



*Department of Obstetrics, Gynecology
and Reproductive Health*

*1st Annual
Laura T. Goldsmith, Ph.D.
Resident Research Day*

Wednesday, April 22, 2026

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Welcome to the inaugural Laura T. Goldsmith, PhD, Resident Research Day. The Resident Research Program of the Department of Obstetrics, Gynecology and Reproductive Health was started in 1986 by Dr. Goldsmith and chair, Dr. Gerson Weiss. During a time when resident research was not an ACGME requirement, Dr. Goldsmith developed and led a program that would become a model for other programs across the nation. She directed this program for over 30 years during her tenure at Rutgers New Jersey Medical. Due to her leadership and mentorship, this program now celebrates its 40th year!

Dr. Goldsmith is a distinguished Professor Emeritus in the Department of Obstetrics, Gynecology and Reproductive Health. She served for 31 years as a full time faculty member of this department, with a joint appointment in the NJMS Dept of Biochemistry and Molecular Biology. During her tenure, she served as Director of Research for OBGYN and Women's Health at NJMS and served on numerous committees and task forces to help shape medical education and faculty governance of the medical school and university. She is an internationally recognized researcher in women's health, reproductive endocrinology, and reproductive aging. She is widely recognized for her work on the biology of the corpus luteum, the peptide hormone relaxin and her pivotal contributions to the NIH-funded Study of Women's Health Across the Nation (the SWAN study). Dr. Goldsmith has played a significant leadership role in mentoring junior investigators and advancing women's health research not only locally at Rutgers NJMS, but around the world. Through her research, mentorship, and national/international collaborations, Dr. Goldsmith has had an indelible impact at Rutgers NJMS and on the field of reproductive health.

Please join us in welcoming our 2026 Resident Research
Day distinguished Visiting Professor:

Kevin Holcomb, M.D.

Dr. Kevin Holcomb is Chair of Obstetrics and Gynecology at the Donald and Barbara Zucker School of Medicine at Hofstra/Northwell and a board-certified gynecologic oncologist. Before his appointment at Northwell, he served as Director of Gynecologic Oncology, Vice-Chair of Gynecology, and Associate Dean of Admissions for Weill Cornell Medical College. He has authored over 100 peer-reviewed journal articles and presented them at numerous regional, national, and international conferences. His research interests include clinical trials of novel therapeutics, outcomes research using large population-based datasets, and collaborations with basic science researchers focused on ovarian cancer biology. Dr. Holcomb has dedicated his career to advancing women's health through compassionate clinical care, innovative research, and transformative medical education. He is particularly recognized for his work in minimally invasive gynecologic surgery and his research into tissue-based biomarkers for endometrial and ovarian cancer subtypes. Throughout his career, he has been an advocate for addressing maternal mortality disparities and improving public health outcomes, serving on the New York City Department of Health's Maternal Mortality Review Committee. Dr. Holcomb is the recipient of numerous awards and honors including the Bruce Ballard Award for Excellence in Mentorship and we welcome him as our visiting Honors Professor.

*Department of Obstetrics, Gynecology & Reproductive Health
1st Annual Laura T. Goldsmith, PhD, Resident Research Day
April 22, 2026*

8:30AM

Breakfast – Rosemary Gellene Room – MSB B515

9:00-9:15 AM

Introductory Remarks

Men-Jean Lee, MD – Chair

Amy Murtha, MD – Dean, Rutgers RWJMS

Shauna Williams, MD – Director of Resident Research

9:15 AM

Predictive Value of Initial Blood Pressure Measurement in the Diagnosis of Hypertensive Disorders of Pregnancy

Resident: Sruthi Gohimukkula, MD

Preceptors: Shauna Williams, MD

Lama Noureddine, MD

9:35 AM

Assessing the Impact of a Gender-Affirming Care Lecture on Obstetrics and Gynecology Resident Comfort with Gender Diverse Patients

Resident: Alex Rizzo, MD

Preceptor: Theodore Barrett, MD

9:55 AM

Social Determinants and Structural Barriers Associated with Palliative Care Utilization Among Black and Hispanic Patients in the U.S.

Resident: Gabrielle Bleich, MD

Preceptor: Ana Tergas, MD

10:15 AM

Endometrial Expression Profiling of Sialyl Lewis X and Its Biosynthetic Glycosyltransferases

Resident: Nicholas Conway, MD

Preceptors: Nataki Douglas, MD

Anat Chemerinski, MD

10:35 *Break*

10:45 AM

Interval Improvements and Ongoing Barriers to Postpartum Sterilization Fulfillment

Resident: Sierra Conine, MD

Preceptor: Marianne DiNapoli, MD

11:05 AM

From Concept to Competence: Evaluating Structured and Simulated Approaches to Teaching POP-Q to Resident Physicians

Resident: Lauren Hutnik, MD

Preceptors: Neha Rana, MD

Jeffrey Segal, MD

11:25 AM

Real World Use of a Postpartum Hemorrhage Risk Assessment Tool: Assessing Clinical Outcomes and Blood Product Utilization

Resident: Vanessa Hwu, MD

Preceptors: Shauna Williams, MD

Lama Noureddine, MD

11:45 *Lunch*

1:00 PM

Is There an Optimal Cut-Off for the GCT? Exploring Gestational Diabetes Screening at University Hospital

Resident: Sara Meyer, MD

Preceptors: Shauna Williams, MD

Rebecca Bradley, DO

1:20 PM

Time to Diagnosis for Early Pregnancy Concerns: An Evaluation of an Early Pregnancy Assessment Clinic Model

Resident: Sarah Stavros, MD

Preceptor: Marianne DiNapoli, MD

1:40 PM

Intracervical Foley Catheter Use for Labor Induction: Does Duration Increase the Risk of Infection?

Resident: Alexandria Vittitow, MD

Preceptors: Shauna Williams, MD

Rebecca Bradley, DO

2:00 PM

Honors Lecture

“Precision Over Procedure: The Modern Transformation of Gynecologic Oncology”



Kevin Holcomb, MD

Chair of Obstetrics and Gynecology

Donald and Barbara Zucker School of Medicine at Hofstra/Northwell

Chair of Obstetrics and Gynecology

North Shore University Hospital and Long Island Jewish Medical Center

3:00 *Closing Remarks*

Shauna Williams, MD

CONGRATULATIONS TO THE GRADUATES

GRADUATING RESIDENTS

Kristin Blackledge, M.D.

Erin Cawthorn, D.O.

Megan Crenshaw, M.D.

Mishel Figueroa, M.D.

Ashley Haney, M.D.

Angela Hopf, M.D.

Ashleigh Pavlovic, M.D.

Hannah Purtell, M.D.

Andrea Simi, M.D.

Kelsey Spear, M.D.

GRADUATING FELLOWS

Jessica Garcia de Paredes, M.D.

Jessie Hollingsworth, M.D.

Lama Noureddine, M.D.

PROGRAM COMMITTEE

Shauna Williams, M.D.

Director, Resident Research Program

Anat Chemerinski, M.D.

Nataki Douglas, M.D, Ph.D.

Sara Morelli, M.D., Ph.D.

Lisa Pompeo, M.D.

RESIDENT ABSTRACTS
Academic Year 2025-2026

Predictive Value of Initial Blood Pressure Measurement in the Diagnosis of Hypertensive Disorders of Pregnancy

Resident: Sruthi Gohimukkula, MD

Preceptors: Shauna Williams, MD

Lama Nouredine, MD

Introduction

Hypertensive disorders of pregnancy (HDP), which include gestational hypertension, preeclampsia, and chronic hypertension, complicate up to 15% of all pregnancies and are a leading cause of maternal and fetal morbidity and mortality. Often patients may have a transient elevation in blood pressure (BP) when evaluated for pain or another acute concern in the outpatient or emergency department (ED) setting. Despite the widespread reliance on ED BP readings to trigger hypertensive disorder evaluations, the predictive value of these measurements has not been well established. It remains unclear whether patients with an elevated ED triage BP are more likely to be diagnosed with a HDP compared with patients referred from outpatient prenatal clinic settings after an elevated reading. This knowledge gap limits the ability to design evidence-based triage protocols that balance patient safety with resource stewardship. Our objective was to examine the outcomes of patients with elevated BP identified in the ED and the Ambulatory Care Center (ACC) outpatient prenatal clinic to inform more efficient and clinically appropriate evaluation pathways for suspected HDP. We hypothesized that an initial elevated BP in the ED is not predictive of the diagnosis of HDP and that patients with an elevated BP in the ED are less likely to be diagnosed with HDP than those referred from the ACC.

Methods

This was a retrospective review of the electronic medical record of patients who were evaluated in the Labor and Delivery (L&D) triage unit at University Hospital between September 2024 and December 2024. Patients were identified by the L&D triage log and were included if the initial BP measurement in the electronic medical record on the day of that encounter was elevated. Patients presenting for a scheduled procedure or for direct admission were excluded. BP measurements, laboratory results, assessments and delivery outcomes were reviewed. The primary outcome was a HDP diagnosis during that encounter. Secondary outcomes included abnormal laboratory values, diagnosis of HDP at any time in pregnancy or postpartum, gestational age at delivery, postpartum readmission and neonatal birth weight. Fisher's exact, Chi square, and Mann Whitney tests were used.

Results

Among 133 patients with an elevated initial BP measurement during the study time period, 116 (87.2%) initially presented to the ED and were referred to L&D and 17 (12.8%) were referred from the ACC. More patients with elevated BP in the ACC were diagnosed with HDP during that encounter when compared to patients with elevated BP in the ED [10 (58.8%) vs 34 (29.3%), $p=0.03$]. Abnormal lab values to indicate preeclampsia were more frequent in the ACC group [3 (17.6%) vs 2 (1.7%), $p=0.02$]. Those referred from the ACC had a lower gestational age at delivery than those referred from the ED [37.3 weeks vs. 38.9 weeks, $p = 0.03$]. The rate of pre-existing hypertensive disorders was higher in the group referred from the ACC compared to patients from the ED [6 (35.3%) vs. 12 (10.3%), $p=0.01$]. There was no difference in the diagnosis of HDP at any time in pregnancy or postpartum based on location of initial BP elevation: 13 (76.4%) in the ACC group vs 66 (56.9%) in the ED group ($p = 0.19$).

Conclusions

Patients with an elevated BP in the ED were less likely to be diagnosed with a HDP during that encounter when compared to patients from the ACC. Patients with initial BP elevation had a high rate of diagnosis of HDP later in pregnancy or postpartum regardless of the location of the initial elevation. Several factors may influence the accuracy of BP measurement in the ED setting and should be considered when determining if patients with an initially elevated ED BP should undergo BP observation and additional laboratory evaluation. However, more frequent outpatient or home monitoring of BP could be useful in identifying patients who may meet criteria for HDP later in pregnancy or postpartum.

Assessing the Impact of a Gender-Affirming Care Lecture on Obstetrics and Gynecology Resident Comfort with Gender Diverse Patients

Resident: Alex Rizzo, MD

Preceptor: Theodore Barrett, MD

Background:

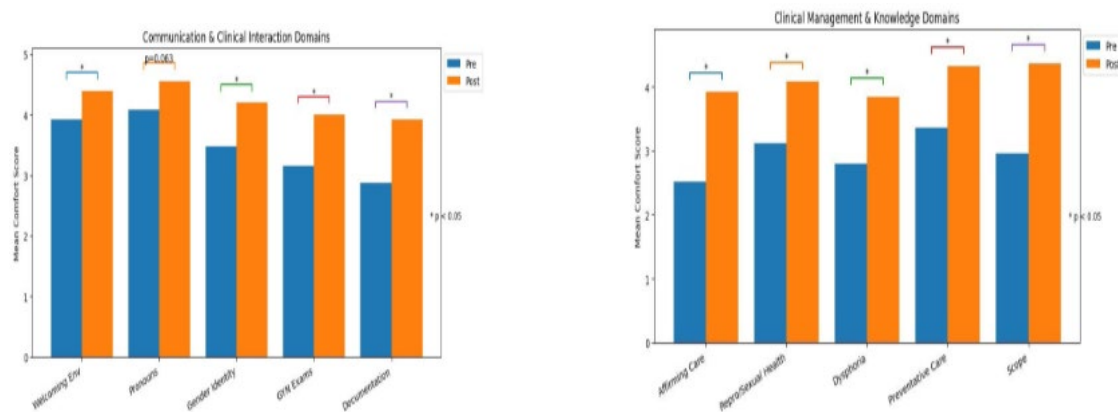
Gender diverse individuals experience significant healthcare disparities, often driven by gaps in provider education and comfort. In obstetrics and gynecology (OBGYN), where care frequently intersects with gender identity, formal training in gender-affirming care remains limited. This study aimed to evaluate resident comfort in caring for gender diverse patients before and after a structured educational intervention. We hypothesized that resident comfort would increase following the structured educational intervention.

Methods:

We conducted a prospective paired pre–post study of OBGYN residents at Rutgers New Jersey Medical School/Cooperman Barnabas Medical Center. Participants completed a survey before and after a formal didactic lecture on gender-affirming care. The lecture included inclusive terminology, communication strategies, and relevant clinical considerations. Responses were measured using a 5-point Likert scale across 10 domains: creating a welcoming clinical environment, asking pronouns, discussing gender identity, performing and documenting gynecologic examinations, discussing gender-affirming care, addressing reproductive and sexual health, addressing gender dysphoria, providing preventative care, and understanding the scope of OBGYN practice. Paired t-tests were used to compare pre- and post-intervention scores, with significance defined as $p < 0.05$.

Results:

A total of 25 residents were included in paired analysis. Mean overall comfort significantly increased following the intervention (3.23 vs. 4.16, $p = 0.00025$). Significant improvements were observed in 9 of 10 domains. Responses regarding asking patients for their preferred pronouns did not differ after the intervention ($p = 0.063$).



Conclusion:

A single educational intervention significantly improved OBGYN resident comfort in caring for gender diverse patients. The domain regarding asking for preferred pronouns did not differ after the intervention, likely reflecting baseline comfort in this area. These findings support the incorporation of structured gender-affirming care education into residency curricula to enhance provider preparedness and reduce barriers to care for gender diverse populations. Future studies should evaluate long-term retention and impact on clinical practice.

Social Determinants and Structural Barriers Associated with Palliative Care Utilization Among Black and Hispanic Patients in the U.S.

Resident: Gabrielle Bleich, MD

Preceptor: Ana Tergas, MD

Introduction:

Early initiation of palliative care has been shown to improve end of life outcomes and is recommended by the National Comprehensive Cancer Network (NCCN) to be initiated at the beginning of cancer treatment in conjuncture with curative treatment [1]. Despite this recommendation, palliative care is consistently underutilized in the US as part of comprehensive cancer care and even more so in the setting of patients with gynecologic malignancies. [2]. When further delving into palliative care utilization in patients with gynecologic malignancies, racial disparities have been cited [3]. Structural barriers such as distance to care facility, Medicaid expansion, and type of care facility have been rarely addressed in existing literature. Additionally, many of the current studies on this topic have focused on comparing certain minority groups to NH-white populations but have not performed Black vs Hispanic stratified analyses, Our objective was to evaluate social determinants and structural barriers associated with palliative care utilization among Black and Hispanic patients with metastatic gynecologic cancers. We hypothesize that the association between social and structural determinants and palliative care utilization differs by race and ethnicity among Black and Hispanic patients.

Methods:

The U.S. National Cancer Database is a clinical oncology database sourced from hospital registry data collected in more than 1,500 Commission on Cancer-accredited facilities. Black and Hispanic patients with stage III/IV gynecologic malignancies (ovary, uterus, cervix, vulva, vagina) were identified from the database spanning from 2004-2022. Data was collected on social/structural factors including income, education, insurance, state Medicaid expansion status, geographic region, urban/rural, distance to facility, facility type, and receipt of palliative care. Multivariable logistic regression and analysis stratified by Black race and Hispanic ethnicity were performed to assess trends of palliative care utilization. Adjusted odds ratios and 95% confidence intervals are shown.

Results:

Of the 55,276 Black/Hispanic patients identified, 3716 (6.7%) received palliative care. Compared to individuals with private insurance, patients without insurance (aOR 1.4, 95%CI 1.15-1.69) or Medicare (aOR 1.16, 95%CI 1.01-1.32) were more likely to receive palliative care. Palliative care use by Black/Hispanic patients was higher in the Northeast/Midwest and lower in the West in comparison to the South (aOR 1.36, 95%CI 1.16-1.61; 1.19, 1.02-1.38, 0.70, 0.56-0.87 respectively). Black/Hispanic patients at integrated cancer networks (aOR 1.18, 95% CI 1.05-1.32) and comprehensive community programs (aOR 1.12, 95% CI 1.01-1.23) had higher palliative care use than those receiving care at academic institutions.

Conclusions:

Insurance, geographic region, and facility type were social/structural factors associated with palliative care utilization among Black/Hispanic patients with metastatic gynecologic cancers. These patterns suggest that palliative care for Black and Hispanic patients may be driven more by system-level factors than by patient-level preferences.

References:

1. Dans M, Smith T, Back A, et al. NCCN Guidelines Insights: Palliative Care, Version 2.2017. *Journal of the National Comprehensive Cancer Network*. 2017;15(8):989-97.
2. Lee MW, Sriprasert I, Phung PG, et al. Trends and comparisons of palliative care utilization for patients with metastatic gynecologic malignancy. *Int J Gynecol Cancer*. 2025;35(4):101631.
3. Islam JY, Deveaux A, Previs RA, Akinyemiju T. Racial disparities in palliative care utilization among metastatic gynecological cancer patients living at last follow-up: An analysis of the National Cancer Data Base. *Data Brief*. 2021;34:106705.

Endometrial Expression Profiling of Sialyl Lewis X and Its Biosynthetic Glycosyltransferases

Resident: Nicholas Conway, MD

Preceptors: Nataki Douglas, MD, PhD

Anat Chemerinski, MD

Introduction

Sialyl Lewis X (sLeX) is a key carbohydrate motif for cell adhesion, immune trafficking, and embryo implantation. Although discrete glycosyltransferases mediate its biosynthesis, the coordinated regulation of these enzymes, and sLeX itself, remains insufficiently characterized across the menstrual cycle and early pregnancy. Within the endometrium, the highest expression of adhesion molecules occurs in the mid-secretory stage, the window of implantation. We therefore hypothesized that endometrial sLeX expression peaks in the mid-secretory stage resulting from upregulation of glycosyltransferases directing its biosynthesis.

Methods

Endometrial biopsies were obtained from 15 subjects with proven fertility across the proliferative, early, mid- and late secretory stage, and decidual tissue was collected during the first trimester after elective pregnancy termination (n=3/stage). Bulk RNA sequencing was performed to measure differential expression of 13 key glycosyltransferases, including fucosyltransferases (*FUT2/4/7*) and sialyltransferases (*ST3GAL1/4/6*, *ST6GAL1*). Single-cell RNA sequencing defined cell-type specific transcriptional patterns. Immunohistochemistry (IHC) was performed to evaluate sLeX distribution in endometrial and decidual tissues. Statistical comparisons were made using the Kruskal-Wallis Test with post-hoc analysis.

Results

The mid-secretory stage showed the strongest upregulation of glycosyltransferases (7 of 13 increased 1.5-11.1-fold, including *FUT2/3/4*, *ST3GAL1/4/6*, and *ST6GAL1*), while *FUT9* peaked in the proliferative stage, and *FUT6* peaked in the late secretory stage. In the first trimester, most enzymes were downregulated, whereas two enzymes known to attenuate sLeX expression, *ST6GAL1*, and *ST3GAL1*, were upregulated. Single-cell analysis revealed highest glycosyltransferase expression in ciliated and glandular epithelium. IHC confirmed sLeX expression, with >90% of glands expressing sLeX. Luminal secretion increased across cycle stages, from $17.3 \pm 7.7\%$ in the proliferative stage to $74.2 \pm 16.2\%$ the late secretory stage, $p < 0.05$. Comparisons between mid-secretory endometrium to the first trimester decidua demonstrated reduced glandular sLeX expression (98.3 vs 59.9%, $p > 0.9$) and decreased presence of secretory products (37.9% vs 21.2%, $p = 0.03$).

Conclusions

sLeX and its biosynthetic glycosyltransferases show dynamic, stage-specific transcriptional and protein-level regulation, peaking in the mid-secretory stage, the window of implantation. In contrast, proliferative endometrium and first trimester decidua exhibit increased *FUT9*, *ST3Gal1*, and *ST6GAL1* expression, enzymes that may constrain sLeX biosynthesis and reduce immune cell infiltration. These findings establish foundational molecular evidence supporting a role for sLeX-mediated glycosylation in endometrial receptivity and highlight targets for future mechanistic investigation.

Interval Improvements and Ongoing Barriers to Postpartum Sterilization Fulfillment

Resident: Sierra Conine, MD

Preceptor: Marianne DiNapoli, MD

Introduction

Postpartum sterilization represents one of the most effective and cost-efficient methods of contraception available. Despite its clinical advantages, significant disparities in access persist, and recent evidence demonstrates that a substantial proportion of women who desire postpartum sterilization do not receive it. These gaps are driven by multiple intersecting socio-economic and institutional barriers. Our project had two aims: 1) to compare postpartum sterilization fulfillment between two time periods, and 2) to improve documentation of reasons for sterilization nonfulfillment. Due to provider education and enhanced emphasis on the importance of postpartum sterilization at our institution, we hypothesized that sterilization fulfillment would be significantly improved in a recent cohort compared to the historical rate.

Methods

We performed a retrospective cohort study comparing rates of postpartum sterilization fulfillment two years apart and assessing reasons for nonfulfillment in both groups. We included all patients who desired postpartum sterilization and delivered at University Hospital over two four-month time periods: (1) 11/15/2023 - 3/15/2024 and (2) 11/15/2025 - 3/15/2026. We excluded patients who only desired sterilization if they were delivered by cesarean, and patients who delivered after cervical preparation for planned pregnancy termination. Demographic information, delivery details, contraception provided upon hospital discharge, reasons for nonfulfillment, and one year follow up data were extracted from the electronic medical record. Chi-square, Fisher's exact and Mann-Whitney tests were used for analysis utilizing PRISM software.

Results

Of 444 patients who delivered in the earlier time frame, 52 (11.7%) desired permanent sterilization, and of 447 patients who delivered in the later time frame, 58 (13.0%) desired permanent sterilization. Comparison of baseline demographic characteristics showed the groups had similar maternal age, gestational age at delivery, body mass index, and parity. The recent cohort had significantly more prenatal visits ($p=0.004$). The rate of postpartum sterilization fulfillment was higher in the recent cohort compared with the earlier cohort [42 (72.4%) vs. 27 (51.9%); $p=0.03$]. When stratifying by delivery mode, sterilization completion rate among those who delivered vaginally was significantly higher in the later cohort (53.3% vs. 24.1%; $p=0.032$). Fulfillment among patients who underwent cesarean delivery was similar across both time frames (92.9% in the later cohort vs. 90.0% in the earlier cohort; $p=0.65$). In the later time frame, a specific reason for nonfulfillment of surgery was documented in 100% of patients denied the procedure, compared with only 72.0% of the earlier group. In the later cohort, of the 16 patients who did not have surgery before hospital discharge, 11 (69%) were denied surgery due to Medicaid consent issues, which was similar to our earlier cohort (64%; $p>0.99$).

Conclusions

Our study examined desire for postpartum sterilization, fulfillment, and common barriers to fulfillment at University Hospital. While Medicaid consent noncompletion still remains a barrier, postpartum sterilization rates have increased over the past two years. The overall increase in sterilization completion rates appears to be driven by increased fulfillment rate among those who had a vaginal delivery. This highlights that cultural change has improved fulfillment rates, as our institution adopted ACOG's recommendation that postpartum sterilization be classified as nonelective surgery. However, further education and standardization of Medicaid consent form completion is necessary, as this remains one of the major road blocks to receiving postpartum sterilization.

From Concept to Competence: Evaluating Structured and Simulated Approaches to Teaching POP-Q to Resident Physicians

Resident: Lauren Hutnik, MD

Preceptors: Neha Rana, MD

Jeffrey Segal, MD

Introduction

Pelvic organ prolapse (POP) is an increasingly common condition yet training in its standardized assessment using the Pelvic Organ Prolapse Quantification (POP-Q) system remains inconsistent in OB/GYN residency education. This results in variability in proficiency among trainees, driven by limited exposure, insufficient hands-on opportunities, and inconsistent educational approaches. This study was designed to evaluate the effectiveness of a low-fidelity simulation model combined with a structured teaching session on improving resident knowledge and confidence in POP-Q staging. As a pilot study, it also assessed the feasibility of implementing a standardized and reproducible teaching model. We hypothesize that a brief, structured teaching session using an affordable simulation model will significantly improve learner proficiency, particularly among those with limited prior exposure.

Methods

OB/GYN residents (PGY1–4) at a single academic institution were invited and consented to participate in this study during a residency teaching retreat. A low-fidelity POP-Q model was constructed using a felt hat, buttons, and an embroidery hoop to demarcate the hymen and key anatomic reference points for the anterior, apical and posterior compartments. Participants completed a pre-test assessing demographics, prior POP-Q exposure, objective knowledge, and self-reported confidence using a 5-point Likert scale. The intervention included a video by Dr. Bump, the creator of POP-Q, explaining POP-Q followed by small-group hands-on practice (3–4 learners) using the model with faculty guidance. Knowledge was assessed with 10 multiple-choice questions evaluating comprehension, application, and analysis. A post-test with similar questions and repeated confidence measures was administered immediately after the session, along with qualitative feedback. A composite experience score was created based on prior education and clinical exposure. Pre- and post-test scores were compared using Wilcoxon signed-rank test, with subgroup analyses performed using Kruskal-Wallis and Spearman correlation. Statistical significance was set at $p < 0.05$.

Results

Thirty-one residents completed the study, with 75% reporting no prior formal POP-Q training. Mean objective test scores improved significantly from 4.87 out of 10 pre-intervention to 8.65 out of 10 post-intervention. Improvements were observed across all training levels, with the largest increase among junior residents (PGY-1 and PGY-2) residents, while PGY-3 residents showed smaller, non-significant gains. Participants with less prior experience as measured by the sum of experience-related variables had lower baseline scores but achieved post-test scores comparable to more experienced peers. Lower experience was associated with greater improvement ($r = -0.38$). Self-reported confidence improved across all domains, including identifying POP, performing and teaching the POP-Q exam, and clinical application. Participants rated the intervention as highly valuable and expressed strong interest in incorporating regular training sessions into the curriculum.

Conclusions

A brief, structured educational intervention using a low-fidelity simulation model significantly improved resident knowledge and confidence in POP-Q staging. Junior trainees and participants with minimal prior POP-Q exposure achieved post-test scores comparable to their more experienced peers, demonstrating a convergence in knowledge by the end of the intervention. The intervention helped standardize competency across training levels. These findings support integrating early, structured, and repeated POP-Q training into residency curricula. Future studies should evaluate long-term retention and clinical impact.

Real World Use of Postpartum Hemorrhage Risk Assessment Tool: Assessing Clinical Outcomes and Blood Product Utilization

Resident: Vanessa Hwu, MD

Preceptors: Shauna Williams, MD
Lama Nouredine, MD

Introduction

Postpartum hemorrhage (PPH) is a leading cause of severe maternal morbidity and the leading cause of maternal deaths worldwide. Hemorrhage risk assessments have been developed to help identify high risk patients and prepare for emergencies. However, these tools have been shown to have limitations with predicting hemorrhage, with one study showing that only about 5% of patients who were deemed high-risk ultimately experienced a PPH. As transfusion rates are overall low, the use of these may lead to overutilization of crossmatch of products and blood bank resources. The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) hemorrhage assessment tool has been used at University Hospital (UH) and anticipatory measures are taken, such as obtaining a crossmatch for patients in the high-risk group. The aim of this study was to examine cross match and transfusion patterns according to risk assessment categorization. Our hypothesis is that the AWHONN risk assessment tool is a predictor of PPH and need for transfusion.

Methods

This is a retrospective cohort study of patients who delivered from 5/1/25 to 8/31/25 at UH. We identified all deliveries from an Epic-generated report and the EMR was reviewed. Patients were included if the estimated gestational age (EGA) at delivery was greater than 20 weeks and there was a hemorrhage risk score documented in the history and physical note. Exclusion criteria were if extramural delivery or within 30 minutes of admission. Patients were categorized by the 2017 AWHONN risk assessment tool into low, medium, and high groups. PPH was defined as a quantitative or estimated blood loss of 1000 mL or greater. Crossmatch, transfusion, and hemorrhage rates were compared. ANOVA, Fisher's exact, Student's t-test, and Kruskal-Wallis tests were performed.

Results

524 patients were identified and 14 were excluded, so 510 patients made up the study cohort. The majority of patients were in the low- and medium-risk groups [low: 198(38.8%); medium: 223(43.7%); high: 89(17.5%)]. Patients in the high-risk group were older, of higher parity and earlier EGA at delivery. PPH was not different when comparing the three groups, although there was over a two-fold higher rate in the high-risk group compared to the low-risk group (see Table). Ninety-one (17.8%) patients were crossmatched on admission with the highest rate in the high-risk group. Nine (1.9%) patients were transfused, and rates were not different across the three groups. For patients who were transfused, compared to not transfused, higher blood loss, lower admission, and postpartum hemoglobin values were seen.

Conclusions

Although the AWHONN hemorrhage risk assessment categorization was not associated with rate of hemorrhage or transfusion, the rate of PPH was two-fold higher in the high-risk group compared to the low-risk group. As PPH occurs infrequently and transfusion is rare, additional studies of risks for transfusion are recommended to guide optimization of crossmatch practices. This study also underscores that as postpartum hemorrhage can occur in all patients, careful monitoring and management of PPH is critical to decrease maternal morbidity.

	Low Risk N = 198	Medium Risk N = 223	High Risk N= 89	P value
Postpartum hemorrhage	7 (3.5%)	13 (5.8%)	7 (7.8%)	0.26
Crossmatch on admission	4 (2.0%)	25 (11.2%)	62 (69.7%)	0.0001
Transfusion of packed red blood cells	2 (1.0%)	5 (2.2%)	2 (2.2%)	0.60

Is There an Optimal Cut-Off for the GCT? Exploring Gestational Diabetes Screening at University Hospital

Resident: Sara Meyer, MD

Preceptors: Shauna Williams, MD
Rebecca Bradley, DO

Introduction

In the United States, screening and diagnosis of gestational diabetes (GDM) is generally performed as a two-step approach, starting with the glucose challenge test (GCT). Diagnostic testing is performed if the glucose value 1 hour after a 50-gram glucose load is elevated. Various thresholds have been suggested. ACOG recommends that “obstetric care providers may select one of these as a single consistent cutoff for their practice, using factors such as community prevalence rates of GDM when making their decision.” Prior studies have demonstrated that lower thresholds increase sensitivity at the cost of reduced specificity. The potential detriment of reduced specificity includes the burden of undergoing the confirmatory glucose tolerance test (GTT), which requires fasting and has more side effects including nausea, vomiting, and hypoglycemia. While prior studies have not shown an increase in anxiety related to this testing, additional information about community rates and obstetric outcomes, such as rates of macrosomia and large for gestational age (LGA) infants, may help guide local protocol. Many providers will use a threshold of 140 mg/dL, but lower cut-offs may provide benefit, so this study aims to investigate if there is an optimal threshold in our population. Our aim was to evaluate obstetric outcomes in patients with GCT values of 135-139 mg/dL. Our hypothesis is that the rate of LGA infants is higher in patients with a GCT in this range compared to patients with values less than 130 mg/dL.

Methods

This is a retrospective cohort study of patients who delivered at University Hospital between October 1, 2024 and April 1, 2025. Inclusion criteria are patients with available prenatal records and a documented GCT completed between 24+0 and 28+6 weeks gestation. Exclusion criteria are women diagnosed with diabetes before or during the pregnancy, GCT results of 140 mg/dL or greater, no documented prenatal care or outside prenatal care without available records, multifetal gestation, and delivery prior to 37 weeks. Patients were grouped by GCT result: (1) less than 130 mg/dL; (2) 130-134 mg/dL; (3) 135-139 mg/dL, and outcomes were compared between group 1 and group 3. The primary outcome was birth weight greater than 90th percentile. Secondary outcomes included rate of cesarean delivery (CD), neonatal hypoglycemia, and neonatal ICU admission. Fisher’s exact, Chi square, Mann Whitney, and Student’s t-tests were used.

Results

There were 754 patients who delivered during the time period. 435 patients were excluded, leaving 319 in the cohort: 279 (87.5%) in group 1, 19 (6%) in group 2, and 21 (6.6%) in group 3. Maternal age, rate of nulliparity, estimated gestational age, and BMI at delivery did not differ between groups 1 and 3. Rate of LGA was low and did not differ between the two groups [1: 21(7.5%) vs 3: 1(4.8%), $p>0.99$]. Birth weight did not differ between the two groups (3278 ± 441 vs 3243 ± 507 grams, $p=0.72$). CD rate, neonatal hypoglycemia, and NICU admission also did not differ. Seventeen (81%) of the patients in group 3 ultimately underwent a GTT, and all were normal.

Conclusions

The rate of GCT results between 135 and 139 mg/dL was low. Due to the small sample size of patients with a GCT result in this range, this study was underpowered to show a difference in LGA rates. GTT testing was high in this group, with normal results, suggesting that a threshold of 140 mg/dL is appropriate for our population. Additional study of cost and patient preferences for GTT testing may help to guide future recommendations.

Time to Diagnosis for Early Pregnancy Concerns: An Evaluation of an Early Pregnancy Assessment Clinic Model

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Preceptors: Marianne DiNapoli, MD

Introduction

Emergency department (ED) utilization during pregnancy is well-established, with up to one-third of pregnant patients visiting the ED at least once during their pregnancy.¹ While the emergency department plays a crucial role in providing immediate treatment for emergent conditions, most early pregnancy-related conditions are suited for outpatient management in the ambulatory setting. The emergency department is often not optimized for longitudinal follow-up, leading to delays in definitive diagnosis, repeat visits, increased healthcare costs, and heightened emotional distress.² Early Pregnancy Assessment Clinics (EPACs) were developed in response to the need for specialized outpatient management of patients with early pregnancy complications. Despite a growing number of EPACs, there remains limited data evaluating their impact on time to definitive diagnosis and treatment plan among those presenting with early pregnancy concerns. The objective of this study was to evaluate whether EPAC establishment at an urban academic tertiary care center and safety-net hospital was associated with time to final diagnosis and treatment among patients presenting to the ED with early pregnancy concerns. We hypothesized that following EPAC implementation, patients presenting to the ED who were then referred to EPAC for follow up would have shorter time to diagnosis and treatment of early pregnancy concerns.

Methods

This is a retrospective chart review of patients presenting to the ED with early pregnancy concerns in the year prior to (10/1/22-10/31/23) and year following (11/1/23-11/30/24) EPAC implementation. All ED encounters with a pregnancy-related diagnosis code were reviewed; patients with a positive pregnancy test were assessed and those with an intrauterine pregnancy with fetal cardiac activity were excluded. All other pregnancies were included in the analysis. Demographic information including race and insurance status as well as final diagnosis date, treatment plan, and overall time to resolution of pregnancy concern were collected. Resolution of concern was defined relative to final pregnancy diagnosis, and included establishment of pregnancy care, management of missed and incomplete abortion, management of ectopic pregnancy, or termination of pregnancy. Outcome differences were analyzed using Pearson's Chi-Square, Fisher's Exact, and Wilcoxon rank-sum tests. Multi-variable linear regression models were adjusted for race and insurance status.

Results

During the study period, 3,444 ED encounters were reviewed; 125 patients in the pre-EPAC implementation period and 141 patients in the post-EPAC implementation period met criteria for inclusion. Baseline characteristics were similar between the two groups, which differed only in a higher percentage of Hispanic patients in the post-implementation group (44% vs 24%, $p < 0.01$) and higher percentage insured (42% vs 30%, $p = 0.03$). There was no difference in the number of encounters to resolution. In a multivariable linear regression model adjusted for race and insurance status, implementation of EPAC was associated with a difference of 8.4 fewer days to diagnosis ($p = 0.006$) and 16.5 fewer days to treatment ($p < 0.05$).

Conclusions

In a setting where patients often face barriers to care, EPAC implementation was correlated with a shorter time to diagnosis and treatment for early pregnancy concerns.

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Intracervical Foley Catheter Use for Labor Induction: Does Duration Increase the Risk of Infection?

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Preceptors: Shauna Williams, MD
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Introduction

Induction of labor (IOL) has risen substantially over the past few decades, increasing from less than 10% to over 30% of all deliveries annually in the United States. This has been influenced by the ARRIVE trial, which demonstrated that elective IOL at 39 weeks in low-risk nulliparous women was associated with reduced rates of cesarean delivery (CD) and hypertensive disorders without worsening neonatal outcomes (1). The combination of misoprostol and an intracervical foley catheter has been shown to be an efficient, cost-effective way to induce labor (2). While considered safe, the optimal duration of placement remains unclear. Recent research has compared 6 versus 12 hour intracervical foley placement and has found the shorter duration decreases time to delivery without increasing cesarean section rates in both nulliparous and multiparous participants (3,4), although one found that longer duration time of a double balloon device was associated with maternal fever. (4) This study aimed to evaluate current IOL practices at University Hospital, foley duration and rate of infection. Our hypothesis was that intracervical foley catheter duration for greater than or equal to 12 hours is associated with increased rate of intraamniotic infection and endometritis (IAI/E).

Methods

This is a retrospective cohort study including patients who underwent IOL and delivered at University Hospital between July 1, 2024 and April 30, 2025. Patients were identified by an Epic report indicating they received an induction agent. Patients were excluded if the pregnancy was complicated with an intrauterine fetal demise, major fetal anomalies, fever or suspected systemic infection on admission, cervical dilation of greater than or equal to 4cm prior to start of induction, prelabor rupture of membranes, or if gestational age was less than 24 weeks. Epic was reviewed for information on febrile morbidity, criteria used for diagnosis of intraamniotic infection, and the diagnosis made by the provider. Primary outcome was IAI/E diagnosed during the hospital stay. Participants were categorized by duration of foley use greater than or less than 12 hours and rates of primary outcome were compared. A secondary analysis was performed grouping patients by foley duration greater than or equal to 6 hours. Chi-square, Fisher's exact, and Mann Whitney tests and multivariable regression was performed.

Results

There were 1246 deliveries during the study time period, 516(41%) were identified as receiving an induction agent, and 86 patients were excluded. 408(95%) patients received a foley for IOL, and 372(91%) had the foley in place for less than 12 hours. Maternal age, gestational age, BMI, and birth weight differed between the two groups. In a univariate analysis, rate of IAI/E was not different [25(6.7%). Vs 4(11.1%), $p = 0.3$]. When grouped by less than or greater than 6 hours rate of IAI/E was higher in the >6 hour group [11/267(4.1%) vs 18/141(12.8%), $p < 0.01$]. As rate of nulliparity was higher in the >6 hour group, multivariable analysis including nulliparous patients only, controlling for gestational age, BMI and foley duration, duration of foley use was significant (OR 0.90, 95% CI 0.82-0.99). When only time to delivery and foley duration were included in analysis, time to delivery was significant (OR 0.89, 95% CI 0.83-0.94).

Conclusions

Many patients undergo IOL and foley placement is high. Given the low rate of foley duration >12 hours, this study is underpowered to answer our primary question. Given the difference in incidence of infection after the 6 hour timepoint, an evaluation for removal of the foley could be considered after 6 hours. Although this study was not designed to assess the infection rate for this group compared to patients who present with spontaneous labor, this provides information that can be used for counseling about IAI/E during the shared decision making process.

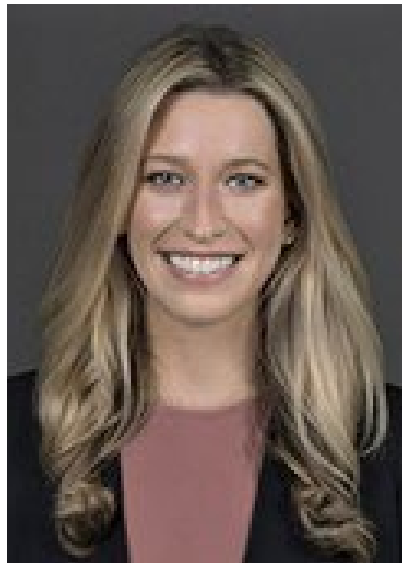
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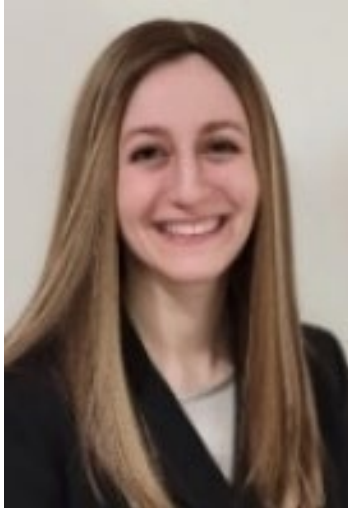


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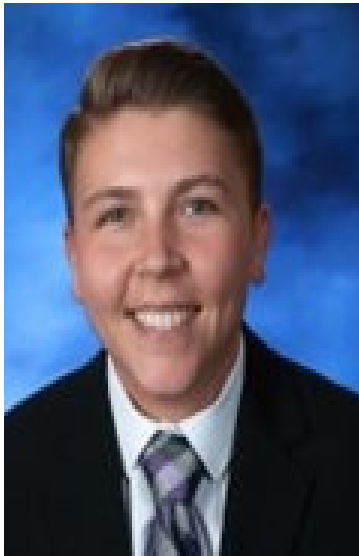


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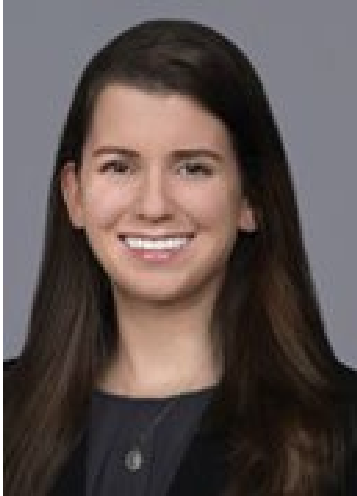


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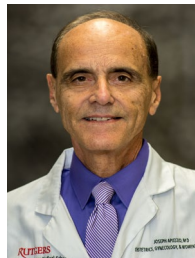
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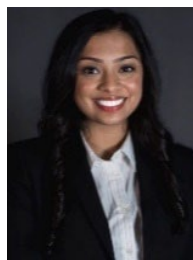
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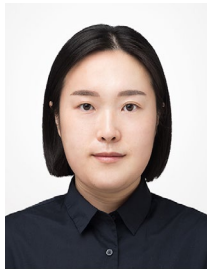
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