, L. S., **Smart, B. P.**, Hirschhorn, L., Meier, P., Jefferson, U., Solomonides, A., Wang, C. E., Handler, A., **Silver, R. K.**, & **Borders, A. E. B.** (2023). Clinically Integrated Breastfeeding Peer Counseling to Promote Breastfeeding Equity. *American journal of perinatology*, 10.1055/s-0043-1771255. Advance online publication. <https://doi.org/10.1055/s-0043-1771255>

Kmiecik, M. J., **Tu, F. F.**, Clauw, D. J., & **Hellman, K. M.** (2023). Multimodal hypersensitivity derived from quantitative sensory testing predicts pelvic pain outcome: an observational cohort study. *Pain*, 164(9), 2070–2083. <https://doi.org/10.1097/j.pain.0000000000002909>

Kyathanahalli, C., Snedden, M., & Hirsch, E. (2023). Is human labor at term an inflammatory condition?†. *Biology of reproduction*, 108(1), 23–40. <https://doi.org/10.1093/biolre/iaoc182>

Kyathanahalli, C., **Snedden, M.**, Singh, L., **Regalia, C.**, **Keenan-Devlin, L.**, **Borders, A. E.**, & **Hirsch, E.** (2023). Maternal plasma and salivary anelloviruses in pregnancy and preterm birth. *Frontiers in medicine*, 10, 1191938. <https://doi.org/10.3389/fmed.2023.1191938>

Lee King, P.A., Finnegan, K., Schneider, P., Oh, E.H., Lee, S., Bennett, A., **Borders, A.** (2023) Optimizing accuracy of birth certificate data through a statewide quality improvement initiative in Illinois. *J Perinatol* 43, 1440–1445. <https://doi.org/10.1038/s41372-023-01788-0>

Lozo, S., **Chill, H. H.**, **Botros, C.**, **Goldberg, R. P.**, & **Gafni-Kane, A.** (2023). Long term surgical outcomes of vaginal colposuspension using the Uphold Lite™ mesh system vs. vaginal vault uterosacral ligament suspension for treatment of apical prolapse. *European journal of obstetrics, gynecology, and reproductive biology*, 280, 150–153. [https://doi.org/10.1016/j.ejogrb.2022.11.025\(*equal contribution\)](https://doi.org/10.1016/j.ejogrb.2022.11.025(*equal contribution))

Lozo, S., **Wagner, D.**, **Shah, N.**, **Goldberg, R.**, **Gafni-Kane, A.**, & **Solomonides, A.** (2023). Should Penicillin Allergy Testing Be Included as Part of Preoperative Testing?. *Journal for healthcare quality : official publication of the National Association for Healthcare Quality*, 45(5), 255–260. <https://doi.org/10.1097/JHQ.0000000000000395>

MacGregor, C., **Freedman, A. A.**, **Keenan-Devlin, L. S.**, Grobman, W. A., Simhan, H., Wadhwa, P. D., Buss, C., & **Borders, A.** (2023). Association of maternal self-reported sleep quality with gestational diabetes. *American Journal of Obstetrics and Gynecology*, 228(1). <https://doi.org/10.1016/j.ajog.2022.11.499>

Martin, L. C., **Chill, H. H.**, Routzong, M. R., Abramowitch, S. D., & **Rostaminia, G.** (2023). Quantifying the physiologic motions of the pelvic viscera during evacuation in nulligravid asymptomatic women. *International urogynecology journal*, 34(2), 535–543. <https://doi.org/10.1007/s00192-022-05282-7>

Martin, L. C., Routzong, M. R., Abramowitch, S. D., & **Rostaminia, G.** (2023). Effect of Squeeze, Cough, and Strain on Dynamic Urethral Function in Nulligravid Asymptomatic Women: A Cross-Sectional Cohort Study. *Urogynecology (Philadelphia, Pa.)*, 29(9), 740–747. <https://doi.org/10.1097/SPV.0000000000001345>

Mehreen, A., **Suresh, S.**, **Freedman, A. A.**, & **Ernst, L. M.** (2023). Histopathologic Findings in Large for Gestational Age Placentas and Correlation With CD15 Immunohistochemistry. *Pediatric and developmental pathology : the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society*, 10935266231191965. Advance online publication. <https://doi.org/10.1177/10935266231191965>

Mehreen, A., **Suresh, S.**, **Freedman, A. A.**, & **Ernst, L. M.** (2023). Histopathologic Findings in Large for Gestational Age Placentas and Correlation With CD15 Immunohistochemistry. *Pediatric and developmental pathology : the official journal of the Society for Pediatric Pathology and the Paediatric Pathology Society*, 10935266231191965. Advance online publication. <https://doi.org/10.1177/10935266231191965>

Mendoza, R. P., Wang, P., Schulte, J. J., Tjota, M. Y., Jani, I., Martinez, A. C., Haridas, R., Wanjari, P., Steinhardt, G., Brown, N., Betz, B. L., Chapel, D. B., Kertowidjojo, E., Yamada, S. D., & Bennett, J. A. (2023). Endometrial Carcinomas With Subclonal Loss of Mismatch Repair Proteins: A Clinicopathologic and Genomic Study. *The American journal of surgical pathology*, 47(5), 589–598. <https://doi.org/10.1097/PAS.0000000000002031>

Metz TD, Clifton RG, Gallagher R, Gross RS, Horwitz LI, Jacoby VL, Martin-Herz SP, Peralta-Carcelen M, Reeder HT, Beamon CJ, Chan J, Chang AA, Costantine MM, Fitzgerald ML, Foulkes AS, Gibson KS, Güthe N, Habli M, Hackney DN, Hoffman MK, Hoffman MC, Hughes BL, Katz SD, Laleau V, Mallett G, Mendez-Figueroa H, Monzon V, Palatnik A, Palomares KTS, Parry S, Pettker CM, **Plunkett BA**, Poppas A, Reddy UM, Rouse DJ, Saade GR, Sandoval GJ, Schlater SM, Sciarba FC, Simhan HN, Skupski DW, Sowles A, Thaweethai T, Thomas GL, Thorp JM Jr, Tita AT, Weiner SJ, Weigand S, Yee LM, Flaherman VJ; RECOVER Initiative. *PLoS One*. 2023 Dec 21;18(12):e0285351. doi:10.1371/journal.pone.0285351. eCollection 2023. PMID: 38128008 Free PMC article.

Moss, N. P. *, **Chill, H. H. ***, Chang, C., & **Goldberg, R. P.** (2022). Same-day Discharge vs Planned Admission after Surgical Treatment for Apical Prolapse. *Journal of minimally invasive gynecology*, 29(12), 1323–1330. <https://doi.org/10.1016/j.jmig.2022.09.006> (*equal contribution).

Moss, N. P., Chill, H. H., Sand, P. K., Chang, C., Goldberg, R. P., & Gafni-Kane, A. (2023). A prospective, randomized trial comparing intravesical dimethyl sulfoxide (DMSO) to bupivacaine, triamcinolone, and heparin (BTH), for newly diagnosed interstitial cystitis/painful bladder syndrome (IC/PBS). *Neurourology and urodynamics*, 42(3), 615–622. <https://doi.org/10.1002/nau.25142>

Routzong, M. R., Moalli, P. A., **Rostaminia, G.**, & Abramowitch, S. D. (2023). Morphological Variation in the Pelvic Floor Muscle Complex of Nulliparous, Pregnant, and Parous Women. *Annals of biomedical engineering*, 51(7), 1461–1470. <https://doi.org/10.1007/s10439-023-03150-z>

Schrepf, A. D., Mawla, I., Naliboff, B. D., Gallop, B., Moldwin, R. M., **Tu, F.**, Gupta, P., Harte, S., Krieger, J. N., Yang, C., Bradley, C., Rodriguez, L., Williams, D., Magnotta, V., Ichesco, E., Harris, R. E., Clemens, Q., Mullins, C., & Kutch, J. J. (2023). Neurobiology and long-term impact of bladder-filling pain in humans: a Multidisciplinary Approach to the Study of Chronic Pelvic Pain (MAPP) research network study. *Pain*, 164(10), 2343–2351. <https://doi.org/10.1097/j.pain.0000000000002944>

Shlobin, A. E., Tu, F. F., Sain, C. R., Kmieciak, M. J., Kantarovich, D., Singh, L., Wang, C. E., & Hellman, K. M. (2023). Bladder Pain Sensitivity Is a Potential Risk Factor for Irritable Bowel Syndrome. *Digestive diseases and sciences*, 68(7), 3092–3102. <https://doi.org/10.1007/s10620-023-07868-7>

Singla DR, de Oliveira C, Murphy SM, Patel V, Charlebois J, Davis WN, Dennis CL, Kim JJ, Kurdyak P, Lawson A, Meltzer-Brody S, Mulsant BH, Schoueri-Mychasiw N, Silver RK, Tschritter D, Vigod SN, Byford S. Protocol for an economic evaluation of scalable strategies to improve mental health among perinatal women: non-specialist care delivered via telemedicine vs. specialist care delivered in-person. *BMC Psychiatry*. 2023 Nov 8;23(1):817. doi: 10.1186/s12888-023-05318-2. PMID: 37940930; PMCID: PMC10634150.

Singla, D. R., Puerto Nino, A. K., Zibaman, M., Andrejek, N., Hossain, S., Cohen, M., Dalfen, A., Dennis, C. L., **Kim, J. J., La Porte, L., Meltzer-Brody, S., Naslund, J. A., Patel, V., Ravitz, P., Silver, R. K., Schiller, C. E., Vigod, S. N., & Schoueri-Mychasiw, N.** (2023). Scaling up quality-assured psychotherapy: The role of therapist competence on perinatal depression and anxiety outcomes. *General hospital psychiatry*, 83, 101–108. <https://doi.org/10.1016/j.genhosppsych.2023.04.002>

Singla, D. R., Savel, K., Dennis, C. L., Kim, J., Silver, R. K., Vigod, S., Dalfen, A., & Meltzer-Brody, S. (2022). Scaling up Mental Healthcare for Perinatal Populations: Is Telemedicine the Answer?. *Current psychiatry reports*, 24(12), 881–887. <https://doi.org/10.1007/s11920-022-01389-2>

Snedden, M., Singh, L., Kyathanahalli, C., Hirsch, E., Toxic effects of trace phenol/guanidine isothiocyanate (P/GI) on cells cultured nearby in covered 96-well plates. *BMC Biotechnol* 22, 35 (2022). <https://doi.org/10.1186/s12896-022-00766-2>

Suresh, S., Freedman, A., Adams, M., Hirsch, E., & Ernst, L. M. (2023). Placental Histology for Targeted Risk Assessment of Recurrent Spontaneous Preterm Birth and Response to 17-alpha hydroxy-progesterone caproate Supplementation. *American journal of obstetrics and gynecology*, S0002-9378(23)00625-7. Advance online publication. <https://doi.org/10.1016/j.ajog.2023.09.018>

Suresh, S., Freedman, A., Plunkett, B. A., & Ernst, L. M. (2023). Tweetable statement: Chronic placental inflammation is associated with lower fetal fraction in first trimester noninvasive prenatal screening. *American journal of obstetrics & gynecology MFM*, 101012. Advance online publication. <https://doi.org/10.1016/j.ajogmf.2023.101012>

Suresh, S., Freedman, A., Plunkett, B. A., & Ernst, L. M. (2023). Low first-trimester fetal fraction is associated with chronic inflammation in the placenta. *American journal of obstetrics & gynecology MFM*, 5(8), 101012. <https://doi.org/10.1016/j.ajogmf.2023.101012>

Suresh, S., Patel, E., Mueller, A., Morgan, J., Lewandowski, W. L., Verlohren, S., von Dadelszen, P., Magee, L. A., & Rana, S. (2023). The additive role of angiogenic markers for women with confirmed preeclampsia. *American journal of obstetrics and gynecology*, 228(5), 573.e1–573.e11. <https://doi.org/10.1016/j.ajog.2022.10.044>

Thadhani R, Lemoine E, Rana S, Costantine MM, Calsavara VF, Boggess K, Wylie BJ, Simas TAM, Louis JM, Espinoza J, Gaw SL, Murtha A, Wiegand S, Gollin Y, Singh D, Silver RM, Durie DE, Panda B, Norwitz ER, Burd I, **Plunkett B**, Scott RK, Gaden A, Bautista M, Chang Y, Diniz MA, Karumanchi SA, Kilpatrick S. (2022). Circulating Angiogenic Factor Levels in Hypertensive Disorders of Pregnancy. *NEJM Evidence*, 1(12), EVIDoaa2200161. <https://doi.org/10.1056/evidoaa2200161>

Thaweethai T, Jolley SE, Karlson EW, Levitan EB, Levy B, McComsey GA, McCorkell L, Nadkarni GN, Parthasarathy S, Singh U, Walker TA, Selvaggi CA, Shinnick DJ, Schulte CCM, Atchley-Challenor R, Alba GA, Alicic R, Altman N, Anglin K, Argueta U, Ashktorab H, Baslet G, Bassett IV, Bateman L, Bedi B, Bhattacharyya S, Bind MA, Blomkalns AL, Bonilla H, Bush PA, Castro M, Chan J, Charney AW, Chen P, Chibnik LB, Chu HY, Clifton RG, Costantine MM, Cribbs SK, Davila Nieves SI, Deeks SG, Duvan A, Emery IF, Erdmann N, Erlandson KM, Ernst KC, Farah-Abraham R, Farner CE, Feuerriegel EM, Fleurimont J, Fonseca V, Franko N, Gainer V, Gander JC, Gardner EM, Geng LN, Gibson KS, Go M, Goldman JD, Grebe H, Greenway FL, Habli M, Hafner J, Han JE, Hanson KA, Heath J, Hernandez C, Hess R, Hodder SL, Hoffman MK, Hoover SE, Huang B, Hughes BL, Jagannathan P, John J, Jordan MR, Katz SD, Kaufman ES, Kelly JD, Kelly SW, Kemp MM, Kirwan JP, Klein JD, Knox KS, Krishnan JA, Kumar A, Laiyemo AO, Lambert AA, Lanca M, Lee-Iannotti JK, Logarbo BP, Longo MT, Luciano CA, Lutrick K, Maley JH, Marathe JG, Marconi V, Marshall GD, Martin CF, Matusov Y, Mehari A, Mendez-Figueroa H, Mermelstein R, Metz TD, Morse R, Mosier J, Mouchati C, Mullington J, Murphy SN, Neuman RB, Nikolich JZ, Ofotokun I, Ojemakinde E, Palatnik A, Palomares K, Parimon T, Parry S, Patterson JE, Patterson TF, Patzer RE, Peluso MJ, Pemu P, Pettker CM, Plunkett BA, et al. (2023). Development of a Definition of Postacute Sequelae of SARS-CoV-2 Infection. *JAMA*. 2023 Jun 13;329(22):1934–1946. 10.1001/jama.2023.8823. PubMed PMID: 37278994. <https://doi.org/10.1001/jama.2023.8823>

