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1. FACTORS THAT INFLUENCE THE CHOICE FOR NEONATAL RESUSCITATION IN PERIVIABLE DELIVERIES

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Background: Periviable preterm birth, defined as delivery between 20+0/7 to 25+6/7 weeks, represents less than 1% of all births but contributes to up to 40% of all infant deaths. Scenarios with high risks of morbidity and mortality to the maternal-neonatal dyad may result in periviable preterm delivery. These situations require shared decision making between healthcare teams and families to decide whether maternal and neonatal patients are candidates for obstetric interventions and neonatal resuscitation at delivery, respectively, and to determine the optimal mode of delivery at the cusp of fetal viability.

Objective: The primary objective is to describe the influence of patient demographics (i.e. maternal race) and societal factors (i.e. maternal religion) on the decision between neonatal resuscitation and comfort care in periviable deliveries. Our secondary goals are: 1. to quantify the use of obstetric interventions (antenatal steroids for fetal lung maturity, magnesium sulfate for fetal neuroprotection, tocolytics and GBS prophylaxis) at the threshold of viability and 2. to establish whether planned neonatal resuscitation versus comfort care influenced the choice of cesarean versus vaginal delivery.

Methods: This project is a retrospective cohort study; electronic medical records were queried for data at Ascension St. Vincent Women's Hospital of mothers and neonates delivered at 22 0/7 to 24 6/7 from January 1, 2016 to July 31, 2020. Study patients were separated to compare outcomes between those that received neonatal resuscitation and those for whom comfort care was provided at 22, 23, and 24 weeks gestational age. Results were further stratified by obstetric interventions, mode of delivery, and maternal race and maternal religion with statistical analysis utilizing Fisher's Exact Test.

Results: Of the 111 patient charts originally identified, 73 patients met inclusion criteria. For those patients that opted for obstetric interventions, the most likely intervention was antenatal steroids (86%), followed by magnesium for fetal neuroprotection (63%) and tocolytics (63%), with the least likely intervention being Group Beta Streptococcus antibiotic prophylaxis (43%). The overall cesarean delivery rate was 53%. Cesarean delivery was selected with increasing gestational age: 9.1%, 52%, and 67% at 22, 23, and 24 weeks respectively. While there was no significant difference in those that opted for comfort care versus neonatal resuscitation at 22 weeks, the majority of patients at 23 and 24 weeks overwhelmingly opted for resuscitation; 5 infants (45%) were resuscitated at 22 weeks, 24 infants (96%) at 23 weeks, and 36 infants (97%) at 24 weeks. Planned neonatal resuscitation increased by gestational age. Patients opting for comfort care were more likely to deliver vaginally (87%) versus those that opted for resuscitation (41%), (Fisher's Exact Test, p=0.02), with the most common diagnoses documented for cesarean delivery being malpresentation followed by fetal distress. As for the influence of maternal race, African American patients opted for resuscitation 100% of the time, regardless of gestational age, in comparison to Caucasian (87%) and "other" (62%) counterparts. As for maternal religion, there was no significant difference between patients that self-identified as Christian, Roman Catholic, Unaffiliated or Other and their decision for neonatal resuscitation at 22 weeks. However, at 23 and 24 weeks, the only patients to opt in favor of comfort care were patients that were Unaffiliated with an organized religion. Overall, our infant survival rates were 7.6%, 44%, 63%, at 22, 23, and 24 weeks respectively, with an overall survival rate of 41%.

Conclusion: While the decision to resuscitate periviable preterm infants is multifactorial, demographic and societal factors influence the decision for planned resuscitation for this vulnerable patient population. Planned neonatal resuscitation rates were higher among patients identified as African American than other demographics included in this study. Patients not affiliated with an organized religion are less likely to opt for resuscitation at later gestational ages. Regardless of plans for resuscitation, the majority of patients received obstetric interventions including antenatal steroids and cesarean delivery. These findings may be used by clinicians for shared decision making during future antenatal counseling sessions.

2. ASSOCIATION OF GABAPENTIN CONCENTRATIONS WITH OPIOID USE AFTER CESAREAN DELIVERY

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Purpose: As part of enhanced recovery after surgery (ERAS) protocols for cesarean delivery (CD), gabapentin is being used as an adjunct to reduce opioid use postoperatively. The objective of this study was to detePaper #1rmine if concentrations of gabapentin in maternal plasma were associated with opioid use in the first 48 hours after cesarean delivery.

Methods: A pragmatic, observational, IRB-approved study was conducted for patients ⩾18yo undergoing CD. The institutional CD ERAS protocol includes scheduled dosing of gabapentin immediately before and for 48 hours postoperatively as an adjunct pain medication. Scheduled acetaminophen and ibuprofen are also used routinely in the postoperative setting. After receiving informed consent, a pharmacokinetic (PK) study was performed, collecting multiple maternal plasma samples during a single 6-hour dosing interval. PK parameters, including area under the concentration time curve (AUC0-48h), were calculated using a population PK (PopPK) approach. Recorded opioid use during the first 48 hours following CD was converted to total morphine milligram equivalents (MME48h) for all subjects using standard conversion. Correlation of gabapentin plasma AUC0-48h with total MME48h was assessed using linear regression and t-tests as appropriate.

Results: 21 participants provided plasma PK samples and MME data. The mean AUC0-48h was 101.1 ± 26.1 mg/L*h (median 96.7, range 60.6 to 174.8 mg/L*h). The mean total MME48h was 123.2 ± 139.8 mg (median 43.6, range 7.50 to 517.0 mg). The individual MME48h totals showed clear variability with 12 (57.1%) being <60 mg (range 7.5 - 54.5 mg) compared to the remaining 9 (42.9%) that were >90 mg (range 92.0 - 517 mg). The association between calculated gabapentin AUC0-48h and total MME48h was not statistically significant (r=0.12, p=0.61). Additionally, total MME48h did not differ if the CD was a primary or repeat procedure (p=0.53). Using the cutoff of low or high total MME48h in our population, gabapentin AUC0-48hs in the highest quartile (>121.06mg/L*h) included 60.0% of participants using high amounts of total MME48h (⩾90 mg), compared to 37.5% of those not in the highest AUC0-48h quartile (p=0.375).

Conclusions: Higher plasma concentrations of gabapentin did not account for the variability in total MME use after CD.

3. OPTIMAL GLUCOSE TESTING FOR THE DETECTION AND DIAGNOSIS OF PREDIABETES AND TYPE II DIABETES MELLITUS IN REPRODUCTIVE AGE WOMEN WITH POLYCYSTIC OVARIAN SYNDROME

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Purpose/Objectives: Polycystic ovarian syndrome (PCOS) is one of the most common metabolic conditions affecting reproductive-age women and its etiology is not completely understood. PCOS is diagnosed using the Rotterdam Criteria, in which patients must meet two of the three following criteria: (1) clinical or biochemical evidence of hyperandrogenism, (2) anovulation/oligomenorrhea and (3) polycystic ovarian morphology on ultrasound. Although not included in the Rotterdam criteria, one of the metabolic features of PCOS is glucose intolerance and insulin resistance. PCOS patients have a four to eight-fold increased risk of developing Type II Diabetes Mellitus (DM) making the diagnosis imperative. Current recommendations for glucose testing in this population are based on limited or inconsistent evidence. Therefore, we sought to determine which glucose test may be the ideal test to detect abnormal glucose metabolism in these patients.

Methods: A retrospective chart review (IRB# 19-477) was performed for all women (ages 18-45 years of age) who presented to the Reproductive, Endocrinology and Infertility clinic at Southern Illinois University School of Medicine who received glucose testing {2-hour oral glucose tolerance test (OGTT), fasting GTT, Hemoglobin A1c (Hgb A1c)

and insulin screening} at their initial visit between 07/01/2012 and 07/01/2019. Variables collected included glucose testing results, age, BMI and other laboratory results associated with PCOS management. Categorical variables are described as frequencies and percentages. McNemar tests were utilized to calculate accordance between test results.

Results: Of the 730 charts that were reviewed, 390 women met the eligibility criteria, 59 subjects were excluded due to taking Metformin at the time of initial workup and 138 were confirmed to have PCOS based on the Rotterdam criteria. In reviewing glucose tolerance tests for PCOS patients, there was discordance (i.e., one test indicated the patient was within normal ranges and the other abnormal) noted between tests, especially in the obese (BMI ⩾ 30) patient population. For PCOS women with a BMI ⩾ 30 (n=93), there was discordance noted between the 2-hour OGTT and Hgb A1c tests in 27 patients (29%); of these, 9 were <30 years of age (33.3%). There was also discordance noted between fasting GTT and HgbA1c tests in 28 patients (30.1%); of these, 15 were <30 years of age (53.6%). In PCOS women < 30 years of age (n=65), there was discordance noted between the 2-hour OGTT and Hgb A1c in 13 patients (20%). Of the 13, 9 were considered obese (69.2%). There was also discordance noted between fasting GTT and Hgb A1c in 23 (35.4%) of these women; of the 23, 15 were also obese (65.2%).

Conclusions: In PCOS patients who are also obese (BMI ⩾ 30), there is a discordance between glucose tolerance tests (2 hour OGTT, fasting GTT, Hgb A1c) in regards to accurately identifying patients with abnormal glucose metabolism. Providers should consider utilizing all glucose tolerance tests in combination to prevent false negatives and to enable better management of these patients.

4. NATIONAL CHORIOAMNIONITIS TRENDS: GEOSPATIAL ANALYSIS OF VULNERABLE COMMUNITIES

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Introduction: Chorioamnionitis is a pregnancy complication that can lead to adverse maternal and infant outcomes. Though risk factors such as prolonged labor, smoking, and alcohol among others have been studied, there has yet to be an epidemiological study on what communities are most impacted. This study attempts to identify at risk communities and the socioeconomic factors that differentiate them.

Methods: CDC natality database as well as American Community Survey, and state level maternity data were used for geospatial analysis of births affected by chorioamnionitis in all 553 counties with populations over 100,000. Hotspots and coldspots were identified and ANOVA analysis was conducted across 85 socioeconomic variables.

Results: The analysis found statistically significant hotspots, $p < 0.05$, with high percentages of chorioamnionitis, mean of 0.61%, SD of 0.51, along southern California, San Francisco, Portland, Salt Lake City, and Denver. Those hotspots also tend to have higher percentages of inductions, augmentations, and steroid & antibiotic treatments. Hotspots had a high percentage of Hispanic race, 25.79%, and a low percentage of African American race, 4.31%. Coldspots had a lower percentage of Hispanic race, 8.84%, and higher percentage of African American race, 11.19%. The percentage of poverty and average maternal age were not found to be statistically significant in comparison of chorioamnionitis hotspots with coldspots.

Conclusion/Implications: With the knowledge of risk factors and the identification of chorioamnionitis hotspots, prevention resources and community level education can be properly allocated.

5. MATERNAL AND INFANT MORBIDITY AND MORTALITY IN EXTREMELY PREMATURE INFANTS - A SINGLE CENTERED STUDY IN DETROIT MICHIGAN BETWEEN 23-26 WEEKS OF GESTATION

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Purpose: The limits of viability and care of extremely premature infants continue to expand in developed countries, but delivery of extremely premature infants still poses significant risk of infant morbidity and mortality. Many participants in the care of extremely preterm gestations perceive that cesarean birth improves neonatal outcomes. This study compares neonatal outcomes with route of delivery across this precarious gestational age range. The study similarly compares maternal outcomes for this population.

Methods: A retrospective cohort study was performed using data from EPIC Electronic Medical Record at HFH. The study was approved by the Institutional Review Board of HFH on October 27th, 2021 (IRB #15191). Study subjects included live births between 23 weeks and 0 days and 26 weeks and 6 days of gestation. Data analysis was done using SAS 9.4 software; statistical significance was set at $p<0.05$ and all tests were two sided.

Results: Among the 253 infants identified, the most com-

mon indications for maternal admission were preterm labor (34.8%), ruptured membranes (26.1%), maternal indications (14.6%), and vaginal bleeding (13.8%). Two hundred nine patients (82.3%) received fetal intervention, and 237 (96%) received neonatal resuscitation. Overall neonatal mortality was 17.5% (n=43). Neonatal mortality decreased with increasing gestational age: 37.2% (n=16), 24.0% (n=12), 15.5% (n=11), and 4.9% (n=4) at 23, 24, 25, and 26 weeks of gestation, respectively (p<0.001). Overall neonatal morbidity (composite score of intraventricular hemorrhage, necrotizing enterocolitis, oxygen requirement on discharge) was 63.8% (n=134). Neonatal morbidity decreased with increasing gestational age: 93.3% (n=28), 82.1% (n=32), 55.6% (n=35), and 5.0% (n=39) at 23, 24, 25, and 26 weeks of gestation, respectively (p<0.001). Overall maternal morbidity (composite score of endometritis, blood transfusion, ICU admission, surgical site infection, venous thrombosis) was 18.1% (n=46) and was not different among the various gestational age groups. Cesarean section was performed for 169 (66.9%) patients, 57 (33.7%) due to fetal malpresentation. Overall maternal morbidity was significantly higher among women with cesarean delivery (23.2%, n=38) compared to vaginal (9.9%, n=8) (p=0.012). Overall neonatal mortality was 19.8% (n=16) among vaginal deliveries compared to 15.9% (n=26) of cesarean deliveries (p=0.446); infant morbidity among surviving infants was 48.1% (n=39) among vaginal deliveries compared to 57.9% (n=95) of cesarean deliveries (p=0.148). Overall morbidity and mortality did not differ by indication of delivery in general, or indication of cesarean delivery in specific (p>0.05).

Conclusion: For extremely premature deliveries between 23 and 26 weeks gestation, cesarean section did not improve neonatal morbidity and mortality and is associated with increased maternal morbidity. Route of delivery in the periviable gestational age range requires careful consideration.

6. RACIAL BIAS IN CESAREAN DECISION MAKING

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Purpose: Since Black patients have higher rates of cesarean birth, and implicit racial bias in clinical decision-making has been demonstrated in multiple contexts, we sought to determine if implicit racial bias is present in providers' decisions about cesarean birth due to category II fetal heart tracings.

Methods: We constructed an online survey study consisting of two clinical scenarios of patients in labor with category II tracings. One vignette described a patient with a history of cesarean birth (undergoing trial of labor after cesarean, or TOLAC); one described a patient without this history. Patient race was randomized to Black and White; vignettes were otherwise identical. Participants had the option to continue with labor or proceed with cesarean birth at 3 decision points in each scenario. Participants reported their own demographics anonymously. This survey was distributed to OB-GYN providers via email, listserv, and social media. Data were analyzed using chi-square tests at each decision point looking first at the overall sample and then in subgroup analyses by various participant demographics. In this analysis, we investigated differences by provider type (e.g. resident, fellow, attending) and by practice setting.

Results: A total of 726 participants contributed to the study. We did not find significant racial bias in cesarean decision-making overall. However, we found that attending physicians were more likely to opt for cesarean at the 3rd decision point overall in the vignette describing TOLAC. In addition, fellows were less likely to opt for cesarean delivery for Black patients in the TOLAC vignette in Bonferroni-corrected post-hoc analyses [X2 (228)=14.18, p<.01]. Responders describing their role as "other" were less likely to opt for cesarean in the non-TOLAC vignette for Black patients [X2 (245)=14.15, p<.01]. We did not note differences in decision to perform a cesarean section across practice setting.

Conclusions: Providers overall did not demonstrate racial bias in cesarean decision-making in our analysis. Participants did not demonstrate differences in decision-making based on practice setting. Attending physicians were overall more likely to opt for cesarean birth at the 3rd decision point for patients undergoing TOLAC. Participants identifying themselves as fellows demonstrated less racial bias in cesarean-decision making. In addition, participants describing their provider type as "other" demonstrated less racial bias than other participants when making a decision about cesarean for a nulliparous patient.

7. UTILIZATION OF ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOL IN GYNECOLOGIC SURGERY

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Purpose: The aim of this quality improvement (QI) project was to increase utilization of an ERAS protocol in gynecologic surgery at a high volume, suburban, community hospital. A user-friendly ERAS protocol and increased education were implemented to raise awareness and increase utilization of ERAS for benign hysterectomy cases.

Methods: This QI project was approved by the HCA Institutional Review Board and implemented at HCA Florida Brandon Hospital. In order to standardize and increase compliance of ERAS use by all physicians, an ERAS pre-op and post-op order set specifically for gynecology surgery was created and made available to all physicians via the hospital's electronic medical record in Oct 2020. Additionally, an ERAS committee was formed with representation from OBGYN, Anesthesiology, Nursing, and Surgical Services to increase education, awareness, and utilization of the ERAS protocol. Standardized ERAS pre-operative admission forms replaced prior admission order set forms and became a requirement by all physicians to schedule any gynecology outpatient surgery. Final approval for all protocols and forms was obtained on January 25th, 2021. At that time, all physicians scheduling outpatient gynecology surgeries were required to utilize the ERAS pre-op admission set forms, pre-op and post-op order sets, or provide a written opt-out reason for not doing so.

The total number of benign gynecologic surgeries who were managed with ERAS protocol were collected in retrospectively for the 6 months preceding and prospectively for the 6 months following mandatory implementation of the ERAS protocol. Procedures included in the study were: total abdominal hysterectomy, vaginal hysterectomy, total laparoscopic hysterectomy, laparoscopic assisted vaginal hysterectomy, and robotic assisted hysterectomy with or without bilateral salpingo-oopherectomy. The primary outcome was utilization of ERAS order sets before and after implementation of a standardized opt-out protocol. Secondary outcomes included: hospital length of stay (LOS), post-operative pain score in the first 24 hours and post-operative narcotic use, measured in morphine milliequivalents (MME). It was hypothesized that implementation of the standardized protocol would result in a minimum 50% increase in ERAS utilization and decreased hospital LOS, pain score, and narcotic usage. Chi-square test and t-test were used to for statistical analysis as appropriate with $p < 0.05$ considered statistically significant.

Results: There were a total of 497 cases included in the study. There was a total of 222 hysterectomies performed in the 6 months preceding implementation and ERAS was utilized in 54 cases (24.32%). There was a total of 275 hysterectomies performed in the 6 months following implementation and ERAS was utilized in 210 of the cases (76.36%), demonstrating a significant increase in ERAS protocol utilization after intervention, $p < .0001$, with an overall increase of 214% in utilization. When comparing pre- and post- intervention groups, there was a significant decrease in hospital length of stay (1.14 days vs 0.70 days, $p < 0.0001$) and a decrease in narcotic use within the first 24 hours (44.8 MME vs 31.4 MME, $p < 0.0001$). There was no difference in post-operative pain score between the groups (3.8 vs 3.7, $p = 0.72$).

Conclusions: Standardized implementation of a user-friendly ERAS protocol was achieved and resulted in a significant increase in ERAS utilization among patients undergoing benign hysterectomy. Additionally, utilization of an ERAS protocol was associated with decreased hospital LOS and post-operative narcotic use. These results are consistent with published data supporting the benefits of ERAS and this project presents a method for implementation of ERAS protocols in busy, suburban, community hospitals.

8. ASSOCIATION BETWEEN PREGNANT PATIENTS' CHARACTERISTICS AND OBTAINING A BIOLOGIC DRUG TEST

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Purpose: The objective of this study is to determine which pregnant patients' characteristics are associated with obtaining a biological drug test.

Methods: IRB approval was obtained. This study is a retrospective cohort study of pregnant patients who delivered a neonate at a large, urban, academic institution. Inclusion criteria comprised all patients who delivered liveborn neonates at or after 23 weeks gestation at University of Illinois Hospital from January 2010 to June 2019. Exclusion criteria consisted of deliveries prior to 23 weeks gestation, stillbirth deliveries, and multi-fetal deliveries. Patients were identified from the electronic medical record by the Center for Clinical and Translational Science. Multiple patient variables were collected via demographics, medical history, birth information, and drug test results. Chi-squared test and two-sided T-Test were performed to evaluate which patient variables were associated with administration of a biological drug test. A p-value of less than 0.05 was considered significant.

Results: In total, there were 19,897 eligible patients analyzed, 1,577 of which had a biological drug test performed. Chi square analysis revealed that administration of a biological drug test was associated with black race ($p < 0.001$), non-Hispanic ethnicity ($p < 0.001$), living in a low-income zip code as stratified by per capita income throughout Chicago ($p < 0.001$), single marital status ($p < 0.001$), history of a mental health diagnosis ($p < 0.001$), Neonatal Intensive Care Unit (NICU) admission ($p < 0.001$), patient receiving prenatal care elsewhere ($p < 0.001$), history of sexually transmitted infection or human immunodeficiency virus (STI/HIV) ($p < 0.001$), opioid prescription in the last year ($p < 0.001$). Two-sided T-Test revealed Body mass in-

dex (BMI) (mean 27, standard deviation (SD) 17.627, $p < 0.001$), parity (mean 1.78, SD 1.82, $p < 0.001$), gestational age at delivery (mean 36.94, SD 3.521, $p < 0.001$), APGAR scores at 1 min (mean 8.02, SD 1.805, $p < 0.001$) and 5 minutes (mean 8.65, SD 0.950, $p < 0.001$), and age at delivery (mean 26.42, SD 6.299, $p < 0.001$) all to be associated with administration of a biological drug test.

Conclusion: A positive biologic drug test in pregnant or neonatal patients can result in limited medical care, displacement of the infant, legal concerns, and increased stigma. Policies regarding biologic substance testing in these populations are not standardized and vary.

Our study demonstrates that black race, non-Hispanic ethnicity, living in a low-income area, single marital status, having a history of a mental health diagnosis, NICU admission, receiving prenatal care elsewhere, history of STI/HIV, documented opioid prescription in the last year, low BMI, high parity, low gestational age at delivery, low APGAR scores at 1 min and 5 minutes, and low age at delivery were more likely to have a biologic drug test ordered.

These findings provide concern as to what factors providers consider when ordering drug tests. It is crucial that providers only consider the clinical signs of drug use during pregnancy given the detrimental effects of a positive biologic drug test. This establishes the importance of clear guidelines on when to administer a biological drug test in the pregnant population. This data raises concerns for potential biases among providers when ordering drug tests.

Future efforts are needed to educate providers on bias, harm reduction, stigma, and local legislation related to biologic drug tests. Further analysis is necessary to assess whether multiple variables together further increase risk of a biological drug test, and whether certain variables have a greater influence on drug test outcome than others.

9. HOMEOPATHIC TREATMENTS OF VULVOVAGINAL CANDIDIASIS ON YOUTUBE

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Purpose: Social media platforms and internet searches have become one of the premier means of disseminating health information to users in search of immediate symptomatic relief. Since the introduction of the internet, patients have more opportunities to search for health information than ever before. In fact, homeopathic drug sales were estimated at $201 million in 1995 and have steadily risen to an estimated 300-450 million by 2003. Because of the unregulated nature of social media, non-health professionals often publish health-related information that can quickly become widely spread. One area frequently searched are symptoms and treatment of uncomplicated vulvovaginal candidiasis. It is estimated that 29-49% of women reported experiencing at least one episode over the course of their lifetime. Due to the unregulated and poorly studied nature of the recommended treatments shared, we sought to describe the recommended treatments for vulvovaginal candidiasis in Youtube videos posted by non-healthcare professionals with more than 5,000 views.

Methods: Utilizing search terms [“Treat” or “Home Remedy”] + [“Yeast” or “Vaginal Yeast” or “Vaginal Itching”] + [“Infection”], we reviewed Youtube videos with a minimum of 5,000 views posted by non-healthcare professsionals. Data was collected on the number of views, likes and dislikes, recommended treatment including ingredients and route of administration, adverse effects, recommendation for consultation with a professional healthcare provider, commissionable links and links to direct product sales, and year of video posting. Qualitative data was collected on measures including evidence of clinical outcomes, claimed benefits, and satisfaction with prior treatment recommendations made by professional healthcare providers.

Results: 35 videos (2008-2021) with median and average viewership of 60,905 and 4.8M were selected. Video likes ranged from 42 to 35,000 ($\tilde{x}$=1300, $\bar{x}$= 5498.5) and dislikes ranged from 11 to 15,000 ($\tilde{x}$=34, $\bar{x}$= 252.51). Like-to-dislike ratio (LDR) ranged from 0.792 to 1 ($\tilde{x}$=0.971, $\bar{x}$= 0.961). 80% (n=28) of videos were posted by non-healthcare professionals within the last 5 years, and 100% (n=35) of videos were posted within the last 15 years. The majority of the videos presented treatment options for vulvovaginal candidiasis, however 31% (n=11) of the videos claimed additional benefits including treatment of bacterial vaginosis, urinary tract infections, and unspecified vaginal itching and odor, and 14% (n=5) claim to balance vaginal pH levels. The most commonly recommended treatments included vaginal boric acid suppositories (40%, n=14), vaginal garlic clove suppositories (31%, n=11), topical coconut oil application (17%, n=6), oral consumption of probiotic yogurt (11%, n=4), and oral probiotic capsules (11%, n=4). Other frequently mentioned treatments included topical aloe vera application, apple cider vinegar (ACV) douching, and topical tea tree oil, oregano oil, pre-soaked green tea bag, and 3- and 7-day miconazole application. The highest viewed videos recommended use of (1) neem paste with water/tea tree oil/coconut oil, (2) ACV/coconut oil, probiotic yogurt, aloe vera, green tea, and (3) vaginal garlic suppositories. The most commonly recommended routes of administration were via vaginal suppository (86%, n=31), topical application to the vulvovaginal area (74%, n=26), and oral ingestion (40%, n=14). Those videos with the highest LDR recommended boric acid suppositories (1), topical oregano and coconut oil (2), and probiotic capsules (3). 60% (n=21) of videos subjectively noted an improvement of clinical symptoms to include vaginal itching, irritation, and discharge. 34% (n=12) of videos expressly stated that all information contained within the video should not be considered as “professional advice” and individuals should consult with a healthcare professional before proceeding with the recommended treatment use. In 8% (n=3) of videos, non-healthcare professionals expressed personal

dissatisfaction with treatment recommendations previously made by professional healthcare providers. Adverse effects of any kind were mentioned in 29% (n= 10) of videos, and 2% (n=1) of videos cautioned against recommended treatment (garlic suppository and salt-water rinse) use during pregnancy. Commissionable links or links to direct products were found in 57% (n =20) of videos.

Conclusions: Searching for and viewing of information regarding "natural" remedies for vulvovaginal candidiasis is common among members of the Youtube community. The vast majority of videos on Youtube are produced by non-health professionals marketing a product. Many of the recommended treatments are supported in video comment sections by the general population, however, they remain untested and unregulated by any regulatory body. The absence of regulation leaves the potential for unreported adverse effects. In order to properly inform and advise patients about alternative remedies, women's health practitioners would benefit from knowledge regarding the wide variety of promoted treatments online.

10. OBSTETRICAL AND NEONATAL OUTCOMES OF PREGNANCIES COMPLICATED BY SARCOIDOSIS

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Purpose: Sarcoidosis is a systemic disease of immune dysfunction that most commonly presents as obstructive or restrictive lung disease. Sarcoidosis, while rare, disproportionately affects African American women of childbearing age, and there is a paucity of data on sarcoidosis in pregnancy. The few existing studies present conflicting data on both the maternal and neonatal outcomes of sarcoidosis in pregnancy. The purpose of this study is to evaluate maternal and neonatal outcomes in women with sarcoidosis. We examined outcomes of pregnancies complicated by sarcoidosis compared to those with systemic lupus erythematous (SLE), a systemic autoimmune disease for which increased perinatal risks are established. We hypothesized that sarcoidosis poses increased adverse obstetrical and neonatal outcomes, similar to SLE.

Methods: We assessed the perinatal outcomes of pregnant women with sarcoidosis (n=24) and SLE (n=28) compared to controls (n=31) matched by age, race, and year of delivery from 2000-2021 at a single tertiary hospital. Subjects were identified retrospectively by ICD 9 and 10 codes. Perinatal outcomes examined included preeclampsia, maternal cardio-pulmonary complications, venous thromboembolism (VTE), gestational hypertension, gestational diabetes, spontaneous preterm delivery (sPTD), C-section, medically indicated preterm delivery, gestational age (GA) at delivery, birth weight, fetal anomalies, neonatal respiratory distress (RDS), and NICU admission. Exclusion criteria included pregnancies in women not diagnosed with sarcoidosis until after delivery and those who delivered or received their obstetric care at an outside facility. Data analysis included Kruskal Wallis (KW) test for continuous data or χ^2-test for categorical data, with significance at $p < 0.05$.

Results: Pregnancies complicated by sarcoidosis and SLE compared to controls resulted in neonates born at significantly earlier mean gestational age (37w0d, 36w1d, and 38w5d respectively; p =0.0077), significantly higher total sPTD ⩽ 36 weeks (20.8%, 42.9% and 3.23% respectively; p= 0.011), including very premature spontaneous delivery ⩽ 32 weeks (4.2%, 25%, and 0%, p=0.049) and lower mean birth weight (2870 ± 646 g in sarcoidosis, 2356 ± 848 g in SLE, and 3181 ± 464 g control subjects; p =0.0003). There was no significant difference in neonatal need for positive pressure ventilation, or NICU admission, although a trend toward longer NICU length of stay was observed in neonates within the sarcoidosis and SLE groups compared to controls (mean 11.8 ± 10 days, 26.1 ± 23.1 days, and 4.3 ± 1.7 days respectively; p =.0512). We found a significantly higher number of fetal anomalies in the sarcoidosis and SLE groups compared to controls (n=5 in sarcoidosis group, 10 in SLE, and 2 in controls; p= 0.021.) Neonates of pregnant women with sarcoidosis were found to have odds ratio (OR) 9.33 for hyperbilirubinemia compared to controls (p =0.0034, 95% CI 2.22-39.18), and incidence was comparable to SLE subjects. No significant differences were found for maternal outcomes including preeclampsia, gestational hypertension, gestational diabetes, C-section, VTE, and medically indicated induction of labor.

Conclusion: Our study found sarcoidosis in pregnancy was associated with an increased incidence of sPTD, lower birth weight, fetal anomalies, and longer NICU stay, similar to the those in the SLE group. Although these increased neonatal risks of SLE and sarcoidosis are similar, our findings suggest the higher risk was seen in the SLE group. Our data suggests sarcoidosis is associated with increased incidence of PTD, fetal anomalies, and neonatal complications which clinicians should be aware of. Increased risk of hyperbilirubinemia and lower birth weight correspond to prematurity and NICU admission, though the etiology of increased spontaneous preterm delivery requires further investigation. While our data did not find increased risk of maternal adverse outcomes, this investigation adds to the limited studies and conflicting data on sarcoidosis in pregnancy. Maternal risk factors that may contribute to adverse perinatal events like sPTD, such as sarcoidosis clinical phenotype, incidence of lymphopenia, and disease modifying medications, should be elucidated in further studies. The rare nature of sarcoidosis in pregnancy continues to be a challenge in generating robust analysis of perinatal outcomes, but ongoing investigation is essential for optimizing pregnancy outcomes for women with sarcoidosis and reducing perinatal morbidity and mortality for African American women.

11. THE IMPACT OF COVID-19 VACCINATION ON INTRAUTERINE FETAL DEMISE RATES AMONG PREGNANT WOMEN IN THE METRO-DETROIT AREA

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Objective: Infection by COVID-19 increases maternal morbidity and mortality prompting both the American College of Obstetrics and Gynecology and the Society of Maternal Fetal Medicine to strongly recommend vaccination during pregnancy. Limited data exist assessing the risk of intrauterine fetal death (IUFD) associated with COVID vaccination during pregnancy.

Methods: This retrospective chart review at a large multisite hospital system in Metro Detroit reviewed data from 13,368 pregnancies and compared IUFD rates between vaccinated and unvaccinated patients.

Results: The rate of IUFD among unvaccinated patients (0.75%) was not statistically different from vaccinated patients (0.60%; p=0.693). The rate of IUFD (1.1%) among Black patients was significantly higher than among White patients (0.53%; p=000.8), but not impacted by patient vaccination status (p=0.857).

Conclusion: These data may provide reassurance to patients who remain COVID vaccine hesitant during pregnancy.

12. FEMALE DYSORGASMIA: AN ANALYSIS OF 19 PATIENTS WHO EXPERIENCE PAIN WITH ORGASM

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Purpose: The purpose of this study was to explore the demographics and clinical associations of female dysorgasmia among patients undergoing non-surgical therapy for pelvic floor disorders. To date, female dysorgasmia has not been described in the medical literature.

Methods: 19 cases of women with dysorgasmia were retrospectively identified from a dataset of 778 subjects who received pelvic floor therapy at a university based Female Pelvic Medicine and Reconstructive Surgery clinic. Coexisting symptoms, medical history, and response to pelvic floor therapy were analyzed and compared with age-matched controls and published population prevalence data.

Results: Among women who endorsed dysorgasmia, 9 (47%) were nulliparous, 4 (21%) were primiparous and 6 (32%) were multiparous. The mean patient age of this group was 31.1 years, and body mass index 29.4 kg/m2. All but one (94.7%) demonstrated clinical puborectalis spasm at the time of examination. Women with dysorgasmia were more likely than controls to experience chronic pelvic pain (p<0.001) and defecatory dysfunction (p=0.031). Prior diagnoses of endometriosis (27.8% vs. 10%) and/or bipolar disorder (21.1% vs. 3.3%) appeared to be unusually high in patients with dysorgasmia when compared with published population controls.

Conclusions: To our knowledge, this is the first report female dysorgasmia as a distinct sexual health problem. Prospective data collection and population surveys are needed to further characterize the condition.

13. LOW-DOSE ASPIRIN INITIATION RATES IN APPROPRIATE CANDIDATES AT AN ACADEMIC RESIDENCY PROGRAM IN THE MIDWEST

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Objective: Hypertensive disorders of pregnancy are one of the leading causes of maternal mortality globally and affect 2-8% of pregnancies. The relationship between low-dose aspirin and reduction in preeclampsia rates is well established. Both the USPSTF and ACOG have set forth guidelines of qualification for aspirin initiation. The primary goal of this study is ascertaining whether or not at least 75% of expectant mothers in a Midwestern academic county hospital population who have either 2 (or more) moderate risk factors or 1 high risk factor for preeclampsia are appropriately initiated on low-dose aspirin.

Methods: This is a single-institution, retrospective cohort study of patients who established prenatal care after 28 weeks gestation and delivered within the year of 2019. Electronic medical record (EMR) review was performed to assess risk factors and subsequent prescription of aspirin prophylaxis. Information regarding patients' medical history, pregnancy history and current complications, basic demographic information and presence of aspirin prescription were abstracted from the electronic medical record.

Results: 2,715 deliveries occurred during this study period. A total of 2,040 (75.1%) patients met criteria to be initiated on low dose aspirin by either two moderate risk factors or one single high risk factor. Of the patients who qualified for aspirin initiation, only 256 (12.5%) received a prescription.

In a multivariate logistic regression model, initiation rate for patients with high risk factors or 2 or more moderate risk factors was 12.5% (95% CI 11.11-14.00%). This was significantly lower than the anticipated rate of 75% (p<0.001). Identification by providers of two qualifying moderate risk factors was significantly more likely than a single high risk factor, with an odds ratio of 19.85 (95% CI 14.57-27.06). Factors that were associated with not receiving an aspirin prescription were younger age, public insurance, nulliparity and a history of poor pregnancy outcome. Globally, rates of initiation were low for all qualifying risk factors.

Conclusions: Our data rejected the null hypothesis that at least 75% of the Eskenazi population in 2019 was appropriately initiated on low-dose aspirin. Patients with both moderate and high risk factors were identified at low rates, only 12.5% receiving a prescription for ldASA. This low initiation rate suggests that utilization of ICD-10 codes and provider risk stratification is not sufficient for identification of moderate to high-risk patients. This data supports further investigation into quality improvement methods to increase uptake of aspirin counseling for moderate to high risk patients.

14. REDUCTION IN BIRTH RATES AND PRETERM BIRTHS FOLLOWING THE EMERGENCE OF COVID-19 PANDEMIC IN MICHIGAN

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Purpose: The COVID-19 pandemic led to more than 190 million confirmed cases and 4 million deaths worldwide. Strategies of containment and mitigation have been employed throughout history during environmental disasters and health pandemics and have impacted birth rates and perinatal outcomes. The goal of this study was to examine the impact of the COVID-19 pandemic on birth rates and birth outcomes in the state of Michigan during the first year of the pandemic.

Methods: A population-based retrospective cohort study was performed using the state of Michigan's birth registry data. The timeline of interest was after the emergence of the pandemic in Michigan from March 2020 until December 2020. The 'unexposed' pre-pandemic group was defined as data from the birth registry from March 2019 until December 2019. Groups were further compared by race. Singleton gestations were included for preterm birth outcomes.

Results: A total of 91,068 births took place between March and December 2019 compared to 83,240 births between March and December 2020. Overall, the percentage of women who received adequate prenatal care dropped from 68.4% to 41.9% (p< 0.001). The pre-pandemic cohort included 65,420 women (71.8%) who identified as White, compared to 16,997 (18.7%) who identified as Black. The post-pandemic cohort included 83,240 women with 57,836 (69.5%) identifying as White, compared to 16,160 (19.4%) identifying as Black. Overall birth rates decreased from 9.1 to 8.3 per 1,000 with Detroit, Wayne County having the highest drop in birth rate from 11.7 to 10.4 per 1,000. Preterm birth rates decreased from 10.4% in 2019 to 9.9% in 2020 (p< 0.001). Detroit, Wayne County, in specific, had a decrease in preterm birth rates from 16.4% in 2019 to 14.3% in 2020 (p< 0.001). Comparing racial distribution, in the pre-pandemic cohort, the preterm birth rate was 9.0% for White women compared to 16.3% for Black women. The difference was not statistically significant per race in the post-pandemic cohort, where the preterm birth rate was 8.6% for White women compared to 15.1% for Black women.

Conclusion: During its first year, the COVID-19 pandemic was associated with statistically significant reduction in birth rates and adequate prenatal care. Despite inadequate care, and in-line with other studies, preterm birth rates also decreased in Michigan and regions of highest pandemic impact as Detroit, Wayne County. Although disparities continue to persist in preterm birth rates between White vs Black women, we found no increased racial disparities in changes in preterm birth rates between both races in the pre vs post-pandemic periods. Overall, the reduction in birth rate findings raise the need to further explore how lifestyle changes and cessation of outside the home activities during pandemics play an impact on a complex worldwide public health priority as preterm birth.

15. SUPPLEMENTING PROVIDER COUNSELING WITH AN EDUCATIONAL VIDEO FOR SCHEDULED INDUCTION OF LABOR

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Purpose: To present the effects of a pragmatic implementation of a video education tool on patient satisfaction and knowledge of induction experience in English and Spanish-speaking patients scheduled for induction of labor at a tertiary care hospital.

Methods: IRB approval was obtained for this study. This was a pragmatic implementation of a quality improvement measure aimed to address the established negative effect labor induction has on birth satisfaction at an academic county hospital in Indianapolis, Indiana. A bilingual survey was developed to evaluate the impact of a brief, three-minute educational video on birth satisfaction and knowledge of induction experience. The survey consisted of two questions about induction agents received and expected la-

bor duration, followed by the 10-question validated Birth Satisfaction Scale-Revised (BSS-R, scale 0-40 with higher scores indicating higher satisfaction). This scale has three validated sub-domains: stress experienced, personal attributes, and quality of care. The survey was distributed to patients during postpartum admission following scheduled induction of labor. The animated video was created by Sara Rahman, MD and is freely available on YouTube in English and Spanish. It reviews various induction agents, anticipated timeline, and indications for cesarean delivery. Baseline surveys were collected from June to July 2021, after which the video was implemented in associated obstetric clinics. This was completed by provider recommendation to view the video along with handouts linking the video. Handouts were provided to patients in checkout paperwork and electronically via the medical record messaging system. After a two-month implementation period, post-intervention surveys were collected from September to November 2021. Participants indicated whether they had watched the video on the post-intervention survey. Pre- and post-intervention groups were compared using t-tests for BSS-R scores and chi-square analyses for categorical variables. Patient characteristics and induction details were abstracted from the EMR.

Results: 32 participants completed the baseline survey and 72 completed the post-intervention survey. 61 participants were English speaking (58%) and 43 Spanish (42%). Most inductions scheduled were elective (55.8%), followed by maternal indications (33.7%). Of the post-intervention group, 30 patients reported watching the video. There were no statistically significant changes between mean total BSS-R scores in the pre- and post-groups (26.9 vs. 28.0, p=0.29) or sub-domains between groups. There was an improvement in correct identification of amniotomy use (p=0.002) in the post-intervention group. No changes were seen in anticipated duration of labor between groups nor in whether patients would elect to be induced again if given the choice. Patients in the post-intervention group who did watch the video reported higher quality of care scores than those who did not watch the video (15.4 vs. 14.5, p=0.02). Patients who watched the video had higher rates of correctly anticipating the duration of labor compared to those who did not watch the video, though the difference was not significant (33% vs. 19%, p=0.17). When looking at all participants, stress experienced subset scores, in which lower scores indicate more stress, were statistically significantly lower in nulliparous (8.9 vs. 9.6, p=0.04) and cesarean delivery patients (7.4 vs. 9.4, p=0.02) compared to multiparous and vaginal delivery patients, respectively.

Conclusions: Our study found that implementation of a video education tool for patients before scheduled induction of labor was associated with little improvement in knowledge about induction procedures, but no significant improvement in patient satisfaction measures. While video education has been demonstrated to improve patient knowledge in various specialties, including obstetrics, our study demonstrated that real-world implementation and patient uptake may be initially difficult. This study may help providers emphasize direct education and counseling during face-to-face interactions. While we did not find many measurable improvements in patient experience with video instruction implementation, we continue to use the educational tool as an adjunct to preprocedure counseling.

16. WELLNESS AND DIVERSITY, EQUITY, AND INCLUSION SUPPORT ACROSS RESIDENCIES IN CORE SPECIALTIES - A NATIONAL CROSS-SECTIONAL STUDY

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Purpose: This study aimed to analyze the national variation in Wellness and Diversity efforts among residency programs in four core specialties (OB/GYN, Anesthesia, General Surgery, and Internal Medicine).

Background: The concept of Diversity, Equity, and Inclusion (DEI) not only affects the quality of patient care, but also impacts the wellness of the resident, affecting their sense of belonging, confidence, and loyalty to the home program. Various studies have been conducted to analyze DEI characteristics of different specialties with focusing on different ways to combat burnout and improve wellness within residency programs.

This study is the first to objectively leverage a systematic approach to benchmark wellness and DEI attributes across multiple specialties.

Methods: This is a cross-sectional study was conducted between March 15 and April 14, 2022 and focused on all ACGME-accredited OB/GYN (OG), Anesthesia (AN), General Surgery (GS), and Internal Medicine (IM) program websites across the United States.

The website assessment was based on 22-attributes devised by two focus groups and contingent on accessibility of the sites. The first focus group consisted of 9 medical students that developed the criteria based on prior research and online commentary. The concentrations included DEI-related semantics, gender/ethnic representation in faculty and residents, and wellness verbiage. The second group consisted of 40 voluntarily recruited students at a large midwestern medical school who piloted and refined the criteria. The website analysis was thereafter performed by an independent cohort of 16 medical students and junior residents.

All researcher and focus group participants were racially, ethnically, and gender diverse to ensure representative benchmarking. Racial diversity was defined as the medical

student researcher's self-perceived identification of at least one African-American/Black, Hispanic/Latino, American Indian/Alaska Native, or Native Hawaiian/Pacific Islander faculty member and resident among their colleagues based on publicly-accessible website photographic representation. Gender diversity was defined similarly as the medical student researcher's photo-based self-perceived identification of at least one member of a differing gender compared to the majority (a minimum of female and/or one male) within the faculty members and resident class.

Results: A total of 1348 residency program websites (out of 1419, 95%) were examined (159 AN, 261 OG, 331 GS, and 579 IM programs).

Up to 78% of OG chairpersons and program directors did not address wellness in their commentaries (compared to 23% in GS, 23% in IM, and 16% in AN). However, AN fared the worst in having dedicated wellness personnel (88% compared to 77% of each OG, GS, and IM specialties lacked resident or faculty officers whose focus was departmental wellbeing). Similarly, dedicated wellness efforts were least notable amongst the AN websites (68% compared to 61% of GS, 40% of OG, and 19% of IM programs).

However, OG did have the least DEI-dedicated sections on their websites at 23% (compared to 25% in AN, 26% in GS, and 30% in IM). Similarly, OG overlooked DEI verbiage in chairperson or program director sections in 60% of cases (compared to 26% of IM, 24% of AN, and 23% of GS websites reviewed).

OG had the highest DEI-focused research listed on their websites at 55% (compared to 20% of IM, 18% of GS, and 5% of AN). However, less than 17% of all specialty websites explicitly stated DEI-related objectives within the curriculum (with AN being the lowest at 4%). Whereas OG (56%) and IM (44%) were most involved in underserved community services, GS and AN lacked such investment (14% and 13%, respectively)

Although OG programs demonstrated up to 100% faculty gender diversity based on photo availability, only 83% of GS programs did (compared to 94% of IM and 90% of AN). OG did not fare as well in resident gender diversity as 13% of programs lacked such representation (compared to 8% in AN, 3% in GS, and 1% in IM programs). However, racial diversity in faculty was most notable in OG at 86% (compared to 81% in GS, 64% in IM, and 62% in AN programs). Racial diversity in residents was highly prevalent in OG, GS, IM (>83%) compared to 65% in AN programs.

Less than 5% of all programs assessed had utilized inclusive pronouns. Similarly, LGBTQIA allyship or supportive verbiage was limited (present only in 24% of OG, 22% of IM, 14% of GS, and 9% of AN programs). Only 3-11% of all programs addressed microaggression management and implicit bias training for residents or faculty. Similarly, only 4% of the programs recognized religious/cultural holidays while allocating time to ensure observing such holidays.

Conclusions: This study highlights the persistent need to support wellness and DEI efforts in four core training specialties as their residency website content lacked student-valued information related to DEI and wellness. Further research will need to be performed to include additional online platforms and assess whether the data within these sites truly reflects the wellness and DEI components offered by the training programs.

17. PERINATAL AND MATERNAL OUTCOMES IN SINGLETON PRETERM BIRTHS OF AFRICAN AMERICAN VERSUS CAUCASIAN WOMEN WITH HYPERTENSIVE DISORDERS

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Purpose: To determine if African American Women with hypertensive disorders have increased risk of preterm birth with poorer perinatal and/or maternal outcomes compared to Caucasian women with hypertensive disorders.

Methods: This is a retrospective cohort chart review study conducted from January 2017 - June 2021. Women who delivered preterm singleton pregnancies complicated by pregnancy related hypertensive disorders were selected. Maternal inclusion criteria consisted of African American vs. Caucasian race and singleton pregnancy. Maternal and neonatal charts were reviewed for the antepartum, delivery, and postpartum courses, as well as neonatal outcomes. The neonatal outcomes included: NICU admission, birth weight, APGARS, and cord pH. Maternal outcomes that were studied included: number of antepartum admissions, length of inpatient stay, number of intravenous and or oral antihypertensives administered, post-delivery hypertensive complications, delivery modality, and readmission rates. Women who identified other than African American and Caucasian and or had multiple gestations were excluded. Neonates with genetic and or anatomical disorders and fetal growth restriction secondary to infectious causes were excluded.

Results: One hundred and seventy-five patients met inclusion criteria including 90 African American women and 85 Caucasian women. There was no difference between the groups in maternal age, gestational age at delivery, or BMI. There was also no difference between the type of hypertensive disorders, additional comorbidities, or medical complications due to hypertensive disorders. Outcomes for both racial populations were analyzed. The post hoc analysis revealed greater than 90 percent power. Therefore, the few differences detected between the two groups were deemed significant. Both groups had similar number of admissions to antepartum and length of stay in the postpartum unit. African American women were more likely to require multiple antihypertensives to control their blood pressure dur-

ing their delivery admission compared to Caucasian women (p=0.005). Likewise, African American patients were more likely to receive magnesium sulfate for seizure prophylaxis in the postpartum period (p=0.0001). There was no difference in hospital readmissions.

Caucasian women with hypertensive disorders were more likely to be delivered by cesarean section (p=0.011) with no difference in umbilical cord pH or admissions to the NICU. There was no difference in neonatal birthweight. African American neonates were more likely to have a 5-minute APGAR less than 5 (p=0.047), though there was no difference in low 1-minute APGAR scores.

Conclusion: In this study, African American women were more likely to need more treatment for their hypertensive disorder compared to Caucasian women. However, this difference did not increase overall neonatal course and outcomes. Furthermore, while our population delivered at near term, more information is needed to review the effect of maternal hypertensive disorders on extremely preterm delivery courses. There was no statistical significance between maternal/neonatal outcomes of African American and Caucasian women with co-morbidities and different hypertensive disorders. In spite of this, there is some literature that reports African American women with hypertensive disorders, specifically chronic hypertension, are more likely to develop worse maternal and or perinatal outcomes. The absence of statistically significant results in this retrospective analysis may lead one to presume that the obstetrical care delivered at this medical institution does not vary amongst this population. This remains inconclusive given the lack of consistent reporting of race. During analysis, approximately 41% of subjects were excluded because of undocumented race, despite meeting all other initial criteria. To overcome this barrier and improve statistical significance, a larger cohort study could be conducted across multiple hospital systems in the United States to draw more accurate conclusions. This would better serve in bridging the gap in obstetrical racial disparity that is well known in the American population, in order to improve maternal and neonatal outcomes.

18. PARTNER SUPPORT HAS LIMITED INFLUENCE ON CLINICAL OUTCOMES IN PREGNANT PATIENTS WITH SUBSTANCE USE DISORDER

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Purpose: Evaluate the influence of partner support on maternal outcomes and neonatal measures including the frequency of neonatal abstinence syndrome (NAS).

Methods: We included consenting patients in a longitudinal cohort study of pregnant patients with substance use disorder (SUD) receiving care through a multispecialty treatment program between 2015 and 2021. Partner support was assessed on enrollment by self-report during the initial behavioral health assessment. Specifically, patients were asked, "Who do you designate as recovery support?" and "Are you partnered with the father of the baby?" Neonatal outcomes included frequency of NAS, pharmacologic treatment, length of NAS treatment, and duration of neonatal stay. Fisher's exact test was used in analysis of variables.

Results: 386 antepartum patients answered designated recovery support. 265 (70%) reported being partnered with the father of the baby; however, only 155 (40%) suggested the father was designated as recovery support. A different significant other was identified as recovery support for 22 patients (5.7%). 125 patients (33%) did not report sexual orientation and 6 identified as lesbian, bisexual, or other (1.5%). The final subgroup of 177 women with partner support for recovery were compared to the remainder identifying family support, friends, or 14 without a support system (3.7%). Maternal characteristics were similar between those with and without partner support including MAT started prior to the pregnancy 31 (19.4%) vs 29 (14.6%), P=.48; MAT started during pregnancy 123 (71.1%) vs 150 (72.1%), P=.52; Total Suboxone dose (mg/day) 11.9 vs 10.2, P=.14; History of overdose 32 (52.5%) vs 36 (46.8%), P=.51; Concurrent psychiatric diagnosis at enrollment 98 (55.4%) vs 123 (58.9%), P=.49, Edinburgh Score ⩾ 12 21 (50%) vs 58 (51.3%), P=.62; Generalized Anxiety Disorder-7 scores 9.5 vs 9.8, P=.84; Total prenatal care visits 12.4 vs 12.0, P=.62. However, the Abuse Assessment Screen (AAS) differed significantly between groups: 80 (45%) with a partner vs 121 (58%) without a partner, P=.01. The other maternal and neonatal outcomes did not differ significantly between the partner-supported patients and no or other supported patients, including vaginal delivery 91(52%) vs 113 (55.4%); P=.51; Operative vaginal delivery 9 (5.1%) vs 12 (5.9%), P=.75; Cesarean section 75 (42.9%) vs 79 (38.7%), P=.41; Postpartum Edinburgh Score ⩾ 12 11 (36.7%) vs 13 (26.5%), P=.34; Preterm birth 28 (15.8%) vs 40 (19.1%), P=.39; Small for Gestational Age 28 (16.2%) vs 24 (12.1%), P=.25; NAS frequency 67 (39%) vs 86 (42.6%), P=.48; Duration of neonatal stay 16.3 vs 15.3 days, P=.65; NAS pharmacologic treatment 67 (39.0%) vs 86 (42.6%), P=.48; Infant admitted to NICU 121 (69.9%) vs 158 (77.8%), P=.08.

Conclusions: Partner support did not appear to influence maternal and neonatal outcomes in our population with SUD. This may be due to a type 2 error or smaller sample size. However, we did find that women without partner support were at higher risk for abuse based on their Abuse Assessment Screen. Further studies are needed.

19. THE CURRENT STATE OF MEDICAL INFORMATICS CURRICULA IN UNDERGRADUATE MEDICAL EDUCATION: A NATIONAL SURVEY

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Introduction: Medical informatics (MI) is a science focused on improving the digital delivery of healthcare services. With the advent of electronic health records (EHR) and its integration in medicine, students are expected to acquire a newer form of non-medical skills while learning fundamental medical knowledge and clinical decision-making.

Unlike the Accreditation Council for Graduate Medical Education (ACGME) fellowship-level training in clinical informatics, the Association of American Medical Colleges (AAMC) has not set competency expectations for medical informatics in undergraduate medical education. The American Health Informatics Management Association (AHIMA) has suggested five areas that professional medical education should address: literacy and skills, computer literacy, electronic health records, privacy and confidentiality, information and data technical aspects, and security

Purpose: The primary goal of this study was to describe the current state of integration of MI in curricula across medical schools in the United States. The secondary goal was to identify how the five areas recommended by the AHIMA are being fostered.

Methods: This is an IRB-approved cross-sectional national survey conducted between January and April 2022. The survey consisted of open- and close-ended questions focused on the presence of current medical informatics platforms, interest, integration, and perceived utility in current medical school training. Associate deans of medical education and/or curricula and those involved in curricular development at all 192 US-based allopathic and osteopathic medical schools were contacted electronically.

Results: The response rate was 40% (77 out of 192). Up to 50% of respondents reported formal integration of medical informatics in their UME curricula, with 67% defining it as a course that is set up with defined objectives. The material offered was structured as electives available to the students (67%), integrated into existing required courses (23%), and as stand-alone required courses (10%); however, only 20% reported seamless integration into the curriculum. Regarding format, this was mainly in-person lectures (63%) compared to online modules (27%).

Although 61% of all participants reported initiating a form of learner exposure in the preclinical years, 48% of participants acknowledged knowing of student-reported concerns regarding readiness for managing EHR by the expected graduation date. Current setups include 24% of participants suggesting gradual unstructured training limited to preclinical years, while 15% suggested dedicated sessions and modules during that period. However, 11% reported having set up modules for MI education scheduled immediately prior to switching into the clinical part of the curriculum.

Up to 51% of the study participants reported five or more years of experience in medical education. Most respondents were from the Mid-West (29%) and Mid-Atlantic (25%). Similarly, the most common age groups were the ages of 35-44 (at 31%) and 45-54 (at 30%).

Of those engaged in teaching MI, 37% were informatics-credentialed faculty, 27% had supplementary training permitting informatics mentoring, and the rest were medical librarians. However, only 30% reported MI education having been set up in an interprofessional manner. When asked who should ideally teach MI, 63% suggested that physicians with informatics training should lead the tutelage, whereas the rest suggested that CMIOs, medical librarians, or other informatics trained personnel could teach the students. Limitations prohibiting having the ideal educators teach such courses include the lack of perceived importance of the topic by leadership and faculty (33%), time constraints (22%), financial challenges (16%), recruitment interest (15%), with 14% being left unspecified.

The topics taught most commonly include clinical decision making (46%), literature searching (24%), EHR use (23%), and security and ethics in healthcare (19%). However, students most commonly utilize informatics skills to focus on EHR handling (66%) and literature searches (66%) compared to patient education (43%) and telehealth services (43%).

Conclusion: Medical informatics curricula lack uniform application and cohesiveness across medical schools. Students may benefit long-term from structured training and competencies set up by educational regulatory bodies in order to address the five areas recommended by the AHIMA.

20. HOT YOGA FOR PREGNANCY: A SURVEY OF HOT YOGA STUDIO OWNERS

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Purpose: The literature supports the benefits of yoga during pregnancy, with burgeoning evidence regarding benefits of hot yoga (i.e., yoga in a heated room) among non-pregnant individuals. The American College of Obstetricians and Gy-

necologists provide recommendations on avoiding hot yoga while pregnant, although there is limited evidence to support or refute the practice. Furthermore, a prior study by Nguyen-Feng et al indicated that individuals trusted studio staff and friends/ acquaintances who practiced hot yoga or prenatal hot yoga more than their obstetrician/gynecologist in providing guidance on the safety of prenatal hot yoga. This study aims to (1) provide descriptive information on knowledge, attitudes, and beliefs of hot yoga studio staff regarding the practice of prenatal hot yoga; (2) examine how hot yoga studio staff rank the credibility of obstetricians and other sources of information regarding the safety of participating in hot yoga while pregnant.

Methods: The research team adapted an existing prenatal hot yoga survey, which was then pilot tested and validated in seven yoga facilitators with experience teaching hot yoga during pregnancy. Survey questions were finalized after receiving and incorporating pilot study feedback. Participants were recruited via email from publicly available websites of studios (N = 275) within three major hot yoga studio brands. Inclusion criteria were adults on the management team of a hot yoga studio. The survey assessed sociodemographics, personal practice of hot yoga and if applicable, during pregnancy, safety information, and knowledge-based questions. Participants were also asked to rank eight sources in terms of perceived credibility in providing guidance about practicing hot yoga while pregnant. For Aim 1, descriptive analyses were conducted. For Aim 2, a one-way analysis of variance was used to compare mean rankings of each of the sources, in which each source served as a within-subject factor. Bonferroni correction was used to account for multiple comparisons. Compensation was $15-25, depending on survey completion date (February 1 to March 15, 2022). The Children's Mercy Hospital IRB deemed the study exempt from review. Procedures and the full list of measures were pre-registered with the Center for Open Science: https://osf.io/wbs3n.

Results: Thirty-five participants responded to the survey request. Four responses were excluded due to incomplete responses, resulting in a final sample of 31 participants. Most participants had a bachelor's degree or higher (n = 27) and, on average, were 41.1 years old (SD = 10.6) with 13.4 years (SD = 5.1) of hot yoga experience. Of the respondents, 32% reported practicing hot yoga during a prior pregnancy, the majority had no reported adverse outcomes, and 87% reported they would likely practice hot yoga in future pregnancy.

Regarding Aim 1, participants encouraged women to practice hot yoga during all trimesters, with the second and third trimester being the most frequent (1st: 48.4%, 2nd/ 3rd trimesters: 71%). Postures that were most frequently advised against practicing during pregnancy included prone (80.6%), inversion (64.5%), and supine positions (54.8%).

The most commonly perceived benefits of hot yoga practice during pregnancy included decreased stress and anxiety (90.3%), improved mood (90.3%), and decreased depressive symptoms (87.1%). The most commonly perceived risks of hot prenatal yoga included heat stroke or overheating (54.8%), muscle injury (48.4%), and hyperthermia (19.4%). Thirty nine percent believe that hot yoga during the first trimester does not increase the risk of birth defects.

With regards to the responsibility of the studio owners with pregnant students, the majority believed they should usually or always provide modifications (n= 28; 90/3%), hydration recommendations (n=24; 77.4%), and discuss safety of hot yoga for pregnant women (n= 20; 64.5%).

Regarding Aim 2, yoga studio leadership ranked obstetricians with the highest credibility, per estimated marginal means (Mi-j = 1.91, SD = 0.32, 95% CI [1.23, 2.58], with 1 = most credible). However, inferential tests suggested that credibility rankings for obstetricians were statistically equivalent to those for academic research journals, oneself and one's own knowledge/ experiences, and a friend/acquaintance who had practiced pre-natal hot yoga (95% CI [-3.39, 0.73]), with near 100% power for contrast tests. The remaining four sources (i.e., yoga studio employee; friend/ acquaintance who practices hot yoga; non-social media news sources; family member, friend) were all rated statistically significantly less than the aforementioned sources-with the exception that a friend/acquaintance who practiced prenatal hot yoga was rated statistically equivalently credible to yoga studio employees.

Conclusions: These findings provide insight into the recommendations that women obtain from yoga studios when practicing hot yoga during pregnancy. Women are being encouraged to practice hot yoga during pregnancy with modifications and guidance from hot yoga studios. Further, obstetricians/gynecologists need to be aware that patients interested in practicing prenatal hot yoga may find other sources of information as credible as obstetrics medical providers.

21. EVALUATION OF SOCIO-ECONOMIC AND IMMUNE FACTORS RELATED TO ENDOMETRIAL CANCER

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Purpose/Objectives: Endometrial cancer (EC) is the most

commonly diagnosed malignancy of the female genital tract with approximately 3% of women being diagnosed with EC at some point during their lifetime. Well established risk factors for type 1 EC, which makes up ~80% of ECs, include obesity and tobacco use. Recent studies suggest that socio-economic factors, such as race, rural residence, insurance status and income, also correlate to morbidity and mortality associated with EC. Furthermore, obesity and low socioeconomic status have been shown to correlate with a pro-inflammatory phenotype, with elevated levels of C-reactive protein and interleukin-6, two commonly measured systemic inflammatory markers. An imbalance of immunotolerant regulatory T cells (Treg) and T helper cells (Th17) has been characterized in diseases such as diabetes and cancer. We sought to further evaluate the relationship between cancer grade and stage, peripheral immune phenotypes, BMI, and socio-economic status, including rural vs. urban location, income, education level, insurance status and tobacco use. We hypothesized that socio-economic factors correlate with altered inflammatory profiles (elevated Th17:Treg ratio) and subsequent higher stage and/or grade of EC at the time of surgery.

Methods: This study was approved by the local IRB under protocol #16-493. Women scheduled for surgery, with biopsy confirmed EC or benign gynecologic conditions (controls), were enrolled within SIU School of Medicine, Department of Ob/Gyn, Division of Gynecologic Oncology. All eligible women who consented completed a questionnaire including socio-demographic data. Pathological analysis was performed at the time of surgery based on primary tumor samples and peripheral blood was collected to assess immune cell populations via FACS analysis. Wilcoxon rank sum test, Spearman coefficient and Cochran Armitage trend test were used for statistical analysis.

Results: Our data did not show any significant differences in EC stage or grade at time of surgery based on income, education level, insurance type or tobacco use. We observed a significant immune shift toward a pro-inflammatory phenotype, as seen by the elevated Th17:Treg ratio, in peripheral blood from EC patients compared to control patients (3.50 ± 0.40 vs. 1.74 ± 0.32, respectively; P-value=0.031). Our data also confirmed significantly higher BMIs in EC patients compared to control subjects (P-value=0.003). We were not able to identify any correlations between the ratio of Th17:Treg and insurance status, tumor grade, BMI, income or education level.

Conclusions: While our data failed to show any significant correlations between socio-economic status and inflammatory phenotypes or EC stage/grade, one major limitation of our study is the small sample size (58 patients) and the fact that all subjects were enrolled at a single institution. Our data confirms previous studies indicating obesity is associated with EC and shows the presence of a pro-inflammatory phenotype in EC patients. More data are needed to further evaluate this phenotype and its impact on cancer progression.

22. EFFECT OF PRE-OPERATIVE COUNSELING ON POST-OPERATIVE OUTCOMES AT THE TIME OF MINOR GYNECOLOGIC SURGERY: A RANDOMIZED CONTROL STUDY

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Background: Being healthy is not only the absence of disease, but also well-being in terms of the physical, emotional, and social state. There is a delicate balance between the psychological and physiological state. This is especially apparent when patients undergo surgery. Surgery can cause anxiety, fear, and depression. These emotions are brought on by many factors including being in an unfamiliar environment, fear of pain, loss of control and independence, and anxiety over the possibility of a bad outcome. It is important for healthcare providers to improve this experience to consider the patient as a whole person.

Physicians, mid-level providers and office staff conventionally complete pre-operative counseling. It is important to approach this in a standardized and comprehensive way that allows patients and family members to obtain general information on the scheduled procedure as well as address frequent questions and concerns.

Unpreparedness on the part of the patient, fears related to surgery and the outcome are often looked over by healthcare providers due to lack of time available to counsel a patient. The purpose of this study is to explore the application of a standardized informational pre-operative video and assess its effectiveness as a teaching tool through a post-operative questionnaire.

As access to knowledge increases with advancements in technology, patients are demanding more knowledge of the operative process. It is important to find an acceptable and efficient way to provide this information.

Purpose: The objective of this study was to determine whether implementing standardized, media-driven preoperative education improves postoperative satisfaction in the short-term follow up period among patients undergoing minor gynecologic surgery.

Design: A single-blind randomized control study with a parallel group design. Ethical approval was obtained through the Project Review Committee to ensure that it was ethical to randomize and allocate participants to the intervention group. The project was deemed to be Institutional Review Board exempt and was overseen by a faculty mentor. During the study, appropriate confidentiality was maintained. Only healthcare providers involved in the specific research had access to patient information. Patients were identified and data was gathered with the help of clinical staff at My Community Health Clinic and Stark Women's Center.

Patients included women between the ages of 18 and 80 years old at MCHC and Stark Women's Center undergoing elective minor gynecological surgery including hysteroscopy, dilation and curettage, Myosure polypectomy, Novasure endometrial ablation, and bilateral tubal ligation.

Participants were allocated to the experimental or control group. Initially, the goal was that fifty people would be allocated to the control group and fifty would be allocated to the experimental group. We anticipated that a potential issue might be recruitment of these individuals; however, this was a reasonable goal. At the conclusion of the study, 19 people were allocated to the control group and 20 people were allocated to the experimental group.

The experimental group received a standardized pre-operative counseling video that was specific to whichever procedure they were to undergo while the control group received traditional pre-operative counseling by a physician. Both groups were given the opportunity to ask questions and all concerns were addressed within the two groups by the physician performing the pre-operative evaluation.

Results and Recommendations: There was a statistically significant difference in the overall satisfaction post-operatively between the two groups based on 1/8 of the subjective outcomes that were evaluated. When asked "How pleased were you with your overall level of service" and comparing the traditional to the media driven pre-operative counseling groups, it was found that there was a statistically significant higher satisfaction in the media driven group.

There was a statistically significant difference between traditional and media driven counseling when looking strictly at the p-value. The P-value was 0.025. As the findings were statistically significant, the T value was -2.024 and the degree of freedom was 37.

In addition, the overall trend was that there was a trend towards higher satisfaction in 5/8 of the parameters evaluated.

Based on the findings in this study, we would recommend the following. (1) We would recommend a standardized system for counseling patients preoperatively. The benefits of having a standardized system would be to ensure that all major points of counseling would be covered. (2) Additionally, as a patient may learn best through different modalities of teaching, it would be reasonable to provide standardized counseling which includes pictorial references and the opportunity for teaching back on for the patient. By implementing this type of change, it would allow the counseling to be more effective and therefore improve patient satisfaction. (3) In future studies, it would be interesting to expand the study to include more participants to further demonstrate the utility of media driven pre-operative counseling.

23. RELIGIOUS AND CULTURAL DIVERSITY SUPPORT ACROSS US-BASED OBSTETRICS AND GYNECOLOGY RESIDENCY PROGRAM

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Purpose: Our study assessed Obstetrics and Gynecology (Ob/Gyn) residency program websites for indicators of competency and interest in religious and cultural representation.

Introduction: Patient-centered, personalized medical care is becoming widely adopted across healthcare systems. This encompasses providing patients with management that is congruent with their religious and cultural beliefs - a facet of healthcare that is gaining importance, especially in reproductive health. Lack of belief-aligned care may have associated consequences, especially as minorities are more frequently impacted, resulting in deleterious health disparities. Furthermore, the ACGME has identified cultural competency as a part of its core competencies for all training programs. Thus, medical education has begun to incorporate religious and cultural competencies as part of the residency training.

The focus on inclusivity in healthcare systems has enhanced the recruitment of a racially, religiously, and culturally diverse workforce, thus enhancing the patient-provider experience through bringing representation into healthcare systems. This is paralleled in residency programs, whereby diverse applicants are recruited, and evident across their websites which prospective applicants have long used to assess for compatibility in program offerings. However, current literature highlights the steps taken by programs to assure racial equity with little focus on religious or cultural support per se.

Methods: Between March and April 2022, this cross-sectional study evaluated websites of ACGME-accredited Ob/Gyn residency programs in the United States using a novel 20-attribute collector tool that objectively benchmarks programs from a religious/cultural diversity and incorporation of corresponding competency training into resident education. The tool, developed by a religiously-representative diverse focus group, evaluated holistic reviews of applications, explicitly interested in recruitment of residents from diverse religious/cultural backgrounds; the presence of religious/ ethnic indicators depicted on the website; reported support for those with religious obligations and possibly needing flexibility in their schedule or variable days off for religious holidays, the option of opting-out of practices that may conflict with a resident's religious/cultural beliefs, in addition to whether cultural/religious or diversity, eq-

uity, and inclusion (DEI) competency were cited as part of the residents' training.

Results: Our analysis included 285 websites (96%) of Ob/Gyn residency programs based on website availability and development. Only 18% of programs explicitly mentioned the holistic review of applications. Up to 90% of websites lacked any religious/cultural indicators while only 11% referenced interest in the recruitment of applicants of diverse religious backgrounds. A total of 66% of programs omitted a non-discrimination statement. Of the remaining 34%, all had a race-focused non-discrimination statement while only 23% included a cultural/religious one.

All programs surveyed lacked exclusive statements describing flexibility in supporting religious obligations. Similarly, 97% of websites neither indicated support for time off to observe religious holidays nor referenced options for opting out of practices conflicting with beliefs.

When evaluating the programs' emphasis on religious/cultural competency training, only 10% of all websites cited cultural competency per se while 3% specified religious competency. Up to 68% of all programs lacked referencing DEI and religious/cultural competency in their training.

Conclusions: Our study suggests that Ob/Gyn residency websites do not emphasize the recruitment of religiously/culturally diverse residents. Similarly, they largely do not include it in their training. Given the importance of providing care that is culturally and religiously congruent with patients' backgrounds as well as creating a culturally and religiously diverse physician workforce, it is necessary that programs increase efforts to demonstrate a more global form of inclusivity.

24. THE FACE OF WELLNESS, DIVERSITY, EQUITY & INCLUSION: A NATIONAL REVIEW OF OBSTETRICS & GYNECOLOGY PROGRAMS

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Purpose: The objective of this study was to review Obstetrics and Gynecology (Ob/Gyn) residency program websites in the United States based on their published support for the concepts of wellness and diversity, equity, and inclusion (DEI).

Introduction: The pandemic has propelled interviews to become virtual, thus restricting onsite interactions and engagement when identifying alignment of values and personal needs. As such, applicants rely on accessible online references such as websites and other social media platforms to assess for compatibility and ultimately, the selection of residency programs.

Wellness and Diversity, Equity & Inclusion (DEI) are critical to the success of both residents and programs associated. Studies have been previously devised to assess such concepts; however, limited medical student consultation and input guided such analyses or benchmarking. With the commitment to student values and needs, it is paramount to optimize residency program websites based on such a consensus.

Methods: This is a cross-sectional analysis of Ob/Gyn residency program websites across the United States between March 15 and April 14, 2022. The website assessment was based on a compilation of 22-attributes devised by two focus groups. The first focus group consisted of 9 medical students that developed the criteria based on research and online commentary. The concentrations included DEI-related semantics, sex /ethnic representation in faculty and residents, and wellness verbiage.

The second focus group piloted and refined the questions. The second group consisted of 40 voluntarily recruited students from the University of Toledo College of Medicine. A cohort of racially and gender diverse researchers (medical students and junior residents) performed the assessment to ensure representative benchmarking.

All researcher and focus group participants were racially, ethnically, and gender diverse to ensure representative benchmarking. Racial diversity in this study was defined as the medical student researcher's self-perceived identification of at least one African-American/Black, Hispanic/Latino, American Indian/Alaska Native, or Native Hawaiian/Pacific Islander faculty member and resident among their colleagues based on publicly-accessible website photographic representation.

Gender diversity was defined similarly as the medical student researcher's photo-based self-perceived identification of at least one member of a differing gender compared to the majority (a minimum of female and/or one male) within the faculty members and resident class.

Results: A total of 261 ACGME Ob/Gyn program websites met the threshold of available data and were included in the data analysis (out of 296, 88%). Up to 41% of programs did not display pictures of either faculty or residents. Of those with photographs, diversity from an underrepresented or minority standpoint in faculty and residents was noted in 90% and 83% of programs respectively. Involvement in underserved community support was reported in only 17% of programs.

While faculty and resident gender diversity was noted in 100% and 87% of programs respectively, LGBTQIA allyship and sexual orientation support was referenced in 24% of websites with only 4% displaying inclusive pronouns.

Only 23% of programs had a dedicated DEI section with 29% having such verbiage mentioned in the chairperson or program director commentary. Similarly, only 35% or websites clearly stated mission statements or program goals

supporting such a focus with 17% including them in their curricula. Of the 49% of programs listing their research, DEI and wellness was noted in 55% of the websites.

Up to 78% overlooked wellness in the chairperson or program director sections whereas 40% had no wellness support noted throughout the website. Up to 46% of programs had no group wellness activities referenced and only 22% of programs had a dedicated faculty or resident focused on team wellness.

Holistic review for recruitment was stressed in 18% of websites with 21% mentioning microaggression and implicit bias training. However, only 4% of ObGyn websites included dedicated sections supporting the cultural and religious needs of residents.

Conclusion: There is a paucity of key wellness and DEI attributes across Ob/Gyn residency websites. Programs should improve their websites to deliver better representation of current offerings to attract a resilient and diverse applicant pool.

25. PREFERENCES AND SATISFACTION OF PREGNANT PATIENTS AND OB NURSES REGARDING MONOCLONAL ANTIBODY INFUSIONS FOR THE TREATMENT OF COVID-19 PNEUMONIA

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Introduction: The implications of infection with the Coronavirus (SARS- CoV-2) in 2019 led to innovative and investigative therapies to manage the disease, especially with the exacerbation of patient morbidity. Monoclonal antibodies (MAB) emerged as an effective treatment for specific populations and conditions - one being mild Covid pneumonia. For pregnant women, the increased risk of the infection manifested in severe morbidity and mortality from Covid-19 pneumonia. As such, the emergency drug authorization by the FDA for MAB administration for Covid pneumonia included the pregnant patients.

Being a new modality for management of this disease, several logistical concerns arose regarding the administration of the infusions. Literature suggests that large hospital systems sought efficient ways to distribute MAB to enhance access to care by patient. Nursing staff from various units have been integrated in the MAB infusion sites with primary focus on COVID. At times, staff may have limited training in some patient conditions such as pregnancy, which in turn plays a role in job satisfaction and security. For example, pregnant patient monitoring involves more than just the patient herself with all the variations that occur throughout all trimesters, but also involves the fetus (or embryo) whose monitoring may requires specialized training.

Purpose: Our study aimed to evaluate the preferences and satisfaction rates of pregnant patients and obstetric nursing staff when COVID was managed by infusion in obstetric-dedicated and staffed MAB infusion centers across one health system.

Methods: This cross-sectional study was IRB approved and performed in two stages. One stage involved contacting patients and eliciting their satisfaction and outcomes through six close-ended questions while being managed in an obstetric MAB infusion site. The patients were selected based on a retrospective chart review where subjects had been pregnant, diagnosed with mild COVID-19 pneumonia, and received MAB infusions. The second stage of the study involved nursing staff with prior obstetric training who were assessed for comfort with patient care and preferences while engaging the pregnant patients during the infusions.

Results: The total participant count was 163 with a response rate of 50% for patients (97 responses, 194 contacted) and 53% for nursing staff (66 responses, 125 surveys emailed). Up to 99% of patients felt safer and 94% reported reduced stress while being treated in the OB infusion centers compared to medical/ surgical floors or the Emergency Rooms. Similarly, 96% reporting increased comfort with specifically having nursing staff with obstetrical training taking care of them. From an efficiency and convenience standpoint, 94% felt that their care and service were more timely in the OB infusion unit.

Unanimously, nurses felt that pregnant patient safety was better assured when monitored in an OB infusion center compared to a traditional emergency room or other floors, with up to 70% believing that the quality of care was concurrently maximized. Optimization of satisfaction by patients and providers was felt by the nursing staff in up to 64% and 62% of cases cared for respectively.

When asked about participating in OB MAB infusion services, 55% of nurses reported both satisfaction with the current setup and potential for recommending a colleague to join the OB MAB infusion nursing pool. Up to 64% of nurses attributed this to scheduling enhancements and 58% to more efficient patient care. However, 60% also requested improvement in nursing procedures, order sets, and protocols with 63% identifying supplementary training for medication and reaction management as necessary.

Conclusions: Our study suggests that patients and nursing staff felt safer, less stressed, and more comfortable when engaged in OB MAB infusion services as opposed to those of a traditional ER. Developing such services may be a way to meet an increased demand for MAB while improving the value of care, patient satisfaction, and potentiating staff retention.

26. EQUITABLE TIME TO TREATMENT OF SEVERE HYPERTENSION AMONG RACES AT CLEVELAND CLINIC AKRON GENERAL

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Purpose: Through this quality assurance initiative, we sought to ensure that Cleveland Clinic Akron General (CCAG) is 1) adhering to the American College of Obstetricians and Gynecologists (ACOG's) recommendation to treat severe range hypertension within 30 to 60 minutes of recognition and 2) providing equitable time to treatment for women of all races and ethnicities.

Methods: Data was collected by preforming a retrospective chart review. CCAG patients who were diagnosed with severe hypertension in pregnancy and up to six weeks postpartum from July 1, 2020 through July 31, 2021 were included in the data collection. Demographic, clinical, and baseline data were collected and described. This included patients age, body mass index, race (Black, White, Asian, or other), Ethnicity (Hispanic, or Not Hispanic), primary insurance (private/ commercial, self-pay, or Medicaid), status (pregnant, or postpartum), gestational age if pregnant, days postpartum if postpartum, patient location (triage, labor and delivery, postpartum, antepartum, or Emergency Department), diagnosis (chronic hypertension, gestational hypertension, HELLP syndrome, pre-eclampsia, or superimposed pre-eclampsia), medication (labetalol IV, hydralazine IV, Nifedipine IR po, or other), and time to treatment (min). Categorical variables were presented as frequencies with percentages, and continuous variables were presented as means with standard deviations or medians with interquartile ranges depending on normality distribution. Wilcox rank sum tests or Kruskal-Wallis tests were used as appropriate to assess the effect of each predictor on time to treatment of hypertension. Analyses were preformed to test for associations between race and time to treatment using SAS® Software (version 9.4; Cary, NC). A significant level of 0.05 was used.

Results: A total of 131 patients were included: 85 (65%) were White and 46 (35%) were another race. The vast majority of patients were Not Hispanic (99%) vs Hispanic (1%). The mean age of patients was 30 years old. Private insurance comprised of 44%, Medicaid 54%, and Self-pay 1% of patients. When treated for severe range hypertension, 99 (75%) of patients were pregnant, and 32 (25%) were in the postpartum state. The gestational age of pregnant patients who were treated was 37 weeks. If patients were postpartum they were six days postpartum. The patients were either located in triage (n=69, 53%), labor and delivery (n= 57, 43%), postpartum (n=4, 3%), antepartum (n=0, 0%), or the Emergency Department (n=1, 1%) if acutely treated. Patients had the following diagnoses when treated for severe range blood pressure: pre-eclampsia (n=92, 70%), superimposed pre-eclampsia (n=30, 23%), chronic hypertension (n=7, 5%), gestational hypertension (n=2, 1%), or HELLP Syndrome (n=0, 0%). The medications that were used was labetalol intravenous (n=53, 41%), hydralazine intravenous (n=0, 0%), Nifedipine IR oral (n=64, 49%), or other (n=14, 11%).

The only statistically significant variable before controlling for the other variables was medications (p=0.02969). After controlling for diagnosis, medication, and patient location, race was not significantly associated with time to treatment of severe hypertension (beta coefficient 0.94, 95%, confidence interval 0.69-1.27, p=0.6667). The median time to treatment of severe hypertension was 14 (IQR 9.1-21.0) minutes. Two different generalized linear model estimates were developed to estimate the effect of race on time to treatment after controlling for diagnosis, medication, and patient location. Model 1 included all 131 patients. Model 2 included 129 patients; two extreme outlying data points greatly influenced parameter estimates and were removed. In Model 1, diagnosis, medication, and patient location were statistically significant, whereas in Model 2, none of the variables were statistically significant.

Conclusion/Implications: This initiative confirmed that race is not associated with time to treatment of severe hypertension at CCAG. It also confirmed that CCAG is adhering to ACOG's guideline to treat severe hypertension within 30-60 minutes of recognition. However, we discovered that blood pressures are often not collected at the correct time interval, and severe blood pressures are frequently not reported to providers. This means that acute treatment opportunities are unknowingly missed and could be contributing to the increase in maternal mortality among certain racial and ethnic groups. Urgent attention to these matters is needed to prevent maternal mortality.

27. PATIENT VARIABLES WHICH LEAD TO ELECTION OF EARLY VS. LATE POST CESAREAN SECTION DISCHARGE

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Body of Abstract: The hospital course for post cesarean delivery care at Aultman hospital is either 2 or 3 nights and in uncomplicated situations the patient has the right of their own decision for this length of stay. This study aims to determine the reasons for length of stay decisions. This will allow our institution to focus on what aspects of postpartum care our patients value most. The information could allow our providers to collaborate with patients to design a safe, effective, and timely discharge.

Methods: We conducted a qualitative research study which surveyed participants regarding their expected length of stay and their decision-making process for actual length of stay following their cesarean section delivery.

Results: Twenty-six patients participated in filling out the survey on the day of discharge. Of those twenty-six patients, eighteen expected to stay 2 nights and eight expected to stay 3 nights. Seventeen of the patients who expected a 2 night stay in fact stayed 2 nights. A single patient who expected a 2 night stay ultimately stayed for an additional third night. Two patients expected a 3 night stay and in fact stayed 3 nights. Six patients who expected a 3 night stay only stayed for 2 nights.

The most frequent response for desiring early discharge was a "desire to be home or near family" with thirteen patients selecting this choice. This was followed by eleven patients responding that they had a "desire to get back to a normal routine". Less common responses for early discharge were "inconsistent sleep", "risks involved in prolonged hospital stay", and "a physician/nurse encouraged me to be discharged" with 3, 2, and 2 responses respectively.

Patients who stayed 3 nights responded, "I was in pain", "a physician/nurse encouraged me to stay", "unexpected news about infant", and "desire for a break from home life responsibilities" with 2, 2, 1, and 1 response respectively.

Conclusions: Most patients who expected to stay for 2 nights did, in fact, stay for 2 nights and elected to not have an additional night of hospital stay. Most patients who expected to stay 3 nights elected to forego the additional hospital night and stayed for 2 nights. The most common reasons for early discharge were desires to be at home or with family and to re-establish their daily routines. Only two patients were guided by concerns of perceived risks of a prolonged hospital stay. Of the 3 patients who elected to stay for 3 nights, responses were varied.

28. IDENTIFYING THE PALLIATIVE CARE NEEDS OF PATIENTS AND FAMILIES IN GYNECOLOGIC SURGICAL ONCOLOGY

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Objective: Patients undergoing oncology-related gynecologic surgical procedures experience substantial symptom burden and distress. Support from specialist palliative care teams may benefit these patients and their families; however, an evidence-informed approach to the integration of palliative care and gynecologic oncology is needed. To inform such an approach, a scoping review synthesizing current evidence on the palliative care needs of patients and families in gynecologic surgical oncology was performed.

Methods: Reviewers performed a structured search of online databases CINAHL, Scopus, PsycINFO, MEDLINE, and PubMed in addition to the grey literature to identify relevant studies published between 2011 and June 11th, 2021. The original search identified 993 articles, which were dually screened for study inclusion, resulting in a final sample of articles from which data were systematically extracted and synthesized.

Results: This review of 59 publications predominantly consisted of European studies (n=26, 44.1%), described quantitative study methods (n=47, 79.6%), followed an observational study design (n=49, 83.1%), and focused on psychological impact of treatment as a major topic of study (n=21, 35.6%). The dataset also described sexual function of women post treatment (n= 15, 25.4%), quality of life (n=10, 16.9%), therapeutic decision making (n= 9, 15.2%), pain assessment (n=2, n=3.6%), and medication for symptom management (n=2, 3.6%). Explicit discussion of specialist palliative care involvement was rare.

Conclusion: The needs of patients and families in gynecologic surgical oncology are well-suited to palliative care collaboration; however, the body of literature on palliative care services provided to this unique population is underdeveloped.

29. TWIN-TWIN TRANSFUSION SYNDROME IN THE SETTING OF COVID-19 PNEUMONIA: A CASE REPORT

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Objective/Purpose: To present a case of Twin-Twin Transfusion Syndrome (TTTS) in the setting of maternal COVID-19 pneumonia, with placental pathology demonstrating a unique interplay between the two conditions.

Materials and Methods: A gestational carrier status post in-vitro fertilization (IVF) developed COVID-19 pneumonia,

and TTTS was identified. We retrospectively review the patient's hospital course and report unusual placental pathologic findings that were uncovered post-delivery.

Results: A 30-year-old G6P3023 gestational carrier status post IVF with monochorionic-diamniotic twins presented at 23-6/7 weeks for acute hypoxic respiratory failure in the setting of COVID-19 pneumonia. Patient was treated per standard protocols, including empiric coverage of superimposed bacterial pneumonia. Ultrasound (US) on hospital day #4 demonstrated fetus A with anhydramnios and fetus B with polyhydramnios. Fetus A additionally showed intermit-tent absent end diastolic flow on doppler studies, consistent with Stage III TTTS. Fetus A subsequently developed terminal bradycardia on fetal heart rate monitoring. Intrauterine fetal demise was diagnosed on bedside US, changing her status to Stage V TTTS. Monitoring of fetus B monitoring was reassuring. Following discharge, prenatal care included serial main cerebral atrial and umbilical artery doppler studies. Growth US showed intermittent absent umbilical arterial end-diastolic flow which subsequently resolved, and fetal growth restriction that persisted for the rest of the pregnancy. At 31 6/7 weeks, patient presented in active labor, and Fetus B was delivered by low transverse cesarean section for recurrent decelerations remote from delivery. The infant remained in neonatal intensive care unit (NICU) for 17 days before being transported to a NICU closer to the biological parents. At this time, he is 6 months of age and meeting milestones based on corrected estimated gestational age. Placental tissue from both fetuses was evaluated by pathology. Grossly, placenta from fetus A showed approximately 90% fibrosis of the placental parenchyma, suggestive of infarctions. Gross examination of placenta from fetus B was red-brown and spongy with intact cotyledons and marbled fibrotic placental parenchyma. Histologically, placenta from fetus A showed diffuse villous collapse and necrosis of the villi that was present in all examined sections; non-infarcted villi appeared sclerotic, with almost no inflammation seen. Placenta from fetus B showed mature appearing villi with extensive extra-villous trophoblastic lesions. Gross and histologic features determined the cause of the fetal demise was diffuse placental infarction.

Conclusion: We report a case of TTTS in the setting of COVID-19 pneumonia in a gestational carrier with monochorionic twins status post IVF. The gross and histologic findings of the surviving twin demonstrated fairly intact archi-tecture and profusion with the absence of necrosis characteristic of TTTS. These findings suggest that COVID-19 associated thrombosis of aberrant vessels between the placentas may have prevented exposure of the surviving twin to tissue necrosis mediators. This case of Stage V TTTS demonstrates a potentially protective effect of COVID-19 induced hypercoagulability on the surviving fetus.

30. ATYPICAL PRESENTATIONS OF DICER1 SYNDROME IN ADULTS WITH JUVENILE GRANULOSA CELL TUMOR

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Purpose: Autosomal dominant DICER1 syndrome is diagnosed by heterozygous DICER1 loss of function mutation resulting in abnormal microRNA regulation and classically presents with pleuropulmonary blastomas in conjunction with a variety of tumors: cystic nephromas, Sertoli-Leydig cell tumors, multinodular goiters, and papillary thyroid carcinomas. Herein we describe two uncommon presentations of DICER1 syndrome in adults with juvenile granulosa cell tumors (JGCT), rarely seen with this syndrome.

Methods: Two patients were identified who presented with JGCTs and were later diagnosed with DICER1 syndrome. The patients were retrospectively reviewed and their clinical cases reported.

Results: Two female patients, one 20 years-old and one 25 years-old, were found to have complex abdominal masses on imaging following clinical evaluation of associated symptoms. Both were diagnosed with JGCTs by final pathology following exploratory laparotomy with mass removal and staging. Following the pathologic diagnosis, the patients underwent genetic testing and were found to be positive for heterozygous germline DICER1 pathologic variants. The first patient was positive for the DICER1 c.556delT variant and all three of her male children were subsequently found to carry the same mutation. The second patient was positive for the DICER1 c.2988-20_2988del variant. She had a history of malignant follicular thyroid carcinoma diagnosed at age 11. Both family histories were explored and showed the suggestion of undiagnosed DICER1 syndrome in multiple relatives.

Conclusions: The presentation of two cases of atypical DICER1 syndrome presenting with JGCTs suggests the association of JGCTs and DICER1 syndrome may be underrecognized and underreported.

31. A CASE SERIES OF FOUR WOMEN WITH CLEAR CELL OVARIAN CANCER, WITH UNEXPECTED ATYPICAL ENDOMETRIOSIS AS PRECURSOR LESIONS

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Emerging data suggest a causative link between endometriosis and the subsequent development of rare ovarian carcinomas. The coexistence of these two disease processes was first reported in 1925 by John A. Sampson, who described a case in which histological evaluation of a patient's tumor revealed both endometriosis and endometrioid ovarian carcinoma.[1] In 1980, German scientists postulated that endometriosis itself may be a true precancerous lesion, causing certain types of ovarian cancer. Data has since emerged, supporting that endometriosis may be a premalignant lesion in cases of clear cell and endometrioid ovarian carcinomas. We describe four cases of clear cell ovarian carcinoma in the presence of coexisting atypical endometriosis. Documenting such cases is essential to understanding how ovarian cancer and endometriosis may be linked, how specific cancer subtypes may evolve, and whether certain subtypes of endometriosis may be independent risk factors for the development of ovarian cancer.

32. DECIPHERING MATERNAL ETHNICITY FROM STATE BIRTH CERTIFICATES: A PERPLEXING QUANDARY

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Purpose: (1) To discuss the unexpected difficulty in deciphering maternal ethnicity by analyzing 40 years of North Dakota birth certificates. (2) To report the alarming rates of North Dakota mothers refusing to divulge ethnic data. (3) To hypothesize variables responsible for what seems to be a disproportional amount of specific data not answered on the birth certificate

Background: It has been well established that race and ethnicity play an important role in maternal and neonatal outcomes during pregnancy. Therefore, obtaining accurate and reliable data that is representative of the population is imperative in order to document any changes and trends. According to the 2020 U.S. Census data, North Dakota with a total population of 779,094 was the 4th fastest growing (15.8%) state between 2010-2020 primarily due to a boom in oil and gas exploration. North Dakota's diversity index (the measure of probability that two people chosen at random will be from different racial and ethnic groups) also increased during this decade from 54.9% to 61.1%. The single largest non-Caucasian population in North Dakota are American Indians who reside on or near five different reservations and comprise 5.8% of the state population, a significant increase from the 2010 U.S. Census.

Methods: Using the North Dakota Department of Health Vital Statistics computer database, we were able to analyze a total of 426,738 birth records for the 40-year period 1980 through 2019. The initial goal was to determine the ethnicity of birth mothers and to validate changes in the state population using both 5-year and 10-year reporting intervals. This simplistic concept proved to be much more challenging and nuanced than anticipated.

Except for the year 2005, the computer data seemed quite straightforward. The initial data for 2005 however, showed 14,590 births compared to only 9,408 births in 2004 and 9,876 births in 2006, a nearly 5,000 birth increase (a nearly 50% discrepancy) and the most recorded births in North Dakota since 1964. The first "revised" computer search yielded 12,821 births while a second author directed search finally yielded 9,622 births as had been estimated based on surrounding years data. The discrepancies were discovered to be due to the temporary use of "alias birth records." These so called "alias birth records" were actually place holders used until all missing birth certificate data had been received. Each time a revised birth record was received it was dutifully entered into the database but earlier versions were not removed.

Results: There has been a threefold increase in the number of mothers who refused to divulge ethnic information or claimed ethnicity was unknown beginning with only 4.90% (1980-1984) but ending with 14.94% (2015-2019). This is also significantly higher than the nonresponse rate to race related questions reported in the recent U.S. Census (5.77%). North Dakota data reflects not only an evolving ethnic diversity in a heretofore relatively homogenous population as expected but illustrates an increasing suspicion and distrust of federal databases and their validity by the U.S. population as well. Others have hypothesized that the reluctance to provide ethnic information could be attributed to a lack of literacy, privacy concerns, ambiguity of such survey questions, or even uncertainty regarding one's own ethnic identity. Without this data investigations regarding racial disparities in healthcare outcomes lack validity.

North Dakota ethnicity is predominantly European (61.2%) followed by American Indian (13.8%) and other, including Hispanic, African and Asian (8.9%). The confound-

ing variable is the 16.1% of birth certificates where mothers listed ethnicity as either "refused or unknown." By 2019 mothers listed "not Hispanic" (91.6%), "Hispanic" (6.3%) or "Hispanic origin marked refused or unknown" (2.1%). The evolution of survey questions over 40 years produced information gaps and inconsistencies which will be addressed with charts and graphs.

Discussion: With over 40 years of data on maternal ethnicity in North Dakota, we ponder how the evolution of questions related to race and ethnicity have been impacted nationally in general and in North Dakota specifically, and how they might be improved in the future. North Dakota has seen a significant increase in both the American Indian and other minority populations compared to those of European descent who originally populated this western region. With this data we can now more accurately match maternal mortality with ethnicity in our state as well.

33. VAGINAL CUFF DEHISCENCE WITH SMALL BOWEL PROLAPSE 10 YEARS AFTER VAGINAL HYSTERECTOMY

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Purpose: (1) To describe a case of cuff dehiscence with bowel evisceration ten years after vaginal hysterectomy. (2) To critically review the literature of incidence and risk factors for cuff dehiscence. (3) To propose recommendations for management and prevention.

Methods: A 74-year-old female, twenty years postmenopausal, presented for vaginal pain and pain across her lower abdomen after feeling something protruding from her vagina. She has a past surgical history of vaginal hysterectomy ten years ago and has since dealt with prolapse requiring use of a pessary. She was fitted with a ring pessary May 2020. She was using a size 4 which was then removed for six months due to ulcerations. In August 2021, she was refitted with a size 3. It subsequently fell out and a donut pessary was placed a week later. Due to ongoing discomfort it was replaced with a ring in December 2021. She has been on 1 mg of oral estrogen daily for several years. She has a past medical history significant for rheumatoid arthritis treated with 4 mg methylprednisolone daily as well as type 2 diabetes mellitus. She has a remote smoking history and quit over 35 years ago.

On exam, she had elevated blood pressure. She was found to have small bowel protruding from her vagina. Additionally, prior surgical incisions from a hip surgery and oophorectomy in 2019 were noted and partially open. Her small bowel was wrapped in sterile gauze soaked in saline and she was transferred to the operating room for exploratory laparotomy.

Approximately 40 cm of distal ileum was reduced back into the peritoneal cavity. No injuries to the bowel were noted and the vaginal cuff appeared relatively avascular. After the edges were trimmed, the cuff was closed with running suture. Additional interrupted sutures were used to prevent recurrent dehiscence.

She remained stable after surgery and was discharged on postoperative day three. She had a follow up appointment one month later and the vaginal cuff appeared surprisingly well healed.

Results: Vaginal cuff dehiscence is a rare but potentially detrimental complication of gynecological surgery. The risk factors for its occurrence are not completely clear due to the low incidence and number of studies. Proposed risk factors include increased age, increased number of vaginal surgeries, post-operative cuff infection or hematoma, increased intra-abdominal pressure (for example, patients with chronic cough), the mode of hysterectomy, and poor wound healing.

Numerous factors can lead to poor wound healing in patients, including poor nutrition, malignancy, or chronic steroid use, as was the case for this patient as evidenced by the cuff dehiscence many years after surgery and poor wound healing of more recent incisions.

There are some studies that have investigated whether the mode of hysterectomy affects the likelihood of cuff dehiscence, although this body of evidence tends to be limited as well. In general, vaginal hysterectomy was the major method that led to cuff dehiscence prior to minimally invasive options. Since then, there is data that indicates options like total laparoscopic hysterectomy (TLH) and robotic hysterectomy are more likely to have cuff dehiscence as a complication. This shift can be attributed at least in part to the increased utilization of these minimally invasive options leading to more reports on their outcomes and not necessarily because there truly is an increased risk of dehiscence with these methods. Other studies have found evidence that TLH has higher rates of cuff dehiscence compared to other methods.

There are some methods during surgery that have been proposed to prevent the occurrence of cuff dehiscence, although not all have convincing evidence. Preventive measures include using suture rather than electrocoagulation to achieve hemostasis, using a two-layer running closure technique, and ensuring adequate edges of tissue to be sutured. The use of barbed bidirectional suture has been shown in previous studies to have significance in reducing the risk of cuff dehiscence.

The method of repairing cuff dehiscence is not universally agreed upon and depends heavily on the accompanying symptoms, whether there is bowel evisceration present, likelihood that there is injured bowel, and appropriate visualization of the vaginal tissue to close the cuff. There is no

concrete evidence that vaginal, abdominal, or laparoscopic repair is superior to the other.

Conclusions: This case presents a rare and possibly unique instance of cuff dehiscence many years after vaginal hysterectomy and complicated by bowel evisceration. Cuff dehiscence, on average, typically occurs much sooner after surgery, but with potential risk factors present it is still a possibility years later. It is beneficial for gynecological surgeons to be aware of the likelihood of this complication, particularly for their patients with risk factors that may require additional follow up postoperatively. Education on signs and symptoms to be aware of should be provided to the patient and may prevent more serious complications, such as bowel evisceration, if able to be diagnosed early.

34. COLORECTAL ADENOCARCINOMA PRESENTING AS A BOWEL OBSTRUCTION IN THE SECOND TRIMESTER OF PREGNANCY

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Purpose: (1) To report a case of colorectal adenocarcinoma presenting as an unexpected bowel obstruction during pregnancy. (2) To identify associated symptoms commonly seen in pregnancy that may suggest a misleading diagnosis. (3) To review increasing frequency of adenocarcinoma of the colon and promising new screening techniques for diagnosing colorectal malignancy.

Methods: Case Report: While colon cancer diagnosed in pregnancy is a rarely encountered complication, it appears likely that there will be an increase occurrence of cases in the coming years. While the etiology of colon cancer is multifactorial two key trends should be considered. First is that the mean age of mothers at the time of first childbirth has been increasing. This age was documented to be 24.9 years in 2000, increased to 26.3 years in 2014 and presumably has still been increasing during the past seven years. Second, this rise accompanies a concomitant national upsurge in the overall incidence of colon cancer in 20-34-year-old age women in recent years. This portends a huge obstetric and gynecologic concern going forward.

Presented here is a case of a 28-year-old primigravid woman diagnosed with colorectal adenocarcinoma at 22 weeks of gestation. She initially presented to the hospital with complaints of abdominal bloating, pain, nausea and vomiting. Her pregnancy had been unremarkable to this point. She had been unable to tolerate food for the few days prior to admission and was vomiting frequently. She did not recall passing flatus or having a bowel movement within those same preceding days. Subsequent evaluation included an abdominal x-ray that showed evidence of colonic obstruction in the descending colon. She was taken to surgery which consisted of a midline vertical incision laparotomy and a left colectomy with end colostomy. Findings included a near complete obstructing 5 cm circumferential tumor near the junction of the descending and sigmoid colon. No evidence of intra-abdominal metastasis apparent at exploration.

Pathology was consistent with a moderately differentiated adenocarcinoma which had invaded through the muscularis propria into the mesentery and sub-serosal soft tissue. Proximal, distal and mesenteric margins were uninvolved. Twenty-one lymph nodes were negative. Mismatch repair proteins gave normal results (mismatch pair proficient). The final pathology was consistent with Stage II pT3N0 adenocarcinoma of the colon. CEA levels were normal at the time of surgery and remain so a year later.

Postoperatively the patient spent 4 days in the hospital and had an unremarkable recovery with very quick return of bowel function. She adapted to the colostomy and finished the remainder of the pregnancy uneventfully. She was induced at 39 weeks gestation but due to fetal intolerance of labor she underwent a primary C-section resulting in a healthy baby as well as a normal postpartum course. Three months post C-section the colostomy was taken down and she has returned to a normal lifestyle.

Discussion: Diagnosing colorectal cancer presenting during pregnancy poses a difficult diagnostic challenge since common clinical manifestations of colorectal cancer during pregnancy include nausea, vomiting, abdominal pain, and constipation which are all symptoms commonly present in a normal pregnancy. Because of mimicry colorectal cancer may not be diagnosed until it reaches an advanced stage. Consequently, prognosis for a mother diagnosed with colorectal cancer in pregnancy tends to be significantly poorer than predicted. Fortunately, a promising solution to this diagnostic challenge is on the near horizon. Recent studies have evaluated the possible use of utilizing autoantibodies in the diagnosis, prognosis, and prediction of colorectal carcinoma look promising. A systematic literature review identified several of these promising autoantibodies, several of which include antibodies against CCD83, CEA, PIM1, and MAPKAPK3. Recently the utility of circulating tumor DNA (ctDNA) monitoring in cancer patients who are pregnant or planning to become pregnant has been reported. A routine screening protocol could easily be implemented wherein ideally one or more of these tests could be included with the first blood draw for any pregnant patient presenting with a family history of colon cancer or abdominal/ gastrointestinal symptoms which could be seen concomitantly with colorectal carcinoma. While Cologuard and stool hemoccult testing have been used for colon cancer screening in the general population they have met with limited acceptance as a diagnostic tool during pregnancy.

35. SECOND CASE OF SPONTANEOUS LEFT URETER RUPTURE DURING NORMAL SPONTANEOUS VAGINAL DELIVERY

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Case Report: A healthy 26-year-old nulliparous woman presented for elective induction of labor at 40 weeks 5 days gestation. Her pregnancy, past medical and surgery history were unremarkable. She was given 2 doses of Cytotec for cervical ripening followed by spontaneous rupture of membranes. She received epidural anesthesia and was completely dilated 13-1/2 hours later. The second stage of labor lasted 18 minutes before she delivered via NVSD over an intact perineum without laceration. As the epidural analgesia was wearing off, the patient reported severe left sided abdominal pain radiating into her back. Physical exam was significant for guarding and rebound tenderness. A stat hemoglobin was normal, but a CT scan of the abdomen/pelvis demonstrated spontaneous proximal complete ureteral disruption with mild left proximal hydronephrosis and extravasation of urine into the retroperitoneum as well as focal cortical thinning/scar involving the superior and medial left kidney. (Imaging available for publication.) Intravenous narcotics gave no significant pain relief. Urology was immediately consulted, and a left ureteral stent was successfully placed in the operating room. The stent remained in place for 6 weeks and imaging during stent removal confirmed an intact left ureter. Rheumatology consultation ruled out any connective tissue disorder.

Two and a half years later the same patient had an uncomplicated pregnancy. She underwent a scheduled prophylactic placement of a left ureteral stent under spinal anesthesia at 38 6/7 weeks. The following day she was admitted for labor induction and had an uncomplicated vaginal delivery. The epidural remained in place for regional anesthesia until the following morning when urology removed the left ureteral stent. An intraoperative left retrograde pyelogram confirmed the left ureter to be intact and she has had no subsequent problems to date.

Discussion: Spontaneous ureteral rupture is a rare event, which requires immediate medical intervention. It can present similar to many acute obstetric complications, such as uterine rupture and retroperitoneal hematoma/bleeding. Ureteral rupture most commonly is due to increased pressure within the renal system or increased external forces. Potential causes of intraluminal pressure increases include nephrolithiasis, iatrogenic or post-radiation ureteric strictures, neoplasm, fibrosis, and increased laxity of ureter wall due to connective tissue disorders. External pressure causing compression of the renal system resulting in increased intraluminal pressure may be due to urinary retention, vascular structures, neoplasm, and gravid uterus.

This is an exceedingly rare obstetric complication, especially if involving the left ureter. Spontaneous ureteral rupture has been found to occur more commonly in nulliparous women and almost always involves the right ureter. The mechanisms are likely due to physiologic compensations of pregnancy, involving an interplay of both hormonal and anatomical changes that occur during pregnancy.

Renal physiology changes significantly during pregnancy to compensate for the pronounced volume expansion and vasodilation. These changes are hypothesized to occur more commonly on the right ureter than the left due to the relationship of the right ureter with the right iliac and ovarian arteries at the pelvic brim, along with the natural dextro-rotation of the uterus by the sigmoid colon, which also helps to provide a cushion to the left ureter. Progesterone is thought to play a role in ureteral dilation via relaxation of the smooth muscle, however, there has not been strong evidence supporting this association and no relationship has been found between progesterone levels and severity of dilation.

Approximately 35 cases have been previously reported of spontaneous rupture of the urinary tract during pregnancy. Rupture of the proximal ureter and fornix have been the most common. Most cases of ureter rupture have been on the right. In fact, we could only identify 1 other reported case involving the left ureter. It has been theorized that increased intra-abdominal pressures during active labor with physiologic changes of pregnancy may contribute to increased traction and pressure on the ureters due to downward force on the bladder.

Other published case reports do not discuss subsequent pregnancies. There are no recommendations for reducing risk of ureteral rupture in future pregnancies. Almost 3 years later, during this patient's next pre-delivery planning, we coordinated with Urology. Since there was no clear evidence that a cesarean delivery would reduce her risk, we were planning for a vaginal delivery. In this patient's case, the prophylactic left ureteral stent placement protected her ureter and recurrent ureteral rupture did not occur with this delivery. Her postpartum period was uncomplicated.

Spontaneous ureteral rupture is an exceedingly rare obstetrical complication that requires acute awareness with early diagnosis due to high risk of complications.

36. SORROWS AND THE JOYS OF TOMORROW: ANALYZING MATERNAL EVENTS DURING DELIVERY AND POST-PARTUM IN THE COVID-19 PANDEMIC THROUGH UTILIZING THE EPDS

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Purpose: To describe the perinatal findings associated with postpartum depression utilizing the Edinburgh Post-Partum Depression Scale (EPDS) following delivery during the first 24 months of the Covid-19 pandemic.

Material and Methods: We report a secondary analysis of 203 post-partum women aged 19 to 50 years (mean age 33.2) who delivered between February 8, 2020, and December 30, 2021, who voluntarily completed the Edinburgh Post-Partum Depression Scale (EPDS) and were cared for by a single urban-suburban obstetrical team. The self-administered EPDS was completed at the time of the first postpartum visit. Twenty-two patients were tested more than once, with three being tested thrice. The testing interval ranged from six to one hundred and 70 days for the first test, and forty-two to one hundred and 21 for any additional tests done. A score of ⩾10 was utilized for the analysis. All patients were tested for SARS-CoV-2 one to five days before delivery via nasopharyngeal swab and PCR determination. The perinatal record and the results of the EPDS were merged and deidentified. Maternal and neonatal variables were listed in tables for further comparison. Simple statistics were calculated and when appropriate student T (p-value) was utilized. Once the abstraction was completed all raw subject information was destroyed. All participants consented to the use of the anonymous results. All patients that scored ⩾10 on the EPDS were referred for psychiatric and/or substance use disorder consultation.

Results: All results listed are specific to the patients who scored ⩾10 on the EPDS at any point during the timeline for the analysis. EPDS scores of ⩾10 in 22 patients and of 13 and over in 23 patients (22.10%) were distributed as follows: 48.8 % of White patients, 28.8 % of Black patients, 8.8 % in Hispanic and Middle Eastern, and 2.2 % of Asians and Native Americans. 88.9% of the patients tested negative for SARS-CoV-2, with 4.4% testing positive and the remainder were not tested. The average BMI for patients with elevated EPDS was 33.9 K/m^2, similar to the average BMI of 34.8 that was found in the overall patient group. 5% of the patients with elevated EPDS were class III obese. The average gestational age at delivery was 38.4 weeks. For non-psychiatric comorbidities, 9 patients had a prior history of preterm birth, 6 had gestational diabetes, and 4 had neonatal admissions, among other comorbidities. 28.9% of patients delivered by primary cesarean and 20% by repeat cesarean. Elevated EPDS were recorded on mothers of 22 males and 18 females. 46.6% of patients who scored ⩾10 on the scale had an associated past history of mental health issues or a current/past history of substance use relative to the 7.59% who scored an EPDS below 10. 13% of those patients were married and 5.9% were primiparous.

Conclusion: PPD is considered a major psychiatric disorder that is clinically understudied with a reported prevalence between 1.9 to 82 % in developed countries, with the lowest reported in Germany and highest in the United States, with wide variations across cultures. We report the results of utilizing the EPDS on a limited multiethnic cohort of post-partum women who delivered during the first 24 months of the Covid-19 pandemic. We demonstrated a prevalence of PPD of 22.2% within the cohort. Typically, patients are referred for psychiatric consultation if they score ⩾13, but in the cohort, the cutoff was 10. A host of related perinatal findings that are potentially associated with PPD were collected and analyzed, including but not limited to: COVID-19 status, previous history of PPD, previous history of other psychiatric diagnoses or substance use, clinical comorbidities, ethnicity, and civil status. The factors that appeared to be clearly associated with PPD were a previous history of a psychiatric diagnosis or substance use and a previous diagnosis of PPD. Patients who developed PPD had a prior history of preterm births as the most common comorbidity, along with obesity. Perinatal care providers have the optimal opportunity to identify the basic characteristics and possible risk factors in pregnant women at risk for PPD and can implement ways to decrease or avoid its occurrence following childbirth. The information obtained from our analysis may not be generalizable, owing to the limited sample size of the population. Further quality research is needed to accurately determine the effects of the COVID-19 pandemic on the incidence rate of PPD in the USA and the associated short and long-term outcomes on the affected women, their children, and their extended family. In addition, research is needed to accurately determine the relationship of the EPDS score to the severity of the maternal disease.

37. ARAB AMERICAN OUTCOMES OF PREGNANCIES COMPLICATED BY FETAL GROWTH RESTRICTION

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Objective: The diagnosis of fetal growth restriction (FGR) is associated with increased fetal morbidity and mortality which drives current antenatal testing guidelines. Traditional growth curves do not account for variability within race or ethnicities. It has been proposed and studied that customized growth charts which consider maternal ethnicity could better differentiate between fetuses with pathologic growth restriction versus those who have reached their growth potential. Arabic ethnicity was not accounted for in these studies. The primary goal of this study was to look at neonatal outcomes of fetuses diagnosed with FGR in the Arab American population and to propose the development of specific growth curves for women of Arab American ethnicity to reduce unnecessary interventions, testing, healthcare cost, and patient anxiety.

Methods: This study was a retrospective chart review at a large teaching hospital which studied 1258 Arab American pregnancies. The following neonatal outcomes were analyzed; 1 minute APGAR, umbilical artery pH, fetal hypoglycemia, and sepsis.

Results: No statistically significant difference was noted in the neonatal outcomes between the FGR neonates compared to control neonates. Control neonates were less likely to stay in the NICU and had higher 5-minute APGAR scores. Only 0.05% of FGR fetuses had abnormal Dopplers at any point during the pregnancy.

Conclusion: The neonatal outcomes for these FGR fetuses were similar to normally grown fetuses. This supports the hypothesis that growth restriction curves based on ethnicity could benefit the patient as certain ethnicities may consistently have smaller fetuses for constitutional reasons and not pathologic reasons. Continued research should be pursued to create growth curves based on ethnicity to more accurately diagnose FGR.

38. APPLICATION OF THE OVARIAN-ADNEXAL RADIOLOGICAL DATA-REPORTING SYSTEM (O-RADS) FOR ULTRASOUND DIAGNOSIS AND MANAGEMENT OF ADNEXAL MASSES

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Introduction: "O-RADS™" is an acronym for the Ovarian-Adnexal-Imaging-Reporting-Data System which functions as an efficient quality assurance tool advancing gynecologic practice and using an ovarian/adnexal pathology description, under the auspices of the American College of Radiology (ACR). The creation of a standardized lexicon permits the development of a practical, uniform vocabulary for describing the imaging characteristics of ovarian masses in order to determine the risk of malignancy (ROM), with the ultimate goal of applying it to a risk stratification classification for consistent follow-up and management in clinical practice.

This lexicon is combined with the rules and adnexal risk prediction model of the International Ovarian Tumor Analysis (IOTA) group and its ADNEX algorithm. O-RADS US working group designed it to provide consistent interpretations to decrease or eliminate ambiguity in US reports resulting in a higher probability of accuracy in assigning ROM to ovarian and other adnexal masses, and to provide a management recommendation for each risk category. It describes 6 risk categories (0-5) according to ROM. Color flow Doppler analysis is included in this sonographic assessment. It has undergone extensive evaluation and validation, based on 5,905 cases.

- O-RADS 0, an incomplete evaluation
- O-RADS 1, the physiologic category (normal premenopausal ovary. 0 ROM)
- O-RADS 2, the almost certainly benign category (<1% ROM)
- O-RADS 3, lesions with low risk of malignancy (1% to 10% ROM)
- O-RADS 4, lesions with intermediate risk of malignancy (10% to ⩽50% ROM)
- O-RADS 5, lesions with high risk of malignancy (>50% ROM)

Determination of its accuracy of malignancy risk assignment is important to measure, for demonstrating the utility of its consistent clinical use. Since gynecologists seek to address the rising incidence of mortality from ovarian malignancy with the limited tools which we currently have, we need to recognize the potential of this tool to provide optimal practice. To that end, the authors sought to explore the benefit of O-RADS in our own clinical experience.

Methods: Consecutive cases of sonographic female pelvic assessment from August of 2021 through May of 2022, referred to our clinic to exclude the possibility of an adnexal malignancy, and with consultation of the O-RADS system, were evaluated (IOTA-ADNEX model app is available on iOS and Android phones). If the O-RADS prediction of possible malignancy was greater than 10%, GYN/ONC consultation was obtained. The ultimate diagnosis which was obtained was recorded.

Results: There were 71 cases that were assessed using the O-RADS system. While many cases of sonography were considered as being likely benign, 2 cases were rated as O-RADS-4 or O-RADS-5 at the time of ultrasound (US), and 2 cases were managed by our GYN/ONC and ultimately found to be malignant. As far as could be determined for those cases which underwent surgical evaluation, the screening sensitivity of O-RADS in our US experience was 100%.

Conclusion: O-RADS US is a modern algorithmic approach to predicting the statistical likelihood of a diagnosis based on the relative association of particular clinical and identifiable imaging variables (descriptors). The clinical value of using this app for prediction and management guidelines in the sonographic assessment of ovarian masses, was measured by a gynecologic sonographer. Of course, the use of this diagnostic tool has been substantially validated, and though this case series may be extremely limited in size, it does appear that its application for ultrasound imaging may have the potential to significantly address the diagnosis and treatment of ovarian malignancy, which has evaded our collective ability to diagnose it at an early treatable stage. This O-RADS online application is certainly worthy of discussion at the present time.

39. RACE/ETHNICITY BIAS AND ITS ROLE IN SEVERE MATERNAL MORBIDITY: A CLINICAL PERSPECTIVE

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Racial and ethnic health disparities have been identified by many information sources in recent years, and a specific example of this is severe maternal morbidity (SMM), which includes postpartum hemorrhage (PPH), and which can directly lead to mortality, and can often be considered as preventable. It is this racial/ethnic health disparity that has been highlighted in news reports that should be of concern to all physicians and healthcare providers, recognizing that women of color have more than three times the risk of dying in childbirth than white women. Organizations such as the CDC, ACOG, AAFP, and SMFM have partnered to address this concern, and the details about this are worthy of further examination.

The American College of Obstetrics and Gynecology issued a Committee Opinion (#495) in 2015, related to racial and ethnic disparities in Obstetrics and Gynecology (e.g., incidence of preterm birth, maternal morbidity and mortality, fetal demise, fetal growth restriction, and access to prenatal care and contraception), recognizing the prevalence of this disturbing trend, though its exact etiology is yet undetermined. Some references refer to racial prejudices existing among people in general, possibly even including some medical providers, as potentially being responsible for the identified disparities. Naturally, the use of related medical terminology needs to be precise, in order to help with this identification and health disparity measurement. Unfortunately, appropriate and revealing language is not consistently used in the medical literature for it to be closely studied. Obviously, the extent of such racial and ethnic disparities can relate to a variety of specific morbidities in women's healthcare (obstetrics & gynecology), as has been noted by many authors.

Severe maternal morbidity (SMM) has been a specific example of these commonly described disparities. The most common cause of SMM is hemorrhage originating at childbirth, termed postpartum hemorrhage (PPH), which is potentially remediable with prompt treatment with multiple uterotonic and thrombotic medications, and other measures as well, though it may inevitably require operative therapies for its resolution, including hysterectomy. Failure to initially recognize hemorrhage when occurring at childbirth, and the lack of its immediate treatment consistently by all providers to all populations, likely contributes to the incidence of this SMM disparity, the degree to which it exists may be specifically measurable and scored.

Regarding the rising rates of perinatal hemorrhage being reported, and the relative lack of its predictability from risk factors, the previously mentioned possible personal bias among some providers may need to be considered as an etiology of this, given the reported evidence. Moreover, additional evidence may be necessary to acquire, with aggregate data analysis, to identify any provider biases that may exist, to eventually improve perinatal care quality. While many different sources have reported the existence of structural racism in society, its possible inclusion in health-care practice (i.e., among providers) may need to be identified, to understand how corrections can successfully be initiated. For example, data within an electronic medical record (EMR) system may be useful, if aggregated from multiple hospital systems, with respect to demographic groups. If data analyses are to be pragmatically conducted to investigate the racial/ethnic disparities that may exist regarding SMM, identification of the response time between the date/time of birth (which is always recorded in any perinatal dataset) and the time of initial administration of the first medication given in the usual cascade of medical treatment when hemorrhage is clinically identified (which is part of any EMR) may be ideal. A comparison of this time difference across different racial/ethnic cohorts within multiple institutions can be potentially revealing, and be an objective way of explaining a previously documented specific ethnic and racial healthcare disparity, and its potential preventability. Of course, there may not be a great incentive for any institution to engage in such data analysis, given the potential of revealing the embarrassing cause of racial/ethnic health disparity in an individual healthcare organization. Of course, there may be value to an institution's recognition of possible savings, measuring the associated costs of these disparities, and the possible savings which can accompany their potential correction.

This may also be seen as an inequity when providing quality obstetric healthcare to some populations. It may be inescapable that personal bias of some providers may be ultimately responsible for these demonstrated racial/ethnic health disparities, accompanied by the various societal racial/ethnic disparities known to ubiquitously exist, and a call for its systematic change has been made. Nonetheless, any explanation of these known health disparities should be welcomed by the entire medical community.

40. BUPRENORPHINE INDUCTION USING MICRODOSING FOR THE MANAGEMENT OF OPIOID USE DISORDER IN PREGNANCY

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Purpose: Buprenorphine induction in pregnancy requires withdrawal symptoms prior to initiation and has been associated with dissatisfaction and non-compliance.

Methods: This is a case presentation of a successful buprenorphine induction of a pregnant patient on methadone maintenance, who desired induction onto buprenorphine to minimize the risk of neonatal opioid

withdrawal syndrome (NOWS), which severely affected her last child.

Case Presentation: The patient is a 29 year old G2P1001 at 18 2/7 weeks of gestation, who desired a switch from Methadone to buprenorphine to minimize NOWS in this pregnancy. The patient had a history of IV drug use from 17 to 25 years of age. This pregnancy was complicated by Hepatitis C infection, a history of anxiety and depression, and tobacco use. Her medications included a daily PNV in addition to her methadone. Her prior pregnancy was an NSVD at 37 6/7 weeks of gestation of a female infant weighing 7 pounds 8 ounces, 3 years ago.

She was counseled that buprenorphine maintenance can also be associated with NOWS, and that changes in neonatal treatment across the US using eat, sleep, console allows successful newborn transition and significantly decreases the experience of neonatal withdrawal symptoms and the need for medication. She was also counseled regarding smoking cessation as a means to decrease the risk of NOWS.

Despite these recommendations, the patient was slowly weaning herself down to 30 mg from 68 mg of methadone daily (a decrease of 2 mg qod). This was recommended by the clinic where she was receiving her methadone. The plan had been to abstain from methadone for at least 48 hours, until she experienced moderate withdrawal symptoms before initiating buprenorphine. This is to minimize a precipitated withdrawal in the patient.

Precipitated withdrawal occurs when there is a net decrease in opioid effect. Buprenorphine is a partial opioid agonist which has a high affinity for the μ-receptor, but less intrinsic opioid effect than a pure opioid agonist such as methadone or fentanyl. When buprenorphine is given to a patient with an opioid agonist on board, the partial agonist (buprenorphine) displaces the full agonist from the μ-receptor, and since it activates the receptor to a lesser degree than a full agonist, this results in a net decrease in agonist effect, and the patient experiences severe withdrawal symptoms.

The patient was counseled extensively regarding the possible risks and benefits of buprenorphine microdosing. The main advantage of microdosing is avoiding a precipitated withdrawal. The Prescription Monitoring Program was checked and the patient had no other prescriptions for opiates. She continued to take her daily dose of methadone 30 mg, while increasing her daily dose of buprenorphine according to the protocol used by Terasaki et al.

For our buprenorphine formulation, one-quarter of a 2 mg sublingual strip/film was used.

The patient did well during the week of buprenorphine micro-dosing, with no complaints of withdrawal or cravings. She continued to be engaged in her prenatal care. She had a normal fetal anatomy scan. Her dose of buprenorphine was increased to 8 mg bid for some withdrawal symptoms in the evening (new onset nausea, vomiting). She had a normal follow-up growth ultrasound at 32 weeks. She was down to 2 cigarettes a day.

The patient underwent an elective induction of labor at 39 weeks and had a spontaneous vaginal delivery of a 3340 gm (7 pound 6 ounce) male infant. Apgar scores were 8 and 9 after 1 and 5 minutes respectively. The FINNEGAN NEONATAL ABSTINENCE SCORE peaked at 5 days of life. Only non-pharmacologic interventions were used. He did not require any opioids for treatment. The patient continued her daily dose of buprenorphine intrapartum and postpartum. Her pain was adequately controlled with NSAIDS and Tylenol. She was prescribed enough buprenorphine until her clinic visit in 2 weeks. She was also referred to GI for treatment of Hepatitis C.

Conclusion: A growing body of literature supports microdosing of buprenorphine in non-pregnant persons. This approach avoids withdrawal symptoms by slowly displacing the full opioid agonist, and can safely be performed in the outpatient setting. Given the safety profile of buprenorphine and its potential to be a lifesaving intervention, a study of micro-dosing in pregnancy is indicated. This is especially true as overdose deaths exceeded 100,000 last year, with illicit fentanyl now a predominant opioid of abuse.

41. COMPARING DELIVERY OUTCOMES OF CONCURRENT USE OF MECHANICAL DILATION WITH LOW DOSE VERSUS MEDIUM DOSE PITOCIN VERSUS BALLOON CATHETER ONLY

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Purpose: The most effective method of inducing labor is unclear, as studies comparing labor induction methods are variable and results are conflicting. We conducted a retrospective chart review to compare delivery outcomes following induction of labor with concurrent use of mechanical dilation with Pitocin at various rates versus mechanical dilation only.

Methods: This is a retrospective cohort study reviewing patients who underwent induction of labor with mechanical dilation between January 1, 2017 to July 31, 2021 at Bayfront Health St. Petersburg. IRB approval was obtained prior to review. Patients included in the study were singleton pregnancies delivering after 36 weeks gestation with the use of mechanical dilator for cervical ripening. Medical records were reviewed for patient demographics, cervical exam upon admission, length of time mechanical dilator was used, use of pitocin, starting time of pitocin, time to and mode of delivery. Different rates of Pitocin use were reviewed including low dose pitocin defined as 1mU/min increased no more than 1mU/min every 30-60 minutes, and medium dose pitocin at 1-2 mU/min increased no less than 1-2 mU/min every 15-30 minutes. For further analysis, data was stratified by time between mechanical dilation and starting time of Pitocin, use of additional cervical ripening

techniques, and other categorical data.

Results: In total, 159 charts met inclusion criteria, of which there were 79 vaginal deliveries (50%) and 79 cesarean sections (50%). Mechanical dilation was used concurrently with low dose pitocin in 47% of inductions while medium dose pitocin was used in 48% of inductions. Only 5% of inductions used mechanical dilation alone. Mechanical dilation with low dose pitocin resulted in a vaginal delivery rate of 49% (37/75) and a cesarean section rate of 51% (38/75). Mechanical dilation with medium dose pitocin resulted in a vaginal delivery rate of 54% (41/76) and a cesarean section rate of 46% (35/76). Mechanical dilation without use of pitocin resulted in a vaginal delivery rate of 25% (2/8) and cesarean section rate of 75% (6/8). On subset analysis, we found that the rate of vaginal delivery with immediate versus delayed initiation of pitocin with mechanical dilator use was 54% and 46% respectfully. Further statistical analysis is currently pending.

Conclusions: While there is a large amount of variability in the use of mechanical dilation for induction of labor, we did note some differences in delivery outcomes. Vaginal delivery rates were found to be higher than cesarean delivery rates for patients who underwent cervical mechanical ripening performed concurrently with pitocin use when compared to mechanical dilation alone. It appears medium dose pitocin has a slightly higher vaginal delivery rate and slightly lower cesarean delivery rate when compared to low dose pitocin. When delivery outcomes are further stratified by time, where pitocin was either started at the time of mechanical dilation or delayed more than one hour, the overall vaginal delivery rate is highest in those who received immediate medium dose pitocin (55%), and lowest in those who received delayed low dose pitocin (47%). Additional aggregate data shows no difference between comparative groups and primary out-comes. Further studies are planned with a larger population.

42. GASTROSCHISIS: TO CUT OR NOT TO CUT?

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Purpose: To present a rare case of gastroschisis with bowel adherent to the placenta that resulted in the loss of the majority of the infant's large bowel. The goal is to provide insight into possible limitations of antenatal imaging in predicting outcome and prognosis as well as to further guide counseling and set expectations for patients.

Case Report: A 29 yo G2P1001 was transferred to our MFM service after being diagnosed with fetal gastroschisis. Routine antenatal surveillance was performed including antenatal testing and growth ultrasounds. The fetus was noted to have no additional complications due to gastroschisis and was normally grown. The patient had a low risk NIPT and elevated MSAFP. Delivery was planned for 37 weeks per routine obstetric protocol.

Patient presented to the labor and delivery unit at 35w2d with painful contractions and evident preterm labor. She received a single dose of betamethasone prior to delivery. The MFM and neonatology team were present for imminent delivery. The fetal head was delivered without complication. The fetus's body delivered except for a thin loop of bowel that failed to deliver and remained attached to both the infant with the remainder of the bowel remaining in utero. Loops of small bowel were also seen to be exteriorized from the gastroschisis defect. The thin loop of bowel that remained in utero was attempted to be delivered with manual extraction and maternal expulsive efforts that were both unsuccessful. Placental delivery was also attempted without success. At this time, pediatric surgery was called to the bedside, and due to oxygen desaturation and concerns for poor perfusion, the infant was intubated and given a normal saline bolus. Upon arrival of pediatric surgery, the bowel was clamped and resected. The neonate was taken immediately to the NICU and then to the operating room for exploratory laparotomy.

The placenta was unable to be manually extracted in the delivery room and the patient was taken to the operating room for dilation and curettage. The patient was given IV Nitroglycerin and Terbutaline for uterine relaxation. The first manual extraction delivered the fetus's large bowel and portions of the small bowel with placental delivery upon secondary uterine sweep. Upon delivery of the fetal bowel, it was noted that about 100 cm of bowel had been attached to the posterior segment of the placenta.

The infant underwent an exploratory laparotomy which demonstrated a matted bowel, 20cm segment of ischemic intestine with only the seromuscular and mucosal layers. The serosal layer was thought to be adherent to the placenta. The nonviable bowel was resected. Due to the degree of inflammation, the two ends of the bowel were tied and placed into the abdominal cavity. The umbilical stalk was used to temporarily close the abdominal defect.

Postoperatively, the infant advanced from conventional ventilation to high frequency oscillation secondary to fluid shifts and generalized inflammation. He received one dose of surfactant and was successfully extubated to unassisted room air on postoperative day 4. Further surgical intervention was delayed until 6 weeks of age due to significant matting and inflammation of the bowel. The patient remained on total parenteral nutrition with adequate growth. Given the patient's prematurity and initial metabolic and respiratory acidosis, a cranial ultrasound was performed which revealed a grade 2 intraventricular hemorrhage. Periventricular white matter injury was seen in subsequent ultrasounds. Developmentally, the patient was active and maintained neurologic progression in the newborn period.

Discussion: Gastroschisis is seen in 1 in 1,800 newborns every year. In general, infants with gastroschisis are delivered vaginally, with a cesarean section reserved for obstetric indications.

Complications associated with gastroschisis are often seen in relation to inflammation and feeding issues in the postnatal course. We share an exceedingly rare case of an infant with adherent bowel and subsequent short gut after surgical bowel transection during delivery. This case emphasizes a rare complication of gastroschisis, not visualized on antenatal imaging, which should be counseled to families. While we do not know if this complication could have been prevented with cesarean delivery, this case presents a rare complication with an otherwise uncomplicated gastroschisis pregnancy.

43. PREGNANCY OUTCOME AFTER PLACEMENT OF LAMINARIA AND SUBSEQUENT SECOND TRIMESTER REMOVAL

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Objective: To report the pregnancy outcome after the removal of laminaria that was placed for an elective termination of pregnancy at 19 weeks gestational age.

Background: According to data collected by the CDC, patients present for elective termination of pregnancy in 11.4 per 1000 women (reported between 2010 to 2019), and only 6.2% of these abortions are performed between 14 and 20 weeks gestation. For second trimester abortions, osmotic dilation prior to a dilation and curettage or evacuation is common practice.

Patients undergo extensive counseling when considering an elective termination of pregnancy, however, rarely, a patient changes their mind even after the process has been started. Specifically, patients who receive osmotic dilators, in this case Laminaria tent inserts, for cervical dilation and preparation, they can change their mind and request removal of laminaria. There is limited data in the literature about pregnancy outcomes following attempted elective termination of pregnancy when the process has been interrupted. In review of 19 cases of women who had undergone extensive cervical dilation with laminaria in preparation for dilation and curettage for elective abortion, the outcomes of these pregnancies varied. Four of the nineteen cases resulted in full term, uncomplicated vaginal deliveries of viable infants. However, six of the pregnancies resulted in spontaneous abortion or fetal/neonatal death, while the remaining nine pregnancies experienced complications including premature preterm rupture of membranes, preterm delivery, maternal infection and hemorrhage. Further, most of these patients received some type of broad-spectrum antibiotic after laminaria removal for prevention of acute chorioamnionitis. This case represents one case of Laminaria insertion for termination with subsequent presentation one month following with preterm premature rupture of membranes past viability.

Case Description: A 25-year-old gravida 3 para 1011 presented to the emergency department (ED) for removal of laminaria that was placed several hours prior at Planned Parenthood in preparation for an elective termination at 19 weeks 5 days gestation. Eight laminaria sticks were placed under cervical block for anesthesia around 10am and patient reported that severe cramping and contractions began shortly after. She then had a change of heart and decided she wanted to keep the pregnancy and have the laminaria removed. Laminaria was removed by obstetric provider and cervix was noted to be 2-3cm dilated with erythema and oozing of blood noted within cervical os from mechanical dilation. Fetal heart tones were confirmed via ultrasound, and patient was discharged on prophylactic antibiotics with Metronidazole and Cephalexin. Patient was given strict preterm labor and preterm premature rupture of membranes (PPROM) precautions.

The patient returned for evaluation at 24 weeks 3 days for PPROM and was found to have advanced cervical dilation. She was delivered via emergent cesarean section for fetal bradycardia and infant was transferred to neonatal intensive care unit (NICU). Final pathology for placenta showed severe necrotizing acute chorioamnionitis and mild acute umbilical panvasculitis, with no villitis identified. Patient remained afebrile with complete blood count within normal limits both prior to and after delivery.

Discussion: While outcomes following prolongation of pregnancy after attempted termination of pregnancy vary greatly, limited literature is available for review to properly counsel patients. While it is rare for patients to change their mind once termination procedures have been initiated, providers should be knowledgeable about possible outcomes and risks. It is reasonable to allow the pregnancy to proceed with strict preterm labor, infection, and PPROM precautions. Patients should be counseled on the high risk of fetal morbidity and mortality, however, successful pregnancy outcomes have been documented. At this time, there is not enough data to prove risk reduction with antibiotic administration. In this case with advanced cervical dilation and manipulation of the amniotic membranes at the time of laminaria removal, we chose to treat the patient with broad spectrum antibiotics to help reduce risk or severity of acute chorioamnionitis and PPROM. Further studies are needed to determine risk reduction in patients given antibiotics compared to those that do not receive antibiotics in similar cases.

44. CASE OF THORACOAMNIOTIC SHUNT PLACEMENT FOR TREATMENT OF PLEURAL EFFUSION IN THE SETTING OF CONGENITAL DIAPHRAGMATIC HERNIA COMPLICATED BY HYDROPS

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Purpose: To review a case of novel in utero thoracoamniotic shunt placement for pleural effusion in the setting of congenital diaphragmatic hernia (CDH)

A 37 yo G1P0 with known diagnosis of right CDH on growth scan at 20+1 weeks GA with moderate pleural effusion was evaluated for fetoscopic endoluminal tracheal occlusion (FETO) candidacy at 24+2 weeks GA. The US demonstrated normal growth with right CDH containing liver and gallbladder with moderate right pleural effusion. ECHO obtained with exaggerated levoposition due to right pleural effusion but otherwise normal structure and function. Thoracoamniotic shunt placement was recommended at that time but the patient declined due to concern for preterm delivery with a poor outcome. Repeat evaluation at 26+2 weeks GA demonstrated similar findings of normal growth and large pleural effusion with new small ascites. Worsening polyhydramnios with preterm contractions warranted urgent repeat evaluation at 29+3 weeks GA, and US demonstrated concern for hydrops fetalis with severe polyhydramnios, skin edema, large abdominal ascites, and worsened large pleural effusion. Patient underwent placement of a singular thoracoamniotic shunt at 29+4 weeks gestation and was hospitalized on tocolytics for five days post-procedure. Amniocentesis was obtained at that time and demonstrated a normal male karyotype of 46, XY. Following placement of the shunt, the patient was transferred under our care at 30+5 weeks GA for the remainder of pregnancy. Evaluation of the fetus was performed including fetal echocardiogram, serial ultrasounds with maternal fetal medicine (MFM), and consultation with the CDH team at Johns Hopkins All Children's Hospital (JHACH). Imaging at 34 weeks was consistent with a right-sided CDH containing bowel, liver, and gallbladder. There was no evidence of residual pleural effusion or ascites and the thoracoamniotic shunt remained in place for the duration of pregnancy. The CDH was categorized as moderate to less severe based on MRI with a 95% likelihood of survival and 5-30% ECMO risk based on protocolized treatment at JHACH.

Patient was monitored regularly by ultrasound through the MFM office with planned delivery via scheduled cesarean at 37+3 weeks gestation. Per CDH protocol, two doses of antenatal corticosteroids were administered prior to delivery. The male infant was delivered via primary low transverse cesarean section with Apgar scores of 7 and 8 at 1 and 5 minutes respectively. Birthweight was noted to be 2770 g. Immediately following delivery, the infant was evaluated by the CDH team with resuscitation including endotracheal intubation and positive pressure ventilation in the operating room prior to being taken to the CDH intensive care unit (ICU).

Neonate was monitored in the ICU and taken for primary surgical repair of CDH on day of life (DOL) 3 without need for patch placement. He was continued on bowel rest with total parenteral nutrition (TPN) for 12 days following surgery. He was extubated to continuous positive airway pressure (CPAP) on DOL 9 and transitioned to nasal cannula at 0.4L on DOL 15. He initiated breastfeeding on CPAP and began small volume oral feeds with breast milk and fortified formula on nasal cannula while continuing TPN for nutrition. TPN was discontinued on DOL 35. The neonate was discharged home on DOL 49 on room air, tolerating oral feeds without difficulty. Neonate continued close follow-up with the CDH team following discharge.

Discussion: CDH is a rare birth defect occurring in approximately 1 in 2500-3000 live births of which right sided occurs in only 10-15% of cases. The defect requires care of a multidisciplinary team with the option of in utero tracheal occlusion for select candidates and the remainder having repair following delivery. While there is limited data about risks and management of pleural effusion in the neonate, there is very limited data for in utero management options. While fetoscopic endoluminal tracheal occlusion (FETO) procedures are performed for a select few candidates, there is concern for worsening pulmonary hypoplasia in patients that do not undergo fetal surgery, and with additional pleural effusion, concern for additional pulmonary compromise and growth constriction. This case demonstrates the use of thoraco-amniotic shunt placement to manage pleural effusion in the setting of fetal hydrops. While it is unknown if the outcome would be similar without shunt placement, precedence of prior cases of pleural effusion in the setting of other thoracic malformations suggest that pleural effusion may represent a worsening prognosis without correction. Additional cases are needed to compare shunt placement to conservative treatment to determine a change in prognosis, if any.

45. UTERINE RUPTURE SECONDARY TO PYOMYOMA LEADING TO INTRAABDOMINAL ABSCESSES FOLLOWING AN UNCOMPLICATED VAGINAL DELIVERY

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Background: Uterine leiomyomas are benign monoclonal tumors that develop from the smooth muscle cells and fibroblasts of the myometrium. Prevalence of leiomyomas during pregnancy is 10.7% across all races. Usually, fibroids are asymptomatic during pregnancy. When symptomatic, pain is the most common complaint. Pyomyoma, or suppurative leiomyoma, is an extremely rare complication of fibroids in the peripartum period that results from infection or necrosis of a fibroid due to hemorrhage or decreased blood flow. A rare complication of a pyomyoma is spontaneous uterine rupture. The following case report describes the labor and postpartum course of a primipara complicated by intraabdominal abscesses secondary to a ruptured pyomyoma.

Case Presentation: Patient is a 31-year-old G2P0111 who presented to the emergency department (ED) on postpartum day 7 after a spontaneous preterm vaginal delivery due to PPROM complaining of right lower quadrant abdominal pain, ongoing since discharge. The patient had a known history of a subserosal, left anterior uterine fibroid measuring 3.8 x 3.2 x 4.0 cm. Her pregnancy was complicated by iron deficiency anemia and COVID-19. In the ED, she was afebrile, had significant right lower quadrant abdominal tenderness, yet no acute abdomen, and leukocytosis of 17.4 x 109/L. Computer tomography (CT) of the abdomen and pelvis showed evidence of several fluid collections, with the largest pocket in the right abdomen extending across the midline measuring 11.4 x 18.7 cm.

She was admitted and started on broad spectrum antibiotics with ampicillin, sulbactam and gentamicin. Interventional Radiology (IR) was consulted for possible intervention and performed a percutaneous drainage of the largest abscess, yielding 900 cc of yellow, purulent fluid that was sent for culture, which was positive for Fusobacterium nucleatum. Though the patient remained afebrile, her abdominal pain continued and leukocytosis worsened despite continued broad spectrum antibiotics and minimal output from drain. Repeat CT imaging of the abdomen/pelvis showed nonspecific colitis from the cecum to the transverse colon with decreased, yet significant, fluid collections despite drain placement. Decision was made for surgical exploration and a diagnostic laparoscopy with conversion to an exploratory laparotomy was performed. The patient underwent extensive lysis of adhesions, a small bowel resection, and drainage of intraabdominal abscesses. Upon evaluation of the uterus, a defect was noted at the location of the previously noted subserosal fibroid with similar dimensions. The uterine defect was repaired with interrupted stitches after a sample of the surrounding tissue was collected to be evaluated by pathology. The pathology report for the surgical debridement revealed severe acute and chronic inflammation and necrotic tissue with adjacent fibrous and smooth muscle, changes consistent with infarct of a fibroid. Her postoperative course was uncomplicated and she was discharged home in stable condition on hospital day 13.

Discussion/Review of Literature: Pyomyomas typically present with fever, leukocytosis, tachycardia, pelvic pain, and characteristic findings on imaging studies. On ultrasound, a heterogenous uterine mass with cystic components or air can be seen. On CT imaging, identifying calcifications, free peritoneal air, and purulent fluid or material may help support the differential. Imaging findings that can be suggestive of spontaneous uterine rupture include observing disruption of the wall of the pyomyoma with free intraperitoneal fluid and pneumoperitoneum. However, pyomyomas are ultimately a surgical diagnosis. Management of pyomyoma includes IV antibiotics and, in most cases, surgical management with hysterectomy. There have been few documented cases where pyomyoma have been managed more conservatively with antibiotics and CT guided drainage or myomectomy in order to preserve fertility, with our case being one of them.

Conclusion: To the best of our knowledge, there have been 9 cases of pyomyomas resulting in uterine rupture in the reported literature. This resulted in hysterectomy in 6 cases. This abstract reports a unique case of postpartum pyomyoma resulting in uterine rupture treated with primary repair, antibiotics, and uterine preservation.

46. GO NUTS! COCONUT OIL AS A PATIENT-PREFERRED ALTERNATIVE TO COMMERCIAL ULTRASOUND GEL

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Purpose: To evaluate the quality of ultrasound images obtained with coconut oil compared with commercial ultrasound gel and to assess patient acceptability to determine whether coconut oil could be used as an alternative ultrasound coupling agent.

Methods: This was a randomized cross-over study in which forty pregnant patients had standard biometry images obtained with both coconut oil and commercial ultrasound gel during their growth or anatomy ultrasound. All images were then rated by two blinded Maternal-Fetal Medicine physicians on quality, resolution, and detail using a 0-100 scale. Our primary hypothesis is that image quality is equivalent between the two agents with equivalence limits of -10 and 10 on the 0 to 100 scale. Contrasts obtained from linear mixed models were used to estimate the differences in image parameters between the agents. Participant experience was evaluated with an acceptability survey which included five items measured on a five-point Likert scale.

Results: Image quality, as rated by physicians, was found to be equivalent between commercial ultrasound gel and coconut oil. Additionally, there was not a statistically significant difference in image resolution or detail between the two coupling agents. The overall patient experience was significantly higher for coconut oil when compared with commercial ultrasound gel (mean difference = -5.48, 95% CI= [-6.89, -4.06]).

Conclusion: Ultrasound images collected with coconut oil as the coupling agent are equivalent in quality to those collected using commercial ultrasound gel. Patients also preferred the use of coconut oil during their ultrasound, making its use a possible way to improve the patient ultrasound experience. Coconut oil has potential as an alternative coupling agent that could significantly increase access to ultrasound use in resource-limited settings.

47. VIRTUAL SCHOOLING DURING THE COVID PANDEMIC: THE EFFECT ON HIGH SCHOOL RETENTION FOR ADOLESCENT MOTHERS

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Background: Adolescent mothers have higher rates of maternal and infant morbidity. Education has a protective effect on maternal and infant health. Despite this, pregnant adolescents have lower rates of high school completion. Virtual schooling allows for flexibility and personalization of coursework that may benefit adolescent mothers and was offered ubiquitously to pregnant and parenting adolescents during the COVID pandemic. This study compares the high school retention rate in adolescent mothers in the year immediately before and after the COVID pandemic and to identify educational goals and experiences among adolescent mothers during the pandemic.

Methods: We conducted a retrospective mixed-methods cohort study of adolescent mothers who were between the ages of 14-19 years-old and enrolled in high school at the time of the delivery of their liveborn infant between March 1, 2019, and February 28, 2021, who delivered at a midwestern state-wide health system or county hospital in a medium-sized midwestern city. The control group consisted of those who delivered prior to March 1, 2020, as they participated in traditional in-person curriculum. The exposure group included those who delivered after March 1, 2020, as they experienced a shift to virtual curriculum along with their peers, because of the COVID pandemic. Participants were contacted via information in the electronic medical record between November 2021 and March 2022. They were able to complete the 15-minute survey over the phone with research personnel, or via text or email at their convenience. They were asked questions regarding high school retention rate, education experiences, academic plans and goals, perceived support, and functional status, were compared between those who delivered before and after the COVID pandemic. The survey incorporated the Family Affluence Scale and the Columbia Impairment Scale, as low socioeconomic status, behavioral issues, anxiety/depression, and low interest in school itself are risk factors for high school dropout outside of pregnancy and were seen as confounding variables. Participants received a $20 gift card for completion of the survey. Participants were excluded if they did not speak English or Spanish as a preferred language, chose the option of adoption, participated in non-traditional curriculum prior to the study period, were never enrolled in public or private education systems, graduated high school prior to pregnancy, or dropped out of high school prior to pregnancy. We defined retention as enrolling in subsequent grade along with peers in the year following delivery of the child. We defined traditional schooling as in-person education, while non-traditional was defined as online, hybrid, alternative, or home schooling.

Results: Statistical analysis included frequency and percent for categorical variables for each group. The Fishers' exact test was used to determine an association between rate of high school retention and curriculum type. A p-value of less than 0.05 was considered statistically significant. Of the 723 potential participants, 568 (75.8%) could not be reached via contact information in the EMR, 90 (12.4%) were excluded, and 31 (4.3%) agreed to participate. Eighteen adolescent mothers (2.5%) completed the survey, thirteen (72.2%) from the traditional curriculum group, and five (27.8%) from the virtual schooling group. Demographic characteristics were similar between groups, including number of children, age at time of first pregnancy, school grade during studied pregnancy, and family affluence. Regardless of group, most participants indicated some level of social impairment with decreased functioning either with peers, parents, or authority figures. Twelve (92.3%) of the participants in the control group and 1 (33.3%) participant in the exposure group remained enrolled in high school in the year following delivery (p=0.17). Overall, there was a 4.4% dropout rate among our participants and pregnancy negatively affected retention in 57.9% of participants. Reasons pregnancy affected ability to stay in school included physical illness or discomfort, negative interactions with peers, lack of school support, and financial responsibilities. 16% of our participants indicated an intention to enroll in some college or vocational training after high school, and two-thirds of those were already enrolled in a program. COVID affected retention in 31.6% of participants and 38.8% of participants reported the COVID pandemic changed their decision to return to attending school in-person. Only participant reported being asked about status in school by a healthcare provider during her prenatal care.

Conclusion: Our preliminary results show that the ubiquitous transition to virtual curriculum during the COVID pandemic did not significantly affect high school retention in

adolescent mothers in the year following the birth of their child, although our survey response rate was low. Pregnancy itself affects the ability for adolescent mothers to continue schooling. The COVID pandemic impacted academic decisions for adolescent mothers. Our data highlighted the limitations of studying the adolescent population retrospectively. More research is needed to determine the best model to maximize high school retention in adolescent mothers and address school retention during prenatal visits.

48. IMPACT OF PREVIOUS GYNECOLOGIC CARE AND GYNECOLOGY SERVICE CONSULTS ON ABNORMAL UTERINE BLEEDING FOLLOW-UP

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Purpose: This study aims to investigate whether patients who previously established gynecologic care at Loyola University Medical Center (LUMC) or who had a Gynecology Service consult in the ED were more likely to follow-up once discharged.

Methods: A retrospective chart review was conducted examining patients presenting to LUMC ED with abnormal uterine bleeding (AUB) from 2014-2016. Patients with vaginal bleeding that was determined to be associated with pregnancy, the postpartum period, non-uterine sources, or a previously established cancer diagnosis were excluded from the chart review. Variables including previously established gynecologic care at LUMC, Gynecology Service consult performed in the ED, and follow-up with an LUMC gynecologist within 6 weeks of the ED visit were recorded. Analysis of these variables was performed to examine any trends between interactions with Loyola gynecology and follow-up rates.

Results: A total of 452 unique LUMC ED patient visits for AUB were analyzed. Of these patients, 33.40% had previously established gynecologic care at LUMC, 20.35% received a Gynecology Service consult in the ED, and 31.86% followed-up with an LUMC gynecologist within 6 weeks of their ED visit.

Overall, 42.70% of patients had received previous care with Loyola Gynecology and/or received a Gynecology Service consult in the ED on the day of their visit. Of patients who had an encounter with LUMC Gynecology, either prior to or during their ED visit, 52.33% followed-up after discharge. Amongst patients with no previous LUMC Gynecology interaction, only 16.60% followed-up.

Conclusions: Patients who presented to LUMC ED with AUB were more likely to seek follow-up care if they had previously established gynecologic care and/or if they received a Gynecology Service consult in the ED. Gaining a greater understanding of the factors that influence whether a patient seeks follow-up care for AUB is crucial in improving healthcare continuity and patient outcomes.

49. ATYPICAL CERCLAGE INDICATION: A CASE REPORT AND REVIEW OF THE LITERATURE

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Purpose: To report a rare case of a prolapsing fibroid in pregnancy requiring surgical removal and placement of cervical cerclage.

Methods: Case report.

Results: Symptomatic leiomyomas in pregnancy resulting in clinical complications are uncommon. Furthermore, the prevalence of cervical leiomyomas in general is less than 1%. Patients may present in the first trimester of pregnancy with abdominal pain, vaginal bleeding, abdominal heaviness, urinary retention, or may be asymptomatic. We present a 28 year old G3P0112 female with an intrauterine pregnancy at 6 weeks 3 days gestation who endorsed heavy vaginal bleeding with symptomatic anemia. Speculum exam revealed a 4 cm prolapsing, lobulated, and pedunculated mass in the vaginal vault appearing to originate from the cervix. Ultrasound examination revealed a viable intrauterine pregnancy and the mass was characterized as 4.5 cm x 3.6 cm with hyperemia. Her hemoglobin was 7.8 g/dL. The decision was made to take her to surgery that day. A vaginal approach was used to surgically excise the mass. After excision, the cervix remained dilated and continued bleeding was noted from the endocervical canal. Thus, the decision was made to place a McDonald cerclage, despite atypical indication. Postoperatively, the patient had continued symptomatic anemia, prompting transfusion of two units of packed red blood cells after her hemoglobin resulted at 5.1 g/dL. She was discharged home in stable condition. Her hemoglobin on day of discharge was 9.5 g/dL. At outpatient follow-up, she remained asymptomatic with continued pregnancy. Pathologic examination determined the mass to be a benign uterine/cervical leiomyoma.

Conclusions: An English language PUBMED search for management of prolapsing cervical leiomyoma in pregnancy yielded only 10 case reports, none of which used placement of cerclage in the setting of cervical dilation. Complications

from surgical removal of leiomyomas during pregnancy include hemorrhage, rupture of amniotic membranes, preterm labor, and in some cases hysterectomy. If left untreated, large obstructing leiomyomas increase the risks of cesarean section, shoulder dystocia, malpresentation of fetus, and postpartum hemorrhage. Obstetricians are faced with a difficult decision and ultimately must weigh the risks versus benefits of treatment when a patient presents with a prolapsed cervical leiomyoma in the first trimester of pregnancy.

50. UTERINE DIDELPHYS WITH TRANSVERSE VAGINAL SEPTUM: A CASE REPORT AND REVIEW OF THE LITERATURE

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Purpose: To report a rare case of two co-existing Mullerian anomalies.

Methods: Case Report

Results: A 13-year-old G0 female presented with a one-day history of episodic, severe pelvic pain. Her menses had ended two days prior to her arrival to the hospital and was shorter than her usual five-day cycle and had heavier associated clotting. Menarche was four months prior. Past medical history was significant for a single left sided kidney and a family history of congenital kidney disease. Her mother reported that she herself had a uterine didelphys. Breasts and pubic hair were in Tanner stage 2 development. Her external anatomy was grossly normal. Internal exam was limited due to patient discomfort. An abdominal ultrasound showed a hypoechoic cystic structure with layering echogenic debris arising from the cervix. A provisional differential diagnosis of a Mullerian anomaly or a newly obstructed cribriform hymen was given. Therefore, a pelvic MRI was ordered, and an anesthetized pelvic exam was scheduled. MRI of the pelvis revealed uterine didelphys and dilated vagina with suspected cribriform versus imperforate hymen. Pelvic examination under anesthesia revealed a perforate hymen. Within the vaginal vault, a blue bulge with a thin yellow septum was noted. To the left, a small 0.5 cm opening was palpated without a cervix. A 1.5 cm incision was made into the fluid pocket and significant hematocolpos and suspected hematometra was drained. The tissue within the incision was vaginal epithelium by illumination, consistent with a transverse vaginal septum. A possible cervix was palpated through the incision. The final diagnosis for the patient was uterine didelphys with a partially obstructing transverse vaginal septum and an ipsilateral right pelvic kidney. Postoperatively, the patient reported resolution of abdominal pain and was discharged the following day. The patient was referred to pediatric adolescent gynecology at a tertiary care center for further evaluation and follow up. She was started on contraception to prevent recurrent hematocolpos and hematometra.

Conclusions: This case demonstrates many characteristic features of Mullerian anomalies including a history of a unilateral kidney, pelvic pain shortly after menarche, and a bulging mass on pelvic exam. However, the presence of regular menses for four months prior to presentation is unusual. A transverse uterine septum is considered one of the rarest anomalies of the female genital tract. On English language PUBMED search, there are only two other reported cases comprising of both uterine didelphys and a transverse vaginal septum. There are serious potential chronic complications resulting from obstructive Mullerian anomalies, including endometriosis, infertility, infection, spontaneous abortion, and premature birth. These possible long-term implications emphasize the importance of early and accurate diagnosis and management of these conditions.

51. SACRAL NEUROMODULATION IN A PATIENT WITH PSEUDOCHOLIN-ESTERASE DEFICIENCY

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Purpose: To bring attention to a genetic condition that could play a role in management of third line therapies for overactive bladder (OAB).

Case Report: We present a case of a 56-year-old patient with a history of refractory OAB who underwent a stage I sacral neuromodulation (SNM) procedure and was unable to elicit the appropriate S3 motor responses while sedated. Further review of medical history revealed patient was a pseudocholinesterase (PChE) deficiency carrier. The patient ultimately had the device removed due to suboptimal improvement in lower urinary tract symptoms.

Conclusion: This is the first case report of a PChE deficiency carrier who underwent SNM. A diagnosis of PchE deficiency or carrier status should be considered when unable to elicit sacral motor response during lead placement.

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