

**30th Annual
LSU School of Medicine
Department of Obstetrics & Gynecology**



**Resident and Fellow Research Day
Friday, May 18, 2018**

**Human Development Center
411 S. Prieur St, 1st Floor Auditorium
New Orleans, LA**

Keynote Speaker:

Amanda N. Fader M.D.
Director of the Kelly Gynecologic Oncology Service
Director, Center for Rare Gynecologic Cancers
Associate Professor of Gynecology and Obstetrics
Johns Hopkins University

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- 8:00-8:05am** **Welcome & Introduction of Guest Speaker**
Lisa Peacock, MD
Chairman, Department of Obstetrics and Gynecology
Louisiana State University Health Sciences Center
- 8:05-9:00am** **Disparities in U.S. Gynecologic Surgical Care: Defining Quality Measures and Minimizing Preventive Harm**
Amanda N. Fader, MD
Director of the Kelly Gynecologic Oncology Service
Director, Center for Rare Gynecologic Cancers
Associate Professor of Gynecology and Obstetrics
Johns Hopkins University
- 9:00-9:10am** **Break**
- 9:10-9:35am** **Self-Reported Antenatal Substance Abuse and Neonatal Outcomes**

Jessica Rosselot, MD, House Officer III
Advisor: Asha Heard, MD
Discussant: Jessica Patrick, MD
- 9:35-10:00am** **Decreasing the Rate of Insufficient Pap Smears Amongst OBGYN Residents in an Academic Training Environment**

Nia Thompson, MD, MPH, House Officer IV
Advisor: Stacey Holman, MD
Discussant: Karli Boggs, MD
- 10:00-10:25am** **Impact of Immediate Postpartum Long Acting Reversible Contraceptive Access on Short Interval Pregnancy Rates: A Retrospective Cohort Study**

Ophelia Langhorne, MD, House Officer III
Advisor: Valerie Williams, MD
Discussant: LaKedra Pam, MD

10:25-10:50am Postpartum Hypertension: Understanding Risk Factors
Lauren Knapp, MD, House Officer III
Advisor: Joseph Miller, MD
Discussant: Robert Maupin, MD

10:50-11:00am Break

11:00-11:25am Impact of Electronic Health Records on Resident Physicians' Off-Duty Time
Cynthia Grady, MD, House Officer III
Advisor: Florencia Polite, MD
Discussant: Cathy Lazarus, MD

11:25-11:50am Disparities in Performance of Lymph Node Dissection for Women with Early Stage Cervical Cancer in Louisiana
Anna Kuan, MD, House Officer II
Advisor: Amelia Jernigan, MD
Discussant: Ashley Hendrix, MD

11:50-12:15pm Health Literacy and Contraception Experiences in Postpartum Patients
Elise Boos, MD, House Officer IV
Advisor: Stacey Holman, MD
Discussant: Valerie Williams, MD

12:15-12:40pm Effect of Lidocaine Gel on Pain Perception During Diagnostic Flexible Cystoscopy in Women: A Randomized Control Trial
Erin Dougher, DO, FPMRS Fellow
Advisor: Lisa Peacock, MD
Discussant: Amelia Jernigan, MD

12:45-12:50pm Group Picture

12:50-1:30pm Lunch

1:30-2:30pm Poster Viewings and Presentations

2:30-3:00pm Award Presentations and Final Remarks



Amanda N. Fader, M.D.

**Director of the Kelly Gynecologic Oncology Service
Director, Center for Rare Gynecologic Cancers
Associate Professor of Gynecology and Obstetrics
Johns Hopkins University**

Dr. Amanda Nickles Fader is an associate professor in the Johns Hopkins Department of Gynecology and Obstetrics. She is the director of the Kelly Gynecologic Oncology Service and the director of the Center for Rare Gynecologic Cancers at The Johns Hopkins Hospital. She is the former director of the F.J. Montz Fellowship Program in Gynecologic Oncology. She has extensive training and expertise in radical oncology surgery, advanced laparoscopy and robotics, and is an internationally recognized surgeon who is invited often to teach surgical techniques to others worldwide. She has lectured and performed surgery in 15 countries and she has co-authored more than 150 publications in peer-reviewed medical journals. She is recognized as a leading expert in minimally invasive surgical innovations, quality and safety in gynecologic surgery, clinical trials, and rare gynecologic tumors. Dr. Fader serves on the editorial board of several journals, including Gynecologic Oncology and the Journal of Minimally Invasive Gynecology. She also serves on several national committees, including the National Comprehensive Cancer Network's Endometrial, Cervical and Vulvar Committee, the NRG/Gynecologic Oncology Group Rare Tumor Committee, the AAGL Board of Directors, and Vice Chair of the Quality and Outcomes Committee for the Society of Gynecologic Oncology.

Disparities in U.S. Gynecologic Surgical Care: Defining Quality Measures and Minimizing Preventive Harm

Learning Objectives:

- 1) To discuss socioeconomic, geographic, and provider-based disparities in gynecologic surgical care
- 2) To appraise existing quality and process measures in gynecologic surgery
- 3) To review the concept of preventive harm and institutional strategies to reduce perioperative adverse events

Self-Reported Antenatal Substance Use and Neonatal Outcomes

Jessica Rosselot MD, Andrew Suire MD, Shota Kamo MD, Sopan Mohnat MD, Alexandra Berra MD, Joe Hagan ScD, Asha Heard MD, Joseph Miller MD, Irene Stafford MD

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Background: Substance abuse in pregnancy is a concern due to the negative consequences of addiction and effects on the developing fetus. It has been linked to multiple adverse outcomes including poor fetal growth, placental abruption, preterm birth, neonatal intensive care unit (NICU) admission, anatomical abnormalities, fetal loss, and sudden infant death syndrome. Identification of women with substance use is challenging as women fear legal and social ramifications of disclosure. Our goal was to examine the relationship between antenatal self-reported substance use and neonatal outcomes.

Methods: After Institutional Review Board approval, a retrospective cohort study was performed at Touro Infirmary in New Orleans, Louisiana from January 1, 2012 to December 31, 2015. Neonates with a positive meconium test, positive urine toxicology, and/or known maternal exposure to opiates, amphetamines, marijuana, benzodiazepines, barbiturates and cocaine were identified using ICD 9 and 10 diagnosis codes during that time. Records were reviewed for neonatal outcomes including gestational age, birth weight, APGAR scores, NICU admission, and neonatal death. Maternal charts were reviewed to assess maternal reporting of antenatal drug use. Statistical analysis was performed using Fisher's exact test and Wilcoxon rank sum test with a p value of <0.05 set for significance.

Results: During the study period, 168 newborns were identified as having prenatal exposure to one of the above listed substances. For mothers who self-reported drug use vs those who did not, there was no significant difference in gestational age at delivery (262 ± 22 days vs 249 ± 47 days, $p = 0.158$), in 1 minute APGAR score (8.2 ± 1.5 vs 7.7 ± 1.9 , $p = 0.096$), or neonatal birthweight (2728 ± 877 g vs 2423 ± 845 g, $p = 0.101$). However, newborns of mothers who did not disclose drug use were more likely to be admitted to the NICU ($17/39 = 44\%$) compared to mothers who admitted use ($30/128 = 23\%$, $p = 0.017$). In addition, the 5 minute APGAR score was higher in women who disclosed antenatal use (8.8 ± 0.7) versus those who did not (8.6 ± 0.9 , $p = 0.032$). In neonates admitted to the NICU, there was an increased likelihood of positive biological testing for cocaine ($9/17 = 53\%$) and opiates ($10/21 = 48\%$) with p values of 0.02 and 0.04, respectively.

Conclusion: In mothers who did not disclose antenatal drug use, there was a statistically significant difference in 5 minute APGAR scores as well as an increase in likelihood of admission to the NICU compared to mothers whom did disclose drug use. Infants admitted to the NICU were more likely to have been exposed to cocaine and opiates. These findings may aid in patient counseling concerning illicit and non-illicit substance use in the antepartum and intrapartum period. Providers should encourage full disclosure from patients to help identify the at-risk fetus.

Decreasing the Rate of Insufficient Pap Smears Amongst OBGYN Residents in an Academic Training Environment

**Nia Thompson MD, MPH, Eliza Rodrigue MD, Markeiya Polite MD, MPH,
Stacey Holman MD**

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Objective: Pap smears are considered to be the primary cervical cancer screening tool. On average, 2% of pap smears collected are insufficient/unsatisfactory, leading to missed diagnoses, increased healthcare burden, and patient inconvenience. Blood cells, vaginal atrophy, inflammation, proteinaceous material, neoplasia, and provider error are the most common reasons for insufficient samples. In the resident teaching clinic, a 4-fold increased rate of unsatisfactory results prompted a further investigation. The primary objective of this study was to quantify the percentage of insufficient pap smears over one year and identify the most common reasons for insufficient test results. Secondary objectives were to assess pap smear knowledge and retention amongst residents and to develop a multi-disciplinary approach to decrease the rates of insufficient results.

Methods: Pap smear data collected from the University Medical Center-New Orleans resident clinic from June 2016 to June 2017 were reviewed by the Cytopathology department. Insufficient specimens were identified and further stratified by provider post graduate year who collected the specimen. In January 2018 an anonymous 10 question pre-test assessing resident knowledge was administered. After the pre-test, residents were given a 30-minute didactic session by HOLOGIC™ and the Cytopathology department. Three months later the same 10 question test was administered to assess retention.

Results: 1,410 pap smears were reviewed with a 7.4% (n=104) unsatisfactory rate. Scant cellularity (37%), a combination of factors (32%) and blood (19%) were the leading causes of insufficiency. Less common causes (<10%) were inflammation, atrophy, lubricant, and thick preparation. PGY 1 and PGY 4 residents accounted for 39.4% and 27.9% of insufficient pap smears respectively. PGY 2 and PGY 3 accounted for 26% and 6.7% of insufficient pap smears. A total of 21 residents took the pre and post-test. Data analysis for the pre-test shows a 55.59% average score and an average score of 65.08% on the 3-month post-test. The average difference in the post test score was 9.13% (p <0.05).

Conclusions: Regardless of year of training, all resident physicians can benefit from education. Post test scores increased after our educational intervention. Future initiatives include education for off-service physicians and medical students. Annual educational initiatives with the Cytopathology department will be utilized to optimize specimen collection. This multidisciplinary approach will enhance the quality of care in our Women's Health clinic. Our future goal include re-assessment of the pap smear insufficiency rate again 1 year post intervention.

The Impact of Immediate Postpartum Long Acting Reversible Contraceptive Access on Short Interval Pregnancy Rates: A Retrospective Cohort Study

Ophelia Langhorne MD, Rose DePaula, Valerie Williams MD

Department of Obstetrics and Gynecology,
Louisiana State University Health Sciences Center – New Orleans

Objective: Short interval pregnancy (SIP), defined as a pregnancy conceived within 18 months of a prior pregnancy outcome, is associated with adverse maternal and child outcomes. Immediate initiation of long acting reversible contraception (LARC) in the postpartum period has the potential to lower the SIP rate. Our objective was to compare the SIP rate of patients before and after the implementation of LARCs in the immediate postpartum period at one academic hospital.

Methods: This retrospective cohort study examined multigravida women presenting to labor and delivery from December 2015-May 2016 at Touro Infirmary Hospital. We compared the SIP rate in our postpartum population in May 2014 preceding implementation of the immediate postpartum LARC program to those who represented a SIP or who went on to experience one within the next 18 months. We compared these rates using a Fisher's exact test. A p -value of <0.5 was considered statistically significant.

Results: 62 pre-intervention and 437 post-intervention patients were included in the study. The pre-intervention SIP rate was 17.7% (11/62). The post intervention rate was 18.1% (79/437). The relative risk of SIP in patients after implementation of postpartum LARC was 1.02 (95% CI 0.58 to 1.81). This was not statistically significant ($p=1.00$).

Conclusion: We did not demonstrate a significant decrease in the rate of short interval pregnancies following implementation of a program that increases access to long acting reversible contraceptive (LARC) methods. However we did not have sufficient power to detect a difference as we did not meet our intended sample size. Nevertheless, the maternal and fetal health risks that short interval pregnancies present necessitate pursuit of interventions and alternatives that will successfully increase the time between pregnancies. Our findings highlight the role for a multifactorial approach toward reducing short interval pregnancies, of which increasing access to immediate postpartum LARC methods is only one component.

Postpartum Pre-Eclampsia: Understanding Risk Factors

**Lauren Knapp MD, Megan Savage MD, Joseph Hagan ScD, Asha Heard MD,
Joseph Miller MD**

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Louisiana State University Health Sciences Center – New Orleans

Objective: Pre-eclampsia affects up to 10% of pregnancies beyond 20 weeks. Presence of any severe features, indicative of end-organ involvement and increased likelihood of eclamptic seizures, prompts treatment with magnesium sulfate for seizure prophylaxis, with delivery of the fetus and placenta understood to be the cure. However, pre-eclampsia can present weeks following delivery, and the risks factors for development of postpartum pre-eclampsia are poorly understood. Our study aims to determine if there are any identifiable demographic or medical differences between patients with pre-eclampsia who are diagnosed antepartum or intrapartum vs. those diagnosed and readmitted postpartum.

Methods: A case control study was performed on all patients who were readmitted in the postpartum period for administration of magnesium sulfate for pre-eclampsia from July 1, 2011 – December 31, 2016. These cases were matched with two control patients who were treated with magnesium sulfate for pre-eclampsia with severe features during their admission for delivery. Variables collected included age, race, parity, gestational age at delivery, singleton vs. multiple gestation, BMI, weight gain in pregnancy, history of pre-eclampsia, pre-existing hypertensive disorders, other medical comorbidities, fetal growth restriction, tobacco use, and mode of delivery. Odds ratios (OR) were calculated for each of these variables, with a p -value of <0.05 considered statistically significant.

Results: During the study period, there were 32 cases of postpartum readmission for pre-eclampsia with severe features. Among these cases, delivery was less likely to have occurred at <34 weeks gestational age (OR 0.21, $p=0.0229$), and more likely to have occurred at 39 weeks or later (OR 5.44, $p=0.0003$) compared to the control group. Maternal age, race, parity, singleton or multiple gestation, obesity, weight gain, history of pre-eclampsia, pre-existing hypertension, maternal diabetes, fetal growth restriction, tobacco use, and mode of delivery were not associated with any difference in the timing of development of pre-eclampsia with severe features.

Conclusion: Patients who develop pre-eclampsia in the postpartum period are more likely to have had a full-term delivery, compared to women with antepartum or intrapartum disease who are more likely to have delivered preterm. Otherwise, no differences in patient demographics or medical comorbidities were detected. Thus, women identified as being at high for pre-eclampsia who do not develop the disease prior to delivery remain at increased risk postpartum, highlighting the importance of patient counseling and continued blood pressure monitoring despite having already been “cured” with delivery.

Impact of Electronic Health Records on Resident Physicians' Off-Duty Time

**Cynthia D. Grady MD, Sion Ward, Krystal Lockhart, Joseph Hagan ScD,
Florescia G. Polite MD**

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Louisiana State University Health Sciences Center – New Orleans

Objective: Several studies have shown that electronic health records (EHRs) have greatly impacted the amount of time allocated to documentation of patient care. Despite the reform of duty hour restrictions, residents devote a large amount of time to clinical documentation, care coordination and patient-centered administrative tasks, often outside of traditional work hours. Little research has been done to investigate the extent to which residents access EHRs remotely while off-duty to complete daily clinical activities. The purpose of this study is to evaluate off-duty EHR use among residents in residency training programs at the Louisiana State University Health Science Center (LSUHSC), a large multispecialty sponsoring institution.

Methods: The authors created a voluntary survey which was administered to LSUHSC interns and residents to subjectively evaluate EHR use in their various settings while on and off duty. Spearman's correlation analysis was used to assess associations between ordinal variables. The Wilcoxon rank sum test was used to compare male versus female residents' feelings about accessing electronic health records outside of work hours and time outside of work spent accessing electronic health records, while the Kruskal-Wallis test was used to make these comparisons among the top 4 most frequent specialties and all "other" specialties combined.

Results: A total of 200 residents completed the survey, yielding a 30% response rate. Most residents on their inpatient rotation (60%) reported working 61-80 hours per week and accessed EHR outside of work less than 5 hours per week (49%). For outpatient rotations, 41-60 hours per week was most common (47%) and the majority (71%) accessed the EHR outside of work less than 5 hours per week. The most commonly stated reason for accessing EHR while off-duty was to follow up results (83% of residents). Fifty-five percent of residents either disagreed or strongly disagreed that restrictions should be placed on the amount of time spent accessing electronic health records outside of work hours. When asked if time spent accessing electronic health records outside of work should be included in duty hours, most residents (53%) agreed (34% agreed and 19% strongly agreed). Finally, among the top 4 most frequent specialties and all "other" specialties combined there were significant differences ($p=0.027$) in the extent of agreement about whether "having to access electronic health records in your off-duty time negatively impacts your quality of life," with Ob/Gyn residents having the highest agreement.

Conclusion: A large proportion of residents perceive that having off-duty access to EHR negatively impacts their quality of life, with the extent of the impact varying significantly across specialties. Most residents believe time spent accessing electronic health records outside of work should be included when logging their work hours. Further understanding of the specific reasons why residents may view EHR access afterhours as a factor that negatively impacts quality of life and their educational/wellness implications is essential.

Disparities in Performance of Lymph Node Dissection for Women with Early Stage Cervical Cancer in Louisiana

**Anna Kuan-Celarier MD, Eliza Rodrigue MD, Yong Yi PhD, Lauren Maniscalco MPH,
Xiao-Cheng Wu MD, Amelia Jernigan, MD**

Department of Obstetrics and Gynecology,
Louisiana State University Health Sciences Center – New Orleans

Objectives: Racial and socioeconomic disparities in the delivery of cervical cancer (CC) care have been well established. Current guidelines recommend lymph node dissection (LND) as part of the primary surgical treatment of stage IA to IB CC, with the exception of IA1 without LVI (lymphovascular invasion). LND is also a consideration when imaging prior to radiation reveals bulky lymphadenopathy. The goal of this study was to evaluate whether age, race or socioeconomic status was associated with disparities in the performance of LND for women with Stage IA and IB CC in Louisiana.

Methods: 399 women diagnosed with stage IA and IB CC between 2010-2014 from the Louisiana Tumor Registry were analyzed by patient age at diagnosis, race, and insurance status and whether the patient had sentinel or retroperitoneal lymphadenectomy performed as part of the primary treatment of CC. Univariate analysis was performed.

Results: Of the 189 women with IA CC, 47 (24.9%) had a LND. Age, race and insurance status were not significantly associated with undergoing LND. Of the 210 women with stage IB CC, 128 (61%) had a LND. Age was not significantly associated with LND in this group. White women (WW) were more likely than black women (BW) to undergo LND (64.9% vs. 50%, $p=0.04$). Those who had private insurance (PI) were more likely to undergo LND than those with Medicaid (M) or the uninsured (UI) (66.9% PI vs. 53% M & UI, $p = 0.04$). When the Stage IA and IB CC groups were combined, WW were more likely to have a LND than BW (47.2% vs. 35.5%, $p = 0.04$). For Stage IA and IB CC, 48.3% of women with PI had a LND compared to 32.3% of those with Medicaid or who were uninsured ($p = 0.05$).

Conclusion: White and privately insured women with stage IA-IB CC are more likely to undergo a lymph node dissection as part of their initial cervical cancer treatment than black women or women who are either uninsured or have Medicaid. The reasons for these disparities are complex and beyond the scope of this analysis. However, further exploration of these patterns and the reasons for them is warranted to understand and correct any bias in care offered that might result in disparate outcomes.

Health Literacy and Contraception Experiences in Postpartum Patients

Elise Boos MD, Sarah Campbell, Joseph Hagan ScD, Stacey Holman MD

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Louisiana State University Health Sciences Center – New Orleans

Objective: It has been estimated that approximately 36% of American adults have limited health literacy- the capacity to obtain, process, and understand the basic health information needed to make appropriate health decisions. Minority women and those with low socioeconomic status have increased incidence of low health literacy and experience increased numbers of adverse family planning outcomes. This study aims to quantify the level of health literacy of post-partum patients in urban New Orleans and assess the impact of low literacy on contraception counseling, knowledge, and use.

Methods: A survey of 22 English-speaking patients (age 18 years or older) with prenatal care at LSU resident clinics was administered at Touro Infirmary. Health literacy was assessed via the Rapid Estimate of Adult Literacy in Medicine Short Form (REALM-7) and the Newest Vital Sign (NVS), a tool which also assessed numeracy skills. Contraceptive, sexual, pregnancy, and partner history was elicited with a verbal survey. Included in the survey were questions about antenatal contraceptive counseling and future contraceptive plans. Demographics were also collected. Spearman's correlation analysis and logistic regression were used to compare the association between the two health literacy tools. Fischer's exact test assessed the association between limited literacy and perceptions of contraceptive counseling and future contraception plans. Wilcoxon rank test was employed to compare the literacy levels of those who did, and did not, plan to utilize a long acting reversible contraceptive (LARC).

Results: The NVS tool predicted that 54.55% of participants had a possibility or high likelihood of limited health literacy. Increasing scores on the REALM-7 were associated with significantly higher NVS scores and the two tests were significantly correlated ($p=0.004$). The overall accuracy of the REALM-7 at identifying women as having the possibility or high likelihood of limited literacy (per NVS) was 73%. Women with the possibility or high likelihood of limited literacy were not statistically more likely to report feeling inadequately counseled on contraception options ($p=0.481$), recalling words or phrases being used they did not know ($p=0.587$) or feeling pressured to choose contraception or a particular method ($p=1.000$). However, 22% of the participants who chose LARCs could not correctly identify the method's longevity. Of those who elected for post-partum contraception, 18% incorrectly identified the method as able to prevent STI's. All of these women had a possibility or high likelihood of limited literacy, but the small sample size limited the ability to find significance ($p=0.096$). Finally, 56.25% of women choosing non-permanent post-partum contraception choose a LARC. Health literacy scores were not significantly different for those who did or did not choose to use a LARC ($p= 0.298$).

Conclusion: The REALM-7, is a suitable alternative to the NVS in assessment of health literacy in post-partum patients. There is a higher than average incidence of the possibility or high likelihood of limited literacy in this population of postpartum patients. Although limited by sample size, the possibility of limited literacy was not significantly associated with patients feeling inadequately counseled on contraceptive options or pressured to choose a particular method of contraception. There was a high incidence of misinformation regarding method longevity and protection against STDs. These findings highlight the importance of provider training on how to best teach and counsel low literacy patients on topics of family planning in an unbiased manner.

The Effect of Lidocaine Gel on Pain Perception During Diagnostic Flexible Cystoscopy in Women: A Randomized Control Trial

Erin Dougher DO, Dani Zoorob, Diane Thomas MD, Lisa Peacock MD

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Louisiana State University Health Sciences Center – New Orleans

Objective: The use of lidocaine gel for pain reduction during diagnostic flexible cystoscopy in women has little evidence to dictate its use. The choice of either plain lubricant or anesthetic gel is currently based on surgeon preference. The objective of this study was to determine if there is a clinically meaningful variation in pain perception when using lidocaine gel versus plain lubricant prior to office-based diagnostic flexible cystoscopy.

Methods: This study is a randomized, controlled, double blinded trial comparing lidocaine gel and water-based lubricant for the performance of diagnostic flexible cystoscopy. Women scheduled to undergo diagnostic flexible cystoscopy were randomized to either transurethral infusion of 2% lidocaine (Uro-Jet) or water-based lubricant prior to cystoscopy. Participants and physicians were blinded and pain was assessed using the 11-Point Numeric Rating Scale (NRS) after completion of cystoscopy. Apriori sample size calculation indicated the need for 40 patients per group to achieve 90% power. Descriptive statistics and the Student-t test were utilized.

Results: The study included a total of 116 patients of which 61 were in the lidocaine group and 55 within the plain lubricant group. The mean procedural NRS in the lidocaine group (2.43, SD 1.95) was significantly lower ($p=0.01$) than the plain lubricant group (3.58, SD 2.73). After controlling for age and ethnicity, separately as well as together, the procedural NRS scores were 1.37 points ($p=0.002$), 0.97 points ($p=0.04$), and 1.22 points ($p=0.01$) lower for those who received lidocaine. Post-procedure, fewer patients in the lidocaine group (2/61=3.3%) requested pain medicine when compared to the plain lubricant group (11/55=20%) ($p=0.01$). Although anticipated pain scored similarly between groups, actual pain compared to anticipated pain was significantly lower in the lidocaine group ($p=0.02$).

Conclusions: Pain perception during diagnostic flexible cystoscopy is decreased when 2% trans-urethral lidocaine gel is used as opposed to plain lubricant. The use of 2% lidocaine gel is indicated for the control of pain at the time of diagnostic flexible cystoscopy in women.

Poster Presentations

Samantha Bland MD, House Officer IV, LSUHSC Baton Rouge

Endometrial Hyperplasia Risk Factor Stratification on Endometrial Biopsy Recipients
Samantha Bland MD, Sarah Buzhardt MD

Megan Borens MD, House Officer IV, LSUHSC Baton Rouge

The Association between Intrauterine Pressure Catheters and Chorioamnionitis in Obese Women
Megan Borens MD, LaKedra Pam MD

Bobby Garcia MD, FPMRS Fellow, LSUHSC New Orleans

More than a Checkbox: Keeping the Healthcare Team Informed of the Informed Consent of a Jehovah's Witness Patient-A Quality Improvement Project
Bobby Garcia MD, Jessica Rosselot MD, Mandy F O'Leary MD, Barry Hallner MD

Jahan Jadauji MD, House Officer II, LSUHSC New Orleans

Efficacy of the Levonorgestrel Intra-Uterine Device (IUD) in the Treatment of Endometrial Hyperplasia and Adenocarcinoma
Jahan Jadauji MD, Nia Thompson MD, MPH, Aubrey Schacter, Amelia Jernigan MD, Holly Provost MD

Sheena Kaiser MD, House Officer III, LSUHSC Baton Rouge

Discontinuation Rate of Intrauterine Devices and Reasons for Early Removal
Sheena Kaiser MD, Sarah Buzhardt MD

Jamaan Kenner, House Officer II, LSUHSC New Orleans

Which Factors Influence Cerclage Efficacy?
Jamaan Kenner MD, Candice Schwartzenburg, Ann Chau MD

Anna Kuan-Celarier MD, House Officer II, LSUHSC New Orleans

Is Baseline CD4 Count Associated with Progression, Persistence, or Regression of Cervical Dysplasia in Women with HIV?
Anna Kuan-Celarier MD, Dreda Romig, Ashley Reeves, Griffin Farrish, Amelia Jernigan MD

Julie Lagarde MD, House Officer IV, LSUHSC Baton Rouge

Prenatal Intent to Breastfeed Compared to Breastfeeding at Hospital Discharge
Julie Lagarde MD, LaKedra Pam MD, F. A. Moore MD

Kate Neuhoff MD, House Officer II, LSUHSC New Orleans

Can Four-Dimensional Transabdominal Ultrasound Replace Two-Dimensional Transvaginal Ultrasound in the Detection of Shortened Cervices in Pregnant Women at High-Risk for Preterm Births?
B. Kate Neuhoff MD, Ann C. Chau MD, Joseph L. Hagan ScD, Joseph Miller MD

Stephen Padgett MD, House Officer II, LSUHSC Baton Rouge

Survival Rates of Neonates Following Previabie PPRM at Less Than 24 WGA
Stephen Padgett MD, Felicia LeMoine MD, F.A. Moore MD

Samantha Prats, House Officer II, LSUHSC New Orleans

Comparison of IUGR Fetuses to Fetuses with Only an Abdominal Circumference <10th Percentile

Samantha Prats MD, Ann Chau MD

Valerie Valero MD, House Officer II, LSUHSC New Orleans

Impact of Resident Led Didactics on OBGYN Clerkship Shelf Scores and Student Satisfaction

Valerie Valero MD, Kathy Cantrell, La'Nasha Tanner MD



Endometrial Hyperplasia Risk Factor Stratification on Endometrial Biopsy Recipients

Samantha Bland, M.D., Sarah Buzhardt, M.D.
LSUHSC-BR

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Gynecology*

Background

The American College of Obstetrics and Gynecology defines endometrial hyperplasia as “an excessive proliferation of the cells of the endometrium that may progress to or co-exist with endometrial cancer” [2]. Previously, endometrial hyperplasia was characterized based on histologic findings as simple hyperplasia, complex hyperplasia, simple hyperplasia with atypia, and complex hyperplasia with atypia [2]. The American College of Obstetrics and Gynecology and the Society of Gynecologic Oncology have recently redefined these categories as benign endometrial hyperplasia, encompassing simple and complex hyperplasia without atypia, endometrial intraepithelial neoplasia, encompassing simple and complex hyperplasia with atypia, and endometrial cancer [2]. Risk factors for endometrial hyperplasia include age, nulliparity, obesity, diabetes, older age at menopause, and younger age at menarche [1]. Detection of endometrial hyperplasia can reduce the risk of progression to cancer [2]. Current guidelines recommend endometrial sampling in woman forty-five years of age or older with abnormal uterine bleeding or in women less than forty-five years old with persistent abnormal uterine bleeding, abnormal uterine bleeding that has failed medical management, or a history of unopposed estrogen exposure, such as obesity or polycystic ovary syndrome [3]. Previous studies have shown that body mass index is a significant risk factor for endometrial hyperplasia or cancer in premenopausal women and should weigh heavily in the decision to perform endometrial sampling [4,5].

Research Question

Are endometrial biopsies in our clinic being performed without the presence of adequate risk factors based on current recommendations?

Materials and Methods

We will identify endometrial hyperplasia risk factors on all endometrial biopsy recipients in our clinic to determine if the current recommendations are applicable to our patient population. We plan to perform a retrospective chart review to identify all endometrial biopsy recipients from our clinic biopsy log, then assess and stratify their risk factors from the electronic medical record.

Expected Results

We expect to find that we follow the current recommendations and obesity as the most common risk factor biopsy under age forty-five.

	Adjusted odds ratios (95% confidence intervals)	Sensitivity analysis (including endometrial thickness)
BMI 25–29.9 kg/m ²	1.20 (0.31–4.62)	0.69 (0.11–4.41)
BMI ≥30 kg/m ²	4.00 (1.36–11.74)	4.19 (1.13–15.48)
Anemia	2.23 (1.14–4.35)	2.16 (0.91–5.12)
Nulliparity	3.08 (1.43–6.64)	4.95 (1.89–12.92)
Endometrial thickness ≥12 mm		4.20 (1.58–11.15)
Age as cubic form	χ^2 (df = 3) = 5.88, P = .12	χ^2 (df = 3) = 6.30, P = .10
Area under curve	75.5%	84.0%

Wise MR, Gill p, Lensen S, et al. Body mass index trumps age in decision for endometrial biopsy: cohort study of symptomatic premenopausal women. Am J Obstet Gynecol 2016.

References

1. American College of Obstetrics and Gynecology Practice Bulletin 149
2. American College of Obstetrics and Gynecology Committee Opinion 631
3. American College of Obstetrics and Gynecology Practice Bulletin 128
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Background

Chorioamnionitis is the inflammation of fetal membranes caused by an ascending polymicrobial infection. It affects as many as 10% of laboring women. It is a clinical diagnosis that is made using specific criteria after the exclusion of other sources of infection. Maternal complications associated with chorioamnionitis are increased risk of endomyometritis, wound infection, pelvic abscess, postpartum hemorrhage and cesarean delivery. Rare but serious maternal complications include septic shock, disseminated intravascular coagulation, adult respiratory distress syndrome and death. Neonates are at increased risk of sepsis, pneumonia, respiratory distress and death [1,6,7].

Intrapartum internal monitoring with an intrauterine pressure catheter (IUPC) is used with labor dystocia to determine adequate intensity of contractions and monitor augmentation of labor. IUPCs are also placed used for amnioinfusion and when external monitoring is difficult. At some institutions, IUPCs are routinely placed after rupture of membranes[3]. Past studies have evaluated IUPC placement and chorioamnionitis and shown no significant increased risk of infection. However, body mass index (BMI) was either not studied or did not include overweight and obese patients. The BMIs that were studied were <25, so these results are not applicable in our local population which has a high prevalence of obese patients [1,4,5]. Obesity is generally associated with other comorbidities that could result in poorer outcomes with the addition of an infection such as poor wound healing, sepsis and death. As the prevalence of obesity in the general US population increases, external intrapartum monitoring may no longer be useful making internal monitoring inevitable. Increased risk of infection associated with internal monitoring could lead to increased morbidity and mortality in obese women.

This purpose of this study is to determine if there is increased risk of chorioamnionitis associated with the use of IUPCs in patients with obesity.

Hypothesis

The use of an intrauterine pressure catheter during labor increases the risk of chorioamnionitis in obese women compared to obese women without an intrauterine pressure catheter.

Methods

❖ Retrospective Cohort

❖ Inclusion criteria:

- o Woman's Hospital July 2012-June 2017
- o BMI ≥ 30 (with IUPC placed during labor and without IUPC)
- o Singleton, low risk pregnancy
- o Diagnosed with chorioamnionitis intrapartum

❖ Data collected from Meditech (Woman's Hospital Electronic Medical Records)

❖ Analysis of data with respect to multiple variables: maternal age, gestational age, race, length of ruptured membranes, number of attempts for IUPC placement, length of labor

Expected Results/Goals

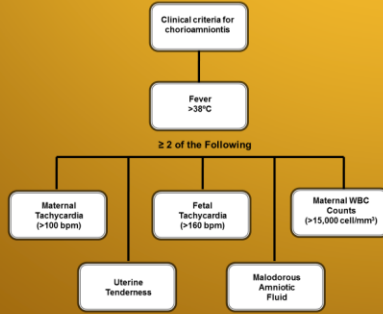
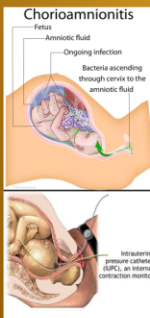
❖ Determine the association between chorioamnionitis and IUPC use in laboring obese women

❖ Findings will be applicable to our patient population and likely the general US population as the rate of obesity increases

❖ Make recommendations for future use of IUPCs in this population

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More than a Checkbox: Keeping the Healthcare Team Informed of the Informed Consent of a Jehovah's Witness Patient – A Quality Improvement Project

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Background/Objective

While most physicians are aware that it is against a Jehovah's Witness (JW) belief to accept blood transfusions, many practitioners find the provision of informed consent to be challenging at best if not confusing. Much of this ambiguity stems from the religion's shifting viewpoints on acceptable transfusion products coupled with a gamut of creative blood conserving products and options that individual patients may or may not consent to based on their personal beliefs.

Based on these Challenges we aim to:
 1) Improve Physician knowledge of the transfusion policy mandated by the religious beliefs of JWs
 2) Improve the quality of informed consent discussion when counseling a patient who is a JW
 3) Improve medical record documentation and thereby transitions in care of the explicit desires of a JW patient.

Hypothesis

Didactic education coupled with incorporation of an EMR Dot Phrase will improve physician comfort and confidence in providing informed consent to JW patients.

Material and Methods

A RedCap questionnaire was sent to the OB/GYN Department to assess physician understanding of transfusion options available to JW patients determine their level of comfort in thoroughly discussing options during informed consent.

A Department Grand Rounds Lecture was then given to discuss the various modalities of transfusion and blood conservation methods available to a JW
 An electronic dot phrase was created to cover the various transfusion options available to JW patients

At the end of the study period (3 months) the department completed a questionnaire gauging their comfort and level of confidence in providing a informed consent for a JW

QI Flow Chart

Aim:
 Improve OB/GYN Department knowledge and comfort with transfusion preferences of JW patients

Measures:
 Questionnaire Assessing Baseline Comfort
 Questionnaire Assessing Comfort After Intervention

Changes:
 Grand Rounds on Transfusion Medicine
 Incorporation of EMR Dot Phrase for JW patients



Tables/Graphs

	I accept				I accept		
	YES	NO	Not Discussed		YES	NO	Not Discussed
Red Blood Cells				Acute Normovolemic Hemodilution			
Platelets				Ultra-Cel Salvage			
Fresh Frozen Plasma				Fluid up Cell Salvage			
Cryoprecipitate				Fibrin glue and sealant (Tisseel)			
Albumin				Fibrin glue and sealant (not Tisseel)			
Recombinant clotting factors (FVIIa)				Other treatment (Specify)			
Prothrombin Complex Concentrate (PCC)							
Fibrinogen concentrate							
If required to save my life:							
Red Cells:				YES/NO			
Platelets:				YES/NO			
Fresh Frozen Plasma (FFP):				YES/NO			

Expected Results/Prelim Data

The OBGYN Department has completed the preintervention questionnaire and has The transfusion preferences of JW patients can vary dramatically. In order to provide the best care for these patients it is necessary to discuss the full spectrum of possible interventions in the event of catastrophic hemorrhage.

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Efficacy of the Levonorgestrel Intra-Uterine Device (IUD) in the treatment of Endometrial Hyperplasia and Adenocarcinoma

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Background

- Endometrial cancer is the 3rd leading cause of cancer related mortality in women
- Approximately 61,000 new cases of endometrial cancer will be diagnosed in 2017 and nearly 11,000 deaths
- Endometrial hyperplasia or intraepithelial neoplasia (EIN) is a precursor to endometrial cancer
- 40% of cases of EIN or atypical hyperplasia progress to malignancy
- Leading risk factors: hypertension, obesity, and diabetes
- Hyperplasia occurs as a result of unopposed estrogen
- Oral progesterone and surgical management are the mainstays of treatment for endometrial hyperplasia and adenocarcinoma

Objective

- Women with multiple comorbidities and/or morbid obesity are poor surgical candidates
- 52mg levonorgestrel intrauterine device (IUD) has been used for treatment in poor surgical candidates
- The objective of the study is to examine the efficacy of the levonorgestrel IUD for the treatment of endometrial hyperplasia and malignancy

Hypothesis

- The levonorgestrel IUD is efficacious in the treatment of endometrial hyperplasia and malignancy.

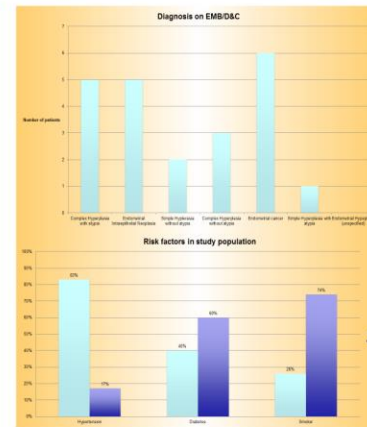
Materials and Methods

- IRB Approval was obtained
- Retrospective chart review from 3/1/2014 to 12/1/2017 at University Hospital and Clinics in Lafayette, LA
- Subjects: Women diagnosed with endometrial hyperplasia with or without atypia, endometrial intraepithelial neoplasia, or endometrial malignancy in which a 52mg levonorgestrel IUD was placed after diagnosis.
- Data Collection: pathologic diagnosis, endorsement of AUB, PMB, endometrial stripe on ultrasound
- Outcomes: Follow up after IUD placement
 - resolution of bleeding vs same or worse, repeat endometrial sampling, ultrasound evaluation of endometrial stripe at each interval
- Demographics: BMI, Age, Parity, Ethnicity, Smoking Status, Age at menopause, and diagnosis of hypertension or diabetes

Preliminary Data

- Of charts reviewed so far, 22 patients with included diagnoses and an IUD placed were noted
- 5/22 (23%) had biopsy proven improvement/resolution
- 4/22 (18%) had resolution by symptomatic observation
- 5/22 (23%) were lost to follow up
- 4/22 (18%) had either worse pathology or no change/worse symptomatology
- 83% were hypertensive
- 40% were diabetic
- 26% were smokers
- Mean BMI at diagnosis was 48.46
- Mean age at diagnosis was 53.1 years

Tables/Graphs



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Discontinuation Rate of Intrauterine Devices and Reasons for Early Removal

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Background/Objective

Historically, nearly one half of all pregnancies that occurred in the United States were unintended (1). Studies have shown that unintended births are associated with adverse social, economic and overall health outcomes for both the mother and the child (3). The unintended pregnancy rates were found to be highest among teenagers, African American women and women with less education or low income (11). Of unintended pregnancies, over half were using some form of contraception. Of the women who became pregnant while using contraception, nine out of ten were due to user failure. This data suggest that there is a need for increased access to and more consistent use of highly effective contraceptive methods (10).

Long acting reversible contraceptive methods (LARC), including intrauterine devices (IUDs) and etonogestrel single-rod implant are currently the most effective form of reversible contraceptive methods available. Rate of LARC use has increased significantly from 2.4% in 2002 to 11.6% in 2012 according to the National Survey of Family Growth (1). A significant decrease in unintended pregnancy rates occurred in the United States from 51% in 2006 to 45% in 2011, which is believed to be in part due to increased use in LARC methods (2,5,8).

The Contraceptive CHOICE project, a prospective cohort study of close to 10,000 women, found that nearly 75% of women chose LARC as their contraceptive after proper counseling and elimination of cost barriers (6,9). Aoun et al studied discontinuation rates of IUDs in a multicenter retrospective chart review of over 2500 women aged 13-35. Their data revealed a 41% discontinuation rate at 37 months and that teenagers ages 13-19 were more likely to request early removal (7). Pelvic cramping, irregular bleeding patterns are among the most common reported reasons for early removal.

The objective of this study is to determine the discontinuation rate of intrauterine devices, including the LNG-20 (Mirena) and Copper T380A (Paragard) in a unique clinic population of Baton Rouge, Louisiana. In addition, we would like to identify the most common reasons reported for early removal in this population (4). Results will be compared with the Contraceptive CHOICE project.

Material and Methods

Electronic medical records were used to obtain data for this retrospective chart review. CPT codes were used to identify clinic encounters in which a patient had an IUD placed (58300) and IUD removed (58301) during the period 7/1/2016-9/1/2017 in LSU OBGYN-BR clinic. Reasons for IUD placement were identified and encounters for reasons other than contraception were not included in the final data. This data was then used to calculate the early discontinuation rate of IUDs during the time period and common reported reasons for removal were recorded.

Hypothesis

- IUD removal rate will be higher among the LSU OBGYN-BR clinic population than the national average reported in the CHOICE project due to high rate of patients who are young, African American, have low income and/or low education level.
- Reasons for early removal are multifactorial and further research will be needed in determining the role and impact that proper counseling prior to placement of IUD may have in lowering early removal rates.

Tables and preliminary results

Table 1
 Total number of IUD insertions and removals

Variable	n (%)
Total inserted	192 (14)
Number of early discontinuation	165 (85.9)
Number of retained IUDs	27 (14)

Table 2
 Reasons for early removal of IUDs

Variable	LNG-20 n (%)	Copper T380A n (%)	Total n (%)
Irregular bleeding	7 (25.9)	4 (14.8)	11 (40.7)
Pelvic cramping	4 (14.8)	2 (7.4)	6 (22.2)
Desired pregnancy	2 (7.4)	1 (3.7)	3 (11.1)
Malpositioned	3 (11.1)	1 (3.7)	4 (14.8)
Other side effects	3 (11.1)	0	3 (11.1)

- Similar continuation rates at 1 year were noted among our clinic population when compared to the CHOICE project, 85.9% vs 85.8%, respectively.
- The most common reported reason for early removal in both studies was irregular bleeding, which included heavy, unpredictable bleeding, spotting, and amenorrhea
- A higher percentage of our clinic population report pelvic cramping and pain as a reason for removal of the LNG-20 IUD (14.8%) than in the CHOICE project (11.5%)
- 11.1% of patients report "other side effects" as a reason for early removal of their IUD, which included mood changes, discomfort with intercourse and increased vaginal discharge

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Which Factors Influence Cerclage Efficacy?

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Background

- Preterm birth is a leading cause of neonatal morbidity and mortality.
- Preterm birth accounts for 70% of neonatal deaths, 36% of infant deaths, and 25-50% of long term neurologic impairment in children¹.
- 26.2 billion dollars annually is attributed to preterm birth and its sequelae¹.
- Predicting women who will deliver prior to term is an inexact process. Screening includes assessment of cervical length via transvaginal ultrasound.
- A shortened distal functional closed cervical length significantly increases the risk of a preterm birth¹. Cerclage placement has been demonstrated to decrease the rate of preterm birth in women with a short cervix.

Indications for Cerclage²

- History of one or more second-trimester pregnancy losses related to painless cervical dilation and in the absence of labor or abruptio placentae
- Prior cerclage due to painless cervical dilation in the second trimester

Physical Examination

- Painless cervical dilation in the second trimester

Ultrasonographic Finding With a History of Prior Preterm Birth

- Current singleton pregnancy, prior spontaneous preterm birth at less than 34 weeks of gestation, and short cervical length (less than 25 mm) before 24 weeks of gestation

Objective

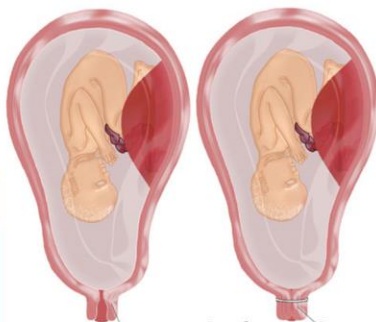
To investigate the pregnancy outcomes of women with and without prior preterm birth who had vaginal cerclage placed in order to determine what factors influence cerclage efficacy.

Materials and Methods

In this retrospective cohort study, women who were seen by a single provider at East Jefferson General Hospital and Touro Infirmary and had a cerclage placed were identified. Patient identifiers were removed.

Data collection included:

- type of cerclage placed
- estimated gestational age at the time of cerclage placement
- number of cerclages placed
- patient BMI
- maternal/pregnancy co morbidities
- distal functional cervical lengths at 13, 16, 19, and 23 weeks
- the length from cerclage to external os at 13,16,19, and 23 weeks
- the length from internal os to cerclage at 13,16,19, and 23 weeks
- cervical dilation at 13,16,19, and 23 weeks



Incompetent (Open) Cervix

Cerclage or Suture Around the Cervix

<https://www.pregmed.org/cervical-cerclage.htm>

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Hypothesis

We predict that elevated BMI increases the risk of cerclage failure.

Expected Results

We will look for patients with cerclage failure. We define cerclage failure as having a preterm delivery prior to 37 weeks of gestation. Using logistic regression analysis, we will determine which characteristics are associated with cerclage failure.

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Is baseline CD4 count associated with progression, persistence, or regression of cervical dysplasia in women with HIV?

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Introduction

Louisiana has the nation's 6th highest incidence and 5th highest mortality due to cervical cancer.¹ The incidence of cervical dysplasia and cancer is higher in women with HIV. This is thought to be due to the higher rate of HPV infection, persistence, and recurrence in immunocompromised women. CD4 count is often used to assess the degree of immune compromise, while HIV viral load (VL) is used to assess the adequacy of disease control and response to therapy. Numerous studies have demonstrated a direct relationship between viral load and risk for more severe cervical pathology as well as for progression of dysplasia.^{3,5} Data on the relationship between CD4 count and pathologic progression are more conflicting.

A better assessment of an HIV-positive woman's risk for progression of cervical dysplasia may help inform management guidelines in this patient population. The goal of this study was to evaluate whether there is an association between baseline CD4 count and progression, persistence, or regression of cervical dysplasia and for what duration of time this association might persist. Our secondary objectives were to evaluate the relationship between CD4 count nadirs, baseline VL, or VL peaks and the course of cervical dysplasia.

Methods

We included HIV+ women seen at LSUHSC Department of Obstetrics and Gynecology clinics at University Medical Center New Orleans from 1/1/2012 to the present. We excluded women with no history of abnormal pap smears, lacking at least 1 year of follow up, who received treatment for cervical dysplasia in the 3 year follow up period, or who had a history of chemotherapy and/or pelvic radiation.

Baseline measures included demographic factors, abnormal cervical cytology results, HPV testing, and CD4 count and VLs closest to time of first abnormal cytology. Subsequent cytology, CD4 counts, and VLs for the next 3 years were recorded. Progression of cytology was defined as an increase in the severity of cytology [atypical cells (ASCUS) -> low grade (LSIL) -> high grade (HSIL)], and regression defined as a decrease in severity. Persistence of cytology was defined as no change in cytology.

Analysis of variance was used to compare mean CD4 counts and VLs among outcome categories and Tukey's honestly significant differences test was used for post hoc analysis to determine which pairs of categories differed significantly.

Demographics

63 patients identified
 ↓
 Excluded:
 15: no abnormal pap
 4: < 1 year follow up
 11: treated for dysplasia
 3: prior chemo/radiation
 ↓
 30 patients included

	N	%		N	%
Age			Years HIV positive		
21-29	4	13.3%	0-2	6	20%
30-39	13	43.3%	3-5	7	23.3%
40-49	9	20%	6-10	5	16.7%
50-65	4	13.3%	>10	12	40%
Race			On HAART		
Black	27	90%	Yes	26	86.7%
White	3	10%	No	1	3.3%
Smoker			Unknown	3	10%
Yes	19	63.3%	N	%	
No	11	36.7%	Baseline cytology		
			ASCUS	19	63.3%
			LSIL	9	30%
			LSIL+HSIL	2	6.7%
			HPV		
			Not done	19	63.3%
			Negative	6	20%
			Positive	5	16.7%

Results

Baseline CD4 & 1 year Cytology

	N	Mean	Std Dev	Min	Max
Persist	10	397	358	76	1358
Progress	2	114	150	8	220
Regress	10	421	230	10	901

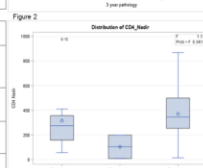
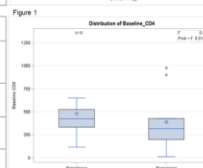
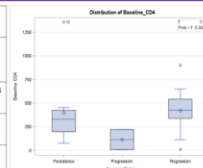
Table 1
Baseline CD4 & 3 year Cytology

	N	Mean	Std Dev	Min	Max
Persist	11	480	322	114	1358
Progress	0				
Regress	10	389	312	10	976

Table 2
CD4 Nadir & 3 year Cytology

	N	Mean	Std Dev	Min	Max
Persist	10	317	259	57	978
Progress	2	103	135	8	199
Regress	13	372	227	14	869

Table 3



Results

The mean baseline CD4 count did not differ significantly between patients with progression, persistence, or regression of cervical dysplasia at 1 year ($p = 0.382$) (Table 1) or 3 years ($p = 0.520$) (Table 2). The 3 year CD4 nadirs between the 3 groups were also compared and no significant difference was seen ($p = 0.342$) (Table 3).

As a secondary objective, HIV VL was evaluated for association with changes in dysplasia. Baseline VL was not significantly different between outcomes at 1 or 3 years ($p = 0.132$; $p = 0.567$). Peak VL was not significantly associated ($p = 0.346$). Higher viral loads did demonstrate the expected trend towards progression of dysplasia.

Discussion

In this group of patients, no significant association was seen between baseline CD4 count and progression, persistence, or regression of cervical dysplasia. There was a trend with lower baseline CD4 count associated with progression, and higher baseline CD4 count associated with regression of dysplasia.

These relationships warrant further study with a larger sample size to better characterize the association between CD4 count and the course of cervical dysplasia in women with HIV. Furthermore, other factors contribute to an HIV+ woman's risk for cervical dysplasia progression such as smoking history and HPV status. Multivariate analysis was not performed in this study due to the small sample size and a larger study would help clarify the potential influence of these other factors.

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Prenatal Intent to Breastfeed Compared to Breastfeeding at Hospital Discharge

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Background:

It is recommended that women should exclusively breastfeed for the first six months of a baby's life. Continuation of breastfeeding to at least a year or beyond is also recommended. Breastfeeding provides age-specific nutrients as well as immunological factors and antibacterial substances to the infant. The data suggest dose-response relationships between the duration of breastfeeding and many of its protective outcomes.

Infant benefits include decreased rates of GI and upper respiratory infections. Decreased rates of leukemia, diabetes, asthma, and eczema have been reported. In addition, decreased rates of obesity and SIDS have been shown. Breastfed infants have also shown higher intelligence scores and teacher ratings later in life. Maternal benefits include decreased postpartum blood loss, weight retention, and depression. In addition, reduced risk of breast and reproductive cancer have reported.

Across population groups, a woman's prenatal intention to breastfeed is the most consistent predictor of initiation and duration of breastfeeding.

Objectives:

- Assess the degree to which a woman's intention to breastfeed prior to delivery translates to actual breastfeeding at the time of hospital discharge.
- Investigate predictors of breastfeeding in our patient population, such as race, insurance type, parity, age
- Identify high risk patients for failure

Methods:

Retrospective chart review of women delivering at Woman's Hospital from July 2015 - June 2016. We will collect data including intent to breast feed at admission and breastfeeding status at discharge. We will also collect demographic information.

Hypothesis:

Intention to breastfeed is an important predictor of breastfeeding at discharge. Hispanics, multiparity, and those with private insurance will be more likely to breastfeed at hospital discharge. In addition, African Americans, primigravids, and those with Medicaid will be less likely to breastfeed at hospital discharge.

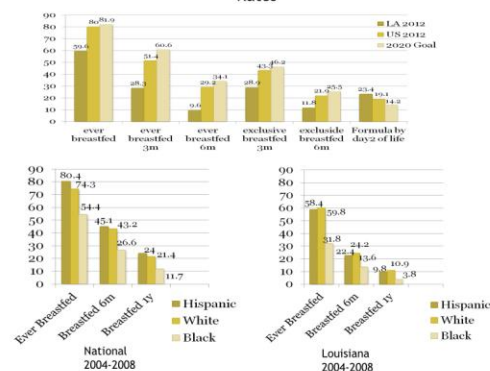
Future Goals:

- Information from this study might be used to help target educational programs for high risk patients
- A better understanding of the pathway from intention to actual initiation of breastfeeding could assist in the development of strategies to improve breastfeeding rates.

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Breastfeeding Rates





Can Four-Dimensional Transabdominal Ultrasound Replace Two-Dimensional Transvaginal Ultrasound in the Detection of Shortened Cervices in Pregnant Women at High-Risk for Preterm Births?

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Background/Objective

Preterm delivery is a significant cause of perinatal morbidity and mortality in the United States, with preterm delivery rates at 9.6% in the United States and 12.3% in Louisiana.⁴

Cervical shortening has been associated with an increased risk of preterm birth.¹ Thus, the evaluation and diagnosis of cervical shortening plays a critical role in the prediction and prevention of preterm delivery.

2D transvaginal ultrasound (TVUS) remains the gold standard method of the cervical measurement in pregnant women at high risk for preterm births.³ However, 2D TVUS is time consuming and uncomfortable for pregnant women, and the procedure is costly due to equipment maintenance and sterilization.

As ultrasound technology continues to improve, researchers are investigating alternative methods to evaluate cervical length. Several studies have investigated the use of 2D transabdominal ultrasound (TAUS) to predict the short cervix in place of the 2D TVUS.^{2,5,6,7} However, there is limited data comparing three dimensional transabdominal ultrasound (3D TAUS) or 4D TAUS to the gold standard.

The objective of this project is to compare the 3D and 4D TAUS versus the 2D TVUS in the detection of shortening cervices in pregnant women at high-risk for preterm birth.

Hypothesis

The use of 3D and 4D transabdominal ultrasound in the measurement of cervical length will be able to accurately predict the equivalent 2D transvaginal measurement. With further study, 3D/4D will be able to replace the 2D transvaginal ultrasound in the evaluation and diagnosis of the shortened cervix.

Materials and Methods

- Retrospective cohort study investigating the distal functional closed cervical length (CL) measurements of singleton pregnant women between 15 – 24 weeks, high-risk for preterm births, using the 2D, 3D, and 4D TAUS followed by the 2D TVUS with an empty bladder.
- Analysis will include:
 - Assessment of the reliability of each method of measurement 3 different times in each evaluation.
 - Statistical models to correlate the 2D TV CL with 2D, 3D, and 4D TA measurements.
 - Intervention and delivery data, including presence or absence of cerclage, tocolytic use, gestational age at delivery, maternal obesity, and neonatal outcomes.
 - Determination of the 3D and 4D TA cervical lengths associated with preterm delivery.
- This study was approved by LSUHSC's IRB.

Images



Preliminary Data

Measurements from about 300 ultrasound evaluations have been collected.

Preliminary data analysis on 180 ultrasound sessions has shown:

- Excellent consistency between measurements made within the same exam session.
- The 2D TA CL and 3D TA CL correlated well with the 2D TV CL ($p < 0.001$) in both EGA intervals.
- The 3D TA CL did not surpass 2D TA CL in the prediction of 2D TV CL ($p = 0.173$).
- Adding BMI and fetal presentation to the regression model did not significantly alter the efficacy of 2D or 3D TA CL in this prediction ($p > 0.05$).

Collection of 4D measurements and delivery data is ongoing.

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Survival rates of neonates following previsible PPRM at less than 24 WGA

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Background/Objective

Background: The current consensus is that survivability of neonates following previsible, preterm rupture of membranes is quite dismal, with survival rates reported to be only about 14% following PPRM at <24WGA². However, there are reports that survivability could be institution-dependent¹. Social factors contribute to the propensity for our patient population to opt for expectant management in this setting as opposed to induction of labor despite the associated long term risks (e.g., bronchopulmonary dysplasia¹¹, intraventricular hemorrhage, neurological sequelae of prematurity^{12,13}, etc). Therefore, we are studying the outcomes of those patients who chose expectant management for previsible PPRM, particularly in those pregnancies between 20 1/7 and 22 0/7 and less than or equal to 20 0/7.

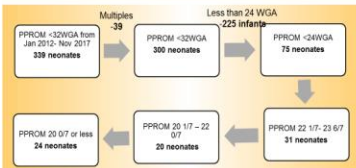
Objective: Assess survivability of extremely premature neonates following PPRM at 22 1/7 – 23 6/7, 20 1/7 – 22 0/7, and 20 0/7 or less following expectant management

Material and Methods

Material: Data was gathered from Woman's Hospital Department of Medical Records using final diagnoses codes: "PPROM" with neonates of EGA <32 weeks.

Methods: Retrospective chart review of patients with PPRM <32WGA from January 2012- November 2017. Multiple gestations and known fetal anomalies were excluded. Following complete chart review, our search was narrowed to include gestations with PPRM at <24WGA only. Data was further subdivided into groups as follows 22 1/7- 23 6/7 WGA, 20 1/7 – 22 0/7 WGA, and ≤ 20WGA. Outcomes were then identified among the three groups with the outcomes classified as follows: 1) "Discharged from NICU" 2) "[Admitted] To NICU but expired" (i.e., those in whom resuscitative efforts were performed and admission to NICU occurred with subsequent expiration), and 3) "Expired prior to NICU" (i.e., those either stillborn or those in which resuscitative efforts were not performed).

Tables/Graphs

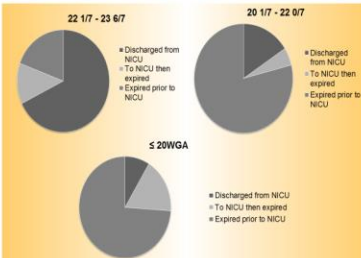


	Range GA at PPRM (WGA)	Mean GA at PPRM (WGA)	Mean GA at delivery (WGA)	Mean duration of ROM (days)	Mean maternal age (years)
All data PPRM <24WGA	15 0/7 – 23 6/7	21 4/7	24 3/7	12	28
22 1/7 – 23 6/7	22 1/7 – 23 6/7	22 6/7	24 0/7	8	27
20 1/7 – 22 0/7	20 1/7 – 22 0/7	21 1/7	23 2/7	8	31
20 0/7 or less	15 0/7 – 20 0/7	18 3/7	25 5/7	19	27

Hypothesis

Survival rate (i.e., rate of neonates discharged from NICU) of neonates expectantly managed following previsible PPRM at 22 0/7 WGA and less is higher than the currently reported 14% (per ACOG)

Preliminary Data



WGA at time of PPRM	Survival rate
22 1/7 – 23 6/7	67.7%
20 1/7 – 22 0/7	15.8%
≤ 20WGA	8.7%

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Comparison of IUGR fetuses to fetuses with only an abdominal circumference <10th percentile

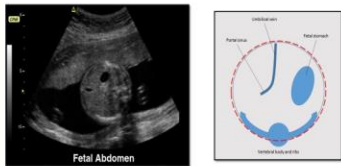
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Background

- Intrauterine growth restriction (IUGR) is defined as an estimated fetal weight (EFW) of less than the 10th percentile ¹
- This terminology does not describe those fetuses unable to reach their full growth potential in utero despite their EFW as greater than the 10th percentile for gestational age ¹
- Neonates with growth restriction have increased risk of adverse perinatal outcomes ²
- Isolated abnormal growth parameters (ie. abdominal circumference) may reflect fetal growth restriction with subsequent associated risks ³

Accurate measurement of the abdominal circumference requires visualization of the following parameters in one plane:

- Right and left portal veins are continuous
- Lower ribs are symmetric
- Stomach bubble in view ⁴



Objective

- To compare the perinatal outcomes between fetuses with an estimated fetal weight of less than the 10th percentile for gestational age versus fetuses with only an isolated abdominal circumference of less than the 10th percentile for gestational age.

Hypothesis

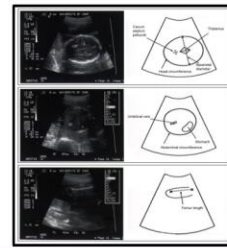
- Fetuses with isolated abdominal circumference less than the 10th percentile are at equal or greater risk of adverse perinatal outcomes than fetuses with an overall EFW less than the 10th percentile

Material and Methods

- Method: Retrospective Cohort Study
- Study period: January 2015 to December 2017
- Study population: Women managed prenatally at LSU MFM Clinics with subsequent delivery occurring at Touro Infirmary or East Jefferson General Hospital
- Associated pregnancy risk factors collected:
 - chronic or gestational hypertension
 - pre eclampsia
 - pre-gestational diabetes
 - obesity
 - placental abnormalities
 - maternal illicit drug use
 - medication history
- Pregnancy outcomes investigated:
 - Gestational age at delivery
 - Birthweight
 - Apgar scores
 - Doppler flow studies
 - Perinatal complications ie (RDS, NEC, IDH, NICU admission)
 - Perinatal morbidity & mortality

- Statistical Analysis: Chi Square Test, Student T Test, & Multifactorial Logistic Regression Analysis

Estimated Fetal Weight



Components of an Estimated Fetal Weight:
 Biparietal Diameter, Head Circumference, Abdominal Circumference, Femur Length

Expected Results

- Equal morbidity rates are expected between fetuses with an AC of less than the 10th percentile and fetuses with an EFW of less than the 10th percentile.

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Impact of Resident Led Didactics on OBGYN Clerkship Shelf Scores and Student Satisfaction

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Background

- The ACGME and Liaison Committee for Medical Education has designated teaching as an accreditation standard with numerous competencies⁴
- Residents serve as clinical teachers for medical students with studies indicating that residents spend up to 20% of their time teaching medical students.
- Students view residents more than attending physicians as their teachers.³
- In a national survey 60% of students reported that they received their teaching from residents and fellows during their obstetrics and gynecology clerkships⁴.
- In 2015-2016, the department of Obstetrics & Gynecology at Louisiana State University School of Medicine-New Orleans implemented a new lecture series for 3rd year medical students.
- Wednesday Lectures: Lectures were geared towards high yield OB/GYN topics and were delivered by a chief resident.
- Wednesday lecture series was designed to complement Team-Based Learning sessions

Objective

- Compare NBME shelf scores prior to and after implementation of the Wednesday lecture series
- Compare satisfaction scores of students prior to and post implementation of Wednesday lecture series. Scores would be obtained from the Aesculapian Society who evaluates students' overall perceptions of clerkships

Hypothesis

- Medical student satisfaction scores during the clerkship will increase with the implementation of additional didactic sessions.
- NBME shelf exam scores will improve as this additional education is made available to the medical students.
- Satisfaction scores positively correlate with success on shelf exams.

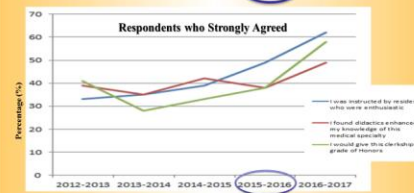
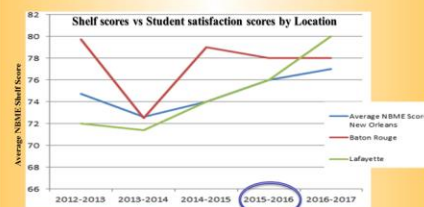
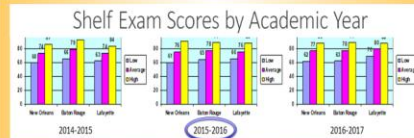
Materials and Methods

- Shelf exam scores from 2011-2017 were reviewed. High, average, and low scores were calculated from each block and compared across the training sites.
- Control Group: Baton Rouge and Lafayette based students who do not receive the same 'Resident lecture series.'
- Satisfaction scores → Aesculapian Society evaluations. Scores before and after implementation were examined

Timeline of Implementation of Didactic Sessions



Results



Discussion

- Student experience and satisfaction may vary by location based on clinical exposure and opportunity
- No standardized resident-lectures amongst all locations
- Current Data Suggests:
 - Positive correlation in resident teaching and satisfaction scores
 - Positive correlation in NBME scores and satisfaction scores.

Aesculapian Society student responses:

"Residents were great and always were looking to teach their students...Best part of the clerkship were the residents."

"I felt very prepared going into the shelf exam and it was reflected in my final grade...Wednesdays didactic time really helped make the clerkship better."

"Excellent didactic sessions and hands on training."

Future Implications

- Examine if there is a statistically significant difference in shelf scores between academic locations
- Standardized implementation of resident led didactics.
- Goal: Implement ACGME recommended 'Resident-as-teachers program as already established in other institutions
- Improve shelf scores over the next 5 years.

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**LSU OB/GYN Residents and Faculty
Quality Improvement and Patient Safety
2017 – 2018**

Oral Presentations:

Holman S, Pruitt ER. *Surgical Site Infection Prevention at an Urban Academic Medical Center: Training in the Trenches*. AAMC Integrating Quality Meeting, June 2018.

Thompson N, Rodrigue E, Polite M, Holman S. *Decreasing the Insufficient Pap Smear Rate Among OBGYN Residents in an Academic Training Environment*. American Society for Cervical and Colposcopic Pathology Annual Meeting, April 2018. LSUHSC Annual Quality Improvement and Patient Safety Forum, May 2018.

Poster Presentations:

Garcia B, Rosselot J, O'Leary M, Hallner B. *More than a Checkbox: Keeping the Healthcare Team Informed of the Informed Consent of a Jehovah's Witness Patient*. LSUHSC Annual Quality Improvement and Patient Safety Forum, May 2018.

Kuan-Celarier A, Peneva R, Holman S, Alleyn J. *Patient Education to Reduce No Show Rate in Colposcopy Clinic*. LSUHSC Annual Quality Improvement and Patient Safety Forum, May 2018.

LSU OB/GYN Residents, Fellows, and Faculty Presented and/or Published Research

2013 – 2018

1. Alleyn J, Holman S, Heard A, Polite FG, Young A. Creating a bootcamp blockbuster: A behind the scenes guide to the preparation for residency curriculum. Association of Professors in Gynecology and Obstetrics/ Council on Resident Education in Obstetrics and Gynecology, January 2015. (Small group presentation)
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15. Chen C, Tanner E, Malpani A, Vedula SS, Fader AN, Scheib SA, Green IC, Hager GD. Warm-Up before robotic hysterectomy does not improve trainee operative performance: A randomized trial. *J Minim Invasive Gynecol.* 2015 Nov-Dec; 22(6S):S34. Epub 2015 Oct 15.
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80. Nhieu C, Kuan-Celarier A., Salom E. Is venous thromboembolism chemoprophylaxis beneficial after robotic hysterectomy with staging for uterine cancer: analysis of prevalence, prophylaxis, and the Caprini risk assessment model among 332 patients. 48th Annual Meeting on Women's Cancer, Society of Gynecologic Oncologists, National Harbor, MD. 2017. (Poster)
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89. Quebedeaux T, Washington G, Lewis P, Miller J. Increasing occurrence of cardiac complications in obstetrical patients admitted into the intensive care unit. 4th International Meeting on Cardiac Problems in Pregnancy. Las Vegas, NV 2016. (Poster)
90. Reynolds K, Barnhill D, Sias J, Young A, Polite F. Utilization of QR reader to provide real time evaluation of residents' skills following surgical procedures. Accreditation Council on Graduate Medical Education, Annual Educational Conference, MD, March 2014.(Oral presentation)
91. Rodrigue EL, Berra A, Adams W, Stafford S, Heard AJ, Stafford IP. Relationship between Group B streptococcal invasive disease and neonatal necrotizing enterocolitis, Central Association of Obstetrics and Gynecology, Scottsdale, AZ, October 2017. (Poster)
92. Rodrigue E, Kuan-Celariet A, Wu XC, Yi Y, Maniscalco L, Jernigan AM. Health disparities in fertility preservation for women with stage IA and stage IB cervical cancer. Western Association of Gynecologic Oncologists Annual Meeting, Park City, Utah. June 2018. (Poster)
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103. Sias J, Barnhill D, Reynolds K, Young A, Polite F, Hagan J. FAC 2.0: The future of resident evaluation, faculty assessment of competency using QR reader. Annual Meeting Association of Professors in Gynecology & Obstetrics and Counsel on Resident Education in Obstetrics & Gynecology, Phoenix, AZ, February 2013 (Poster). Best Student/Resident Research Award.
104. Stafford I, Holman S, Dehon P, McGowin C. Mycoplasma genitalium infection is associated with microscopic cervicitis at first trimester prenatal assessments. Louisiana State University Health Sciences Center- New Orleans. ASM Microbe, 2017 New Orleans, LA. (Poster)
105. Sutherland M, Kerdolff K, Miller J, The evolution of research quality in the American Journal of Obstetrics and Gynecology, a historical perspective. Central Association of Obstetricians & Gynecologists Meeting. Phoenix, AZ, 2017. (Poster)

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108. Sutherland M, Langhorne O, Grady C, Stafford I, Holman S. Implementation of a risk stratification tool to decrease postpartum hemorrhage cases in a high acuity urban hospital setting. LSUHSC Annual Quality Improvement & Patient Safety Forum, May 2017 (Poster) and Central Association of Obstetricians & Gynecologists Meeting. Phoenix, AZ, October 2017. (Poster)
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110. Thompson N, Cloutier V, Hagan J, Alleyn J. Electrosurgery: Does interactive training increase level of safety when operating? Association of Professors in Gynecology and Obstetrics/ Council on Resident Education in Obstetrics and Gynecology, National Harbor, MD, 2018. (Poster)
111. Thompson N, O'Keefe A, Cloutier V, Harbour L, Hodge K, Savage M, Holman S. Impact of patient education on prevention of surgical site infections after gynecologic surgery. LSUHSC Annual Quality Improvement & Patient Safety Forum, New Orleans, LA, June 2016. (Poster)
112. Thompson N, Rodrigue E, Polite M, Holman S. Decreasing the rate of insufficient pap smears amongst OBGYN residents in an academic environment. ASCCP Annual Meeting. Las Vegas, NV, 2018. (Oral presentation)
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115. Valero V, Wallace R, Tanner L, Stafford I. Improving access and education for 17-OH progesterone caproate (17OHP) administration for the prevention of recurrent preterm birth. LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017. (Poster)
116. Vander Tuig BI, Moukarzel L, Scheib SA. Diagnostic hysteroscopy: Preparation for a successful procedure. *J Minim Invasive Gynecol.* 2015 Nov-Dec; 22(6S):S143. Epub 2015 Oct 15.

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LSU OB/GYN Resident Research Day Presentations

2017

Natalia Arango, MD, House Officer III

Advisor: Irene Stafford, MD

Quantification of Mycoplasma Genitalium-associated Cervicitis in Patients Receiving Prenatal Care at University Medical Center New Orleans

*****Vanessa Cloutier, MD, House Officer IV**

Advisor: Jaime Alleyn, MD

Electrosurgery: Does Interactive Training Increase Level of Safety When Operating?

Kimberly Hodge, MD, House Officer IV

Advisor: Irene Stafford, MD

Efficacy of Suture Material in History, Ultrasound and Physical Exam Indicated Transvaginal Cervical Cerclages

*****Eliza Rodrigue, MD, House Officer II**

Advisor: Richard Dickey, MD

Implications of Embryo Selection for Transfer When Preimplantation Genetic Analysis is Not Available

Eric Siegel, MD, House Officer IV

Advisor: Valerie Williams, MD

Outcomes of Post Placental IUD Insertions

Andrew Suire, MD, House Officer II

Advisor: Irene Stafford, MD

Sexually Transmitted Infections and Drug Use in Pregnancy: A Basis for Universal Prenatal Drug Screening

*****Monique Sutherland, MD, House Officer III**

Advisor: Irene Stafford, MD

Mycoplasma Genitalium Infection in an Urban Pregnant Population

Ashley Van Wormer, MD, House Officer IV

Advisor: Ann Chau, MD

Can Transabdominal Ultrasound Replace Transvaginal Ultrasound in the Detection of a Short Cervix in Pregnant Women Who Are at High Risk for a Preterm Birth?

*****2017 Research Award Recipients**