

**29th Annual
LSU School of Medicine
Department of Obstetrics & Gynecology**



**Resident Research Day
Friday, May 19, 2017**

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

Keynote Speaker:
Robert W. Rebar, M.D.
Professor and Chair, Department of Obstetrics & Gynecology
Western Michigan University Homer Stryker M.D. School of Medicine

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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** **Functional hypothalamic Amenorrhea (FHA): A Common, Overlooked Cause of Menstrual Dysfunction**
Robert W. Rebar, MD
Professor and Chair, Department of Obstetrics and Gynecology
Western Michigan University Homer Stryker M.D. School of Medicine
- 9:00-9:10am** **Break**
- 9:10-9:35am** **Quantification of Mycoplasma Genitalium-associated Cervicitis in Patients Receiving Prenatal Care at University Medical Center New Orleans**

Natalia Arango, MD, House Officer III
Advisor: Irene Stafford, MD
Discussant: Robert Maupin, MD
- 9:35-10:00am** **Electrosurgery: Does Interactive Training Increase Level of Safety When Operating?**

Vanessa Cloutier, MD, House Officer IV
Advisor: Jaime Alleyn, MD
Discussant: Amelia Jernigan, MD
- 10:00-10:25am** **Outcomes of Post Placental IUD Insertions**

Eric Siegel, MD, House Officer IV
Advisor: Valerie Williams, MD
Discussant: Lakedra Pam, MD

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- 10:25-10:50am** **Sexually Transmitted Infections and Drug Use in Pregnancy: A Basis for Universal Prenatal Drug Screening**
- Andrew Suire, MD, House Officer II**
Advisor: Irene Stafford, MD
Discussant: Erich Conrad, MD
- 10:50-11:00am** **Break**
- 11:00-11:25am** **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?**
- Ashley Van Wormer, MD, House Officer IV**
Advisor: Ann Chau, MD
Discussant: Joseph Miller, MD
- 11:25-11:50am** **Efficacy of Suture Material in History, Ultrasound and Physical Exam Indicated Transvaginal Cervical Cerclages**
- Kimberly Hodge, MD, House Officer IV**
Advisor: Irene Stafford, MD
Discussant: Ann Chau, MD
- 11:50-12:15pm** **Implications of Embryo Selection for Transfer When Preimplantation Genetic Analysis is Not Available**
- Eliza Rodrigue, MD, House Officer II**
Advisor: Richard Dickey, MD
Discussant: Sissy Sartor, MD
- 12:15-12:40pm** **Mycoplasma Genitalium Infection in an Urban Pregnant Population**
- Monique Sutherland, MD, House Officer III**
Advisor: Irene Stafford, MD
Discussant: Alison Quayle, PhD

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12:40-1:30pm	Lunch
1:30-2:30pm	Poster Viewings and Presentations
2:30-3:00pm	Award Presentation and Final Remarks



Robert W. Rebar, M.D.

Professor and Chair of the Department of Obstetrics and Gynecology Western Michigan University Homer Stryker M.D. School of Medicine

Robert W. Rebar, M.D., is currently Professor and Chair of the Department of Obstetrics and Gynecology at Western Michigan University Homer Stryker M.D. School of Medicine. He is the retired Executive Director of the American Society for Reproductive Medicine in Birmingham, Alabama, having served in that capacity from 2003 through 2013. Dr. Rebar is certified by the American Board of Obstetrics and Gynecology in obstetrics and gynecology and in reproductive endocrinology and infertility.

Dr. Rebar received his M.D. from the University of Michigan in 1972 and from 1972 to 1974 was a resident in obstetrics and gynecology at Parkland Memorial Hospital in Dallas, Texas. He was a Clinical Associate in the Reproduction Research Branch of the National Institute of Child Health and Human Development (1974-1976) before completing his residency in Obstetrics and Gynecology at the University of California at San Diego Medical Center (1976-1978). After his residency, Dr. Rebar continued on at the University of California, San Diego for six years (1978-1984), serving as Associate Professor and Director of the Division of Reproductive Endocrinology for the last two of those years. He was Professor and Head of the Division of Reproductive Endocrinology and Infertility in the Department of Obstetrics and Gynecology at the Northwestern University School of Medicine (1984-1988). Dr. Rebar then was Professor and Chairman of the Department of Obstetrics and Gynecology at the University Of Cincinnati College Of Medicine from 1988 through 1999 and served as Associate Executive Director of the American Society for Reproductive Medicine from 2000 through 2002.

Dr. Rebar is a member of numerous professional societies, including the American College of Obstetricians and Gynecologists (Fellow), the American Gynecological and Obstetrical Society, and the Society for the Study of Reproduction. Dr. Rebar has served on the editorial boards of several journals and is currently a Deputy Editor for the journal *Contraception* and an Associate Editor for *Journal Watch Women's Health* and *OB/GYN Clinical Alert*. Dr. Rebar has contributed to many text books, as well as authored over 250 articles on menopause, fertility, and reproductive endocrinology and has been the Principal or a Co-Investigator on several NIH grants.

Functional Hypothalamic Amenorrhea (FHA): A Common, Overlooked Cause of Menstrual Dysfunction

Learning Objectives:

- 1) Enumerate forms of functional hypothalamic amenorrhea
- 2) Discuss characteristic feature of various forms of FHA
- 3) Outline approaches to the diagnosis and management of individuals with presumptive FHA

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

**Natalia Arango MD¹, Irene A. Stafford MD¹, Stacey Holman MD¹,
Patricia Dehon PhD², and Chris McGowin PhD²**

¹Department of Obstetrics and Gynecology

²Department of Microbiology, Immunology, and Parasitology,
Louisiana State University Health Sciences Center- New Orleans

Objective: *Mycoplasma genitalium* (MG) is a highly prevalent and emerging etiology of inflammatory disease of the female reproductive tract.¹ Approximately 1 in 12 pregnant women at high-risk for sexually transmitted infections (STIs) are chronically infected with MG², yet routine screening is not performed in the United States. MG has been linked to pelvic inflammatory disease (PID) and several adverse pregnancy outcomes, as well as markers of cervical inflammation in several studies.³ Parallel investigations of cervicitis have not been conducted in pregnant women. The objective of this study was to determine the prevalence of MG at initial prenatal visits in our high-risk obstetric clinic population. Using this information, our goal was to quantify the intensity of cervical inflammation, a known risk factor for adverse pregnancy outcomes, in order to determine the need for routine screening in the United States.

Methods: In accordance with an LSU Health Sciences Center IRB approved protocol, de-identified and otherwise discarded routine urogenital specimens were collected from UMCNO Women's Health Clinic patients seeking prenatal care from May 2016 to October 2016. STI test results were obtained via chart review or via laboratory-developed nucleic acid amplification tests (NAATs). Sensitivity of MG detection was assessed in urine and endocervical swab specimens. Using cervical liquid cytology specimens, a ratio of leukocytes to epithelial cells was used to quantitatively assess inflammation associated with MG and other STIs. Leukocyte counts were compared among subjects with and without MG infection, and significant differences were determined using the Student's t test.

Results: The sensitivity of MG detection in urine was 62.5% with a specificity of 95.5% compared to endocervical swabs. The prevalence of MG, *C. trachomatis*, *N. gonorrhoeae*, and *T. vaginalis* was 11.1%, 13.4%, 2.5%, and 10.9% respectively. The composite prevalence of 14 high-risk Human Papillomavirus (HPV) sub-types was 24.1%. Using direct microscopy of liquid cytology specimens, we observed significant increases in cervical leukocyte infiltrates among subjects with mono-infections of MG and *C. trachomatis* compared to women with no detectable STIs ($p < 0.05$). Inflammation was highest among subjects with MG.

Conclusions: MG is a prevalent infection in our pregnant New Orleans population, a group that is considered to be at high-risk for STIs. Our data indicate that endocervical swabs are better for MG detection compared to urine, and that MG infection was associated with increased cervical leukocytes as a direct marker of inflammation. Given the role of inflammation in adverse pregnancy outcomes, our results suggest that prenatal screening and treatment of MG may be warranted. Further study of this emerging STI is needed.

¹ McGowin 2011 (PLoS Pathogens)

^{2,3} Averback 2013 (Int J Gynaecol Obstet)

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

**Vanessa Cloutier MD, Traci Iwamoto MD, Nia Thompson MD,
Joseph Hagan ScD, Jaime Alleyn MD**

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

Objective: Electrosurgery is a surgical technique in which high frequency electric current is used to cut, coagulate and fulgurate biological tissue. Electrosurgery offers an array of benefits for our patients; however, it does present some safety concerns. The application of electrosurgery requires knowledge for proper use and to achieve the desired tissue effect. Literature has shown that there is a need for electrosurgical training. Our study examines an educational initiative for third year medical students beginning in the OBGYN clerkship at LSU Health Sciences Center with the goal of increasing the level of safety during electrosurgery.

Methods: A randomized control trial was offered to all third year medical students participating in OBGYN clerkship orientation in New Orleans from June 2015 – April 2017. All students who consented to participate were randomized to either a didactic session or an interactive course in electrosurgery. The didactic lecture was obtained from the Association of Professors of Gynecology and Obstetrics (APGO) Educational Series on Women's Health Issues Electrosurgery module. The interactive course was given by two electrosurgical representatives from Covidien and Medtronic. Before and after the session, the students were asked to complete a questionnaire that included 15 knowledge-based items, yes/no items and ratings of their comfort level and safety in the operating room. Scores and changes in pre vs. posttest scores were compared for the didactic group vs. the interactive teaching group using the Wilcoxon rank sum test. The Wilcoxon signed ranks test was used to identify a significant change in pre vs post test scores separately for each group. Fisher's exact test was used to compare groups' proportions completing a previous general surgery rotation, finding the course helpful, and finding the simulation/didactics helpful. A p-value of <0.05 was considered statistically significant.

Results: There were 49 participants in the interactive teaching group and 50 participants in the didactic group. Participants had a significant increase in pre vs. posttest scores in both the didactic ($p<0.001$) and interactive teaching group ($p<0.001$). Similarly, participants had a significant increase in safety scores in both the didactic ($p<0.001$) and interactive teaching group ($p<0.001$) from pre to post course. The interactive teaching group had significantly higher experience scores ($p<0.001$), post safety scores ($p<0.001$) and significantly greater improvements in safety scores ($p<0.001$) compared to the didactic group. Fifty three percent (25/47) in the didactic group had previously completed a general surgery course compared to 60% (26/43) in the interactive teaching group ($p=0.528$). All participants in both groups found the simulation course helpful ($p=1.000$). Ninety eight percent (45/46) of students in the interactive teaching group reported the simulation to be helpful compared to compared to 82% (37/45) of the students in the didactic group who reported the didactics to be helpful ($p<0.001$).

Conclusions: Based on our study, implementing an electrosurgery course for medical students improved medical knowledge about the equipment and increased safety scores. When designing electrosurgical teaching, an interactive session should be considered. Future studies should focus on innovative education for resident training in electrosurgery as well as translation of safety scores into the operating room.

Outcomes of Post-Placental Intrauterine Device Insertion

Eric Siegel MD, Joe Hagan ScD, Stacey Holman MD, Valerie Williams MD

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

Objective: There are many advantages to immediate post-placental intrauterine device (IUD) insertion. In the post-partum period, patients are highly motivated to seek contraception. Additionally, patients may not seek follow-up care until their next pregnancy. Post-placental expulsion rates are quoted as 10-27%, but studies have yet to identify candidates at higher or lower risk for expulsion. Our study aims to determine if body mass index (BMI) impacts expulsion rates of immediate post-placental IUDs.

Methods: This retrospective cohort study included all pregnant women who had a post-placental IUD placed at Touro Infirmary from August 2014 – March 2016. Patients undergoing deliveries after 20 weeks of gestational age with an IUD placed within 10 minutes of placental delivery were included. Patients were excluded if they did not have a follow-up visit. Expulsion data was collected from inpatient and outpatient medical records, and expulsion was classified as occurring within 6 weeks of delivery or after 6 weeks of delivery. IUDs removed due to patient or provider preference or recommendation were recorded as well. Demographic information including age, gestational age at delivery, route of delivery, and BMI were obtained. Bivariate association between risk factors and expulsion were assessed with logistic regression analysis. A p-value of <0.05 was considered statistically significant.

Results: During this time period, 130 patients met inclusion criteria. The overall expulsion rate within 6 weeks was 14.6%. Expulsion within six weeks of delivery was not associated with increasing BMI (OR=0.97, 95% CI: 0.91-1.04, p=0.659). Similarly, expulsion at any point was not associated with increasing BMI (OR=0.98, 95% CI: 0.91-1.04, p=0.469). Cesarean delivery was associated with increased expulsion at any point (OR=2.85, 95% CI: 1.08-7.53, p=0.034). Neither maternal age nor gestational age at delivery were significantly associated with expulsion at any point.

Conclusion: We did not identify an association between BMI and expulsion risk of post-placental IUDs. However, we did not reach our intended sample size. In a secondary analysis, Cesarean delivery was associated with an increased risk of expulsion. Future prospective studies may consider the impact of method of placement as associated with BMI as well as to evaluate the etiologies relating to the increased expulsion rate noted in those undergoing Cesarean delivery.

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

Andrew Suire MD, Jessica Rosselot MD, Shota Kamu BS, Alexandra Berra BS, Irene Stafford MD, Asha Heard MD, Joseph J Miller MD

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

Objective: Recent data suggests that 5% of women use illicit drugs during pregnancy. A large body of literature has established that there are multiple maternal and fetal risks of maternal drug use during pregnancy. Existing literature on risk factors for sexually transmitted infection (STI) identifies high-risk behaviors such as drug and alcohol use. Routine prenatal screening includes laboratory tests for most STIs but does not always include screening for maternal drug use. A pregnant patient's social history, may be the most sensitive measure to identify substance exposure in newborns. There are currently no guidelines or recommendations on universal prenatal urine drug screens. Meconium and/or urine testing is the gold standard in detecting illicit drug exposure in utero. The objective of our study was to examine self-admission versus non-admission of maternal drug use in meconium/urine positive newborns to determine if there are higher rates of sexually transmitted infections in the self-admission group versus the nonadmission group. We hypothesized that there would be a higher incidence of STIs in women who self-admit to illicit drugs compared to those who did not admit to drug use.

Methods: After obtaining Institutional Review Board approval, a retrospective cohort study was performed reviewing the records of neonates born between January 1, 2012 and December 31, 2016 with meconium/urine positive screens identified by ICD-9 and 10 codes. Corresponding maternal data was reviewed including maternal age, parity, presence of STIs diagnosed during pregnancy and maternal admission of substance use. Fisher's exact test was used to compare women who disclosed their drug use versus women who did not in terms of categorical variables. Wilcoxon rank sum test was used for quantitative variables. A p-value of <0.05 was considered statistically significant.

Results: One hundred sixty-eight newborns were identified. The most common isolated substance detected in samples was marijuana (27.9%). The mean gestational age at delivery for both groups combined was 36 5/7 weeks gestation with a preterm birth rate of 23%. Twenty-three percent of women did not disclose using at least one illicit drug for which their newborn tested positive. All women whose newborns tested positive for barbiturates and amphetamines (n=17) did not disclose antenatal usage. Twelve percent of women disclosed antenatal benzodiazepine use, 59% disclosed cocaine use, 62% self-reported opiates/heroin use, and 53% of women disclosed marijuana use. There was no significant difference in the proportion of patients with any STI in mothers who denied any illicit drug (23%) compared to mothers who disclosed their drug use (22%, p=0.651). Women who did not disclose were more likely to have a Neisseria gonorrhoea or Chlamydia trachomatis infection (18%) compared to those who were honest (6%, p=0.048).

Conclusion: Infection with N. gonorrhoea or C. trachomatis is a risk factor for maternal use of nonillicit and illicit substances during pregnancy. Pregnant women who screen positive for gonorrhoea or chlamydia on prenatal laboratory testing may be more likely to be dishonest about their drug use during pregnancy. Our results suggest that drug screening should be included in prenatal testing of pregnant women who screen positive for STIs.

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?

Ashley Van Wormer MD, Joseph Hagan ScD, Ann C Chau MD

Department of Obstetrics & Gynecology,
Louisiana State University Health Sciences Center - New Orleans, LA.

Objective: Cervical shortening has been associated with an increased risk of preterm birth (PTB). Preterm deliveries have significantly increased perinatal morbidity and mortality as well as neonatal intensive care cost. Detection of cervical shortening allows for intervention to decrease the risk of PTB. Transvaginal ultrasound is the gold standard for evaluation of the cervix despite discomfort to obstetric patients, time taken to perform the additional procedure, and costly maintenance and sterilization requirements for a transvaginal probe. The objective of this study is to determine the transabdominal cervical measurement threshold for detection of a shortened cervix in women at high risk for a PTB.

Methods: A prospective cohort study was performed including pregnant women with a history of one or more preterm births and an obstetric ultrasound for a dating scan or a fetal anatomy survey from 2012 to 2016. Patients were evaluated using transabdominal and transvaginal ultrasound at the Louisiana State University maternal fetal medicine clinics in New Orleans. The transabdominal distal functional closed cervical length (TADFCL) and the transvaginal distal functional closed cervical length (TVDFCL) were measured with an empty bladder. The performance of using various TADFCL cutoffs to predict TVDFCL of <25 mm was examined. Pearson's Correlation Coefficient (PCC) was used to quantify the linear relationship between TADFCL and TVDFCL. A p-value of <0.05 was considered significant.

Results: This cohort of 88 pregnant women with a history of one or more PTBs had a mean gestational age of 17.9 ± 3.4 weeks, mean gravida of 4.1 ± 2.6 , mean parity of 1.8 ± 1.2 , and mean BMI of 29.4 ± 6.1 . Thirty-two women (36%) delivered prematurely at mean gestation of 33.5 ± 3.9 weeks. There was a significant correlation between TADFCL and TVDFCL (PCC=0.628, $p < 0.001$). Using a TADFCL cutoff of <20 mm to predict TVDFCL of <25 mm yielded a sensitivity of 57.1%, specificity of 94%, positive predictive value (PPV) of 75%, negative predictive value (NPV) of 87.5%. An overall accuracy of 85.2% with a false negative rate (FNR) of 43%. A TADFCL cutoff of <25 mm produced a sensitivity of 67%, specificity of 87%, PPV of 61%, NPV of 89%, overall accuracy of 82% and a false negative rate of 33%. When a TADFCL of <29 mm was used to screen for the TVDFCL <25 mm, the sensitivity was 90%, specificity 79%, PPV 58%, NPV 96%, overall accuracy of 82% and with a FNR of 10%. A TADFCL cutoff of <32 mm to detect TVDFCL < 25 mm gave a sensitivity of 95%, specificity of 69%, PPV of 49%, NPV of 98%, overall accuracy of 75% and a FNR of 5%. Finally, a TADFCL cutoff of < 60 mm to detect a TVDFCL < 25 mm produced a sensitivity of 100%, specificity of 1%, PPV of 24%, NPV of 90% and FNR of 0%.

Conclusion: We could safely avoid transvaginal ultrasound in pregnant women with a history of PTB if these women have a TADFCL of ≥ 60 mm. Performing a transvaginal ultrasound is still the method of choice to evaluate the cervical length of women at high risk for a PTB.

Efficacy of Suture Material in History, Ultrasound and Physical Exam Indicated Transvaginal Cervical Cerclages: a Retrospective Analysis

Kimberly Hodge MD, Patrick Daigle MD, Megan Savage MD, Alex Berra BS, Michelle Bergeron BS, Samantha Karlin BS, Joseph Hagan ScD, Irene Stafford MD

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

Objective: Cervical cerclage has been used for cervical insufficiency to reduce the risks of premature birth. There is limited data on the efficacy of commonly used cerclage materials in prevention of preterm birth. Our study was conducted to compare the efficacy of monofilament suture (Ex. Prolene™), braided polyester thread (Mersilene™), and Mersilene™ 5mm tape suture in history, ultrasound, and physical exam indicated cerclages for reduction of preterm birth.

Methods: Women who received a history, ultrasound, or physical exam indicated cerclage at Touro Infirmary, New Orleans, LA between January 1, 2004 and December 31, 2016 were identified using ICD-9 and 10 codes. All charts were reviewed for demographic and obstetrical variables including gestational age at delivery, prior preterm birth, and suture used for cerclage placement. The suture types analyzed were monofilament suture (Ex. Prolene™), braided polyester thread (Mersilene™), and Mersilene™ 5mm tape. The Wilcoxon rank sum test was used to compare gestational age at delivery achieved with different sutures. Fisher's exact test was used to compare gestational age at delivery (≥ 32 , 34, and 37 weeks) between different suture types. Secondary outcomes included comparison of resident versus attending as surgeon and cerclage efficacy using Fisher's exact test. Also, the effect of body mass index (BMI) and 17 Hydroxyprogesterone Caproate (17-OHP) use with cerclage were both analyzed for their effect across groups using Wilcoxon rank sum and Anova tests respectively. A 5% significance level was used for hypothesis tests.

Results: Of the 145 identified patients, 109 patients had complete data for analysis. The mean gestational age of delivery was 31.6 weeks \pm 7.4 days, and the most common suture type used was braided polyester thread (41%). There was no significant difference in gestational age at delivery for the monofilament suture compared to the braided suture ($p = 0.483$), the braided suture compared to 5 mm tape ($p = 0.722$), or monofilament suture compared to 5 mm tape ($p = 0.826$). There was no significant difference in the proportion who delivered at >32 , 34 or 37 weeks gestation in the monofilament suture group compared to the braided suture group ($p = 0.270$, $p = 0.275$, $p = 0.419$, respectively). There was no significant difference in gestational age at delivery for patients who received 17-OHP compared to those who did not ($p = 0.362$) and there was no significant difference in the mean BMI of patients across different cerclage materials ($p = 0.402$).

Conclusion: There is no difference between suture material types in regards to prolongation of pregnancy. For patients receiving 17-OHP for prevention of preterm labor, concurrent cerclage placement did not have a significant effect on gestational age at delivery. A prospective randomized trial comparing different suture types for cerclage placement with a larger sample size and appropriate power analysis is better suited to determine suture material superiority.

Relationship of Rate of Development and Morphology to Percentage of Euploid Cleavage Stage and Blastocyst Embryos

Eliza L. Rodrigue MD¹, Rebecca L. Surrey MS², Richard P. Dickey MD, PhD^{1,3}

¹Department of Obstetrics and Gynecology, Louisiana State University Health Sciences Center- New Orleans; ² George Washington School of Medicine and Health Sciences; ³ Fertility Institute of New Orleans

Objective: Without the use of preimplantation genetic screening (PGS) during in vitro fertilization (IVF), clinicians rely on morphology and rate of development of cleavage stage (CS) and blastocyst (BL) embryos to select those more likely to result in live birth. There is a general consensus that selection of embryos with superior quality and rate of development may improve IVF outcomes. However, the genetic characteristics of those with inferior quality or slower developing embryos is less well defined. Slow developing CS embryos have historically been discarded. The goal of this study was to determine the prevalence of euploidy according to the rate of development and grade of CS and BL embryos as an aid to embryo selection for transfer.

Methods: A retrospective cohort study included fresh IVF and intracytoplasmic sperm injection (ICSI) cycles performed between January 2011 and December 2016 using patients' own eggs at Fertility Institute of New Orleans, a university affiliated infertility clinic. Data was collected regarding day of embryo biopsy, stage of embryo development, and embryo grade according to facility's classification system. Genetic analysis using 23 chromosome microarray analysis of CS embryos was performed by single nucleotide polymorphism (SNP) or comparative genomic hybridization (CGH). Genetic analysis of BL embryos was performed CGH or by next generation sequencing (NGS). Results were then stratified based on patient age. Statistical analysis was performed using chi-squared analysis with a p-value of 0.05 set for significance.

Results: During the study period, 1355 IVF and ICSI cycles were included. The rate of development and embryos quality did not predict euploidy of CS embryos. On post retrieval (PR) day 3, 40% of 4 cell, 37% of 6 cell and 44% of 8 cell embryos were euploid. BL stage on PR days 5 and 6 was related to rate of euploidy for age ≥ 35 ($p=0.001$). For example, PR day 5 euploidy for age ≥ 35 , ranged from 36% for early BL to 63% for hatching BL. Grade was related to BL euploidy for all ages ($p \leq .005$) on day 5 and for age ≥ 35 on day 6. On PR day 6, a greater percent of BL were hatching stage compared to day 5 ($p= 0.001$); however, percentage euploid and grade were lower than day 5 (OR 0.65 ($p= 0.001$)).

Conclusion: Our findings for CS embryos reveal that slow development of embryos did not predict euploidy. Our findings suggest that slow developing CS embryos should be allowed to progress to day 5 or 6, because their genetic makeup may be euploid. We found that both BL rate of developmental and embryo grade were related to euploidy for age >35 , consistent with studies examining morphology alone. Euploid rates of BL are significantly lower in slow growing embryos biopsied day 6 than in fast growing embryos biopsied day 5. This study provides considerations for embryo transfer when PGS is not available.

Mycoplasma Genitalium Infection in an Urban Pregnant Population

Monique Sutherland MD¹, Christopher McGowin PhD², Irene Stafford MD¹

Department of Obstetrics and Gynecology¹, Department of Microbiology²
Louisiana State University Health Sciences Center – New Orleans

Objective: *Mycoplasma genitalium* (MG) is an emerging sexually transmitted infection (STI) with a prevalence of 3% in low-risk reproductive age people. The urogenital prevalence of MG among pregnant women at high risk of STI acquisition is 8%. MG is typically asymptomatic and persists without treatment, putting young women at an increased risk for adverse pregnancy outcomes including preterm premature rupture of the membranes, preterm labor, and post-partum endomyometritis. Currently, there are no guidelines for MG screening among pregnant women due to lack of evidence suggesting benefit of treatment in reducing adverse pregnancy outcomes. The aim of this prospective study is to determine whether MG infection is associated with preterm birth. Secondary outcomes include evaluating the relationship of MG infection with other common STIs (*Neisseria gonorrhoea*, *Chlamydia trachomatis*, *Trichomoniasis vaginalis*) and establishing if MG infection is more common among young women (<25 years old) as well as among multiparous women (≥4 pregnancies).

Methods: All pregnant women who presented to Touro Infirmary, New Orleans, LA for delivery between March 1, 2016 and March 31, 2017 were offered enrollment. Urine collected during admission was tested for MG using a TaqMan®-based quantitative PCR assay. Data collected included: demographic variables and adverse pregnancy outcomes including history of preterm birth and current or past infection with STIs. Fischer's exact test was used to analyze the association of MG infection with preterm birth and other STIs after adjusting for history of preterm birth using logistic regression analysis. Bivariate analysis with logistic regression was used to evaluate the association of parity and young maternal age. A p-value of <0.05 was used for significance.

Results: Of 562 women offered enrollment, 297 enrolled in the study. The mean age and parity of patients was 27 years old and 1.2, respectively. Sixty-six percent of patients were African American, followed by Caucasian women (15%). The overall mean gestational age at time of delivery was 38 3/7 weeks gestation and 15% of women had preterm birth (<37 weeks gestation). Nine percent of women had MG infection at the time of delivery. There was no significant association between MG status and preterm birth ($p = 0.201$) nor MG and other STIs ($p=0.643$). In bivariate analysis with logistic regression, parity and young maternal age (<26 years) were not significantly associated with MG status (adjusted OR = 1.02, $p = 0.924$; adjusted OR= 1.75, $p = 0.227$). After adjusting for history of preterm birth via logistic regression analysis, parity and young maternal age (<26 years) were not significantly associated with MG status (adjusted OR = 0.96, $p = 0.792$; adjusted OR= 1.80, $p = 0.231$).

Conclusion: *M. genitalium* diagnosis is largely presumptive and highly dependent on clinical suspicion. Currently, there are no prospective studies looking at intrapartum rates of MG infection. Importantly, with regard to adverse pregnancy outcomes, no prospective studies have assessed the role of *M. genitalium* colonization with preterm labor. Consistent with other studies, our findings demonstrated that 8% of urban inner city women are infected with MG. Unfortunately our pilot study was underpowered to detect a difference for preterm labor and STI risk factors. Further studies involving multiple centers are needed to investigate this relationship.

Poster Presentations

Samantha Bland MD, House Officer III, LSUHSC Baton Rouge

Endometrial Hyperplasia Risk factor Stratification on Endometrial Biopsy Recipients

Samantha Bland MD, Sarah Buzhardt MD

Elise Boos MD, House Officer III, LSUHSC New Orleans

Contraceptive Literacy and Planned Use in Post-Partum Patients

Elise Boos MD, Joseph Hagan ScD, Stacey Holman MD

Megan Borens MD, House Officer III, LSUHSC Baton Rouge

The Association Between Intrauterine Pressure Catheters and Chorioamnionitis in Obese Women

Megan Borens MD, Lakedra Pam MD

Erin Dougher MD, Fellow, LSUHSC New Orleans

The Use of Lidocaine Gel and Pain Perception in Women During Diagnostic Flexible Cystoscopy

Lisa Peacock MD, Erin Dougher DO, Joseph Hagen ScD, J.C. Winters MD, Ralph Chesson MD, Ryan Krlin MD, Barry Hallner MD, Diane Thomas MD, Gillian Wolff MD

Cynthia Grady MD, House Officer II, LSUHSC New Orleans

Impact of Electronic Health Records on Resident Physicians' Off-Duty Time: A Multi-specialty Resident Survey at a Large ACGME Accredited Institution

Cynthia Grady MD, Sion Ward, Krystal Lockhart BS, Florencia Polite MD

Lauren Knapp MD, House Officer II, LSUHSC New Orleans

Readmissions for Postpartum Pre-Eclampsia: Understanding Risk Factors

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

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

Lower Genital Tract Dysplasia and Cancer in Women with HIV

Anna Kuan-Celarier MD, Dreda Romig, Amelia Jernigan MD

Julie Lagarde MD, House Officer III, LSUHSC Baton Rouge

Prenatal Intent to Breastfeed Compared to Breastfeeding at Hospital Discharge

Julie Lagarde MD, Lakedra Pam MD, F. A. Moore MD

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Post-Partum Contraception: A Descriptive Study of Recipients' Method of Choice and Timing of Initiation

Ophelia Langhorne MD, Rose DePaula BS, Jamaan Kenner MD, Valerie Williams MD

Kelly McCune MD, House Officer III, LSUHSC Baton Rouge

Post-Operative Wound Complication Following Use of Negative Pressure Wound Therapy in Obese Women Following Cesarean Delivery

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*Incidence and Detection of Hypoxemic Episodes During Cesarean Delivery in Patients with Risk
Factors for Obstructive Sleep Apnea*

Nia Thompson MD, MPH, Eliza Rodrigue MD, Virginia Fontenot BS, Irene Stafford MD



Endometrial Hyperplasia Risk Factor Stratification on Endometrial Biopsy Recipients

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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.

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Contraceptive Literacy and Planned Use in Postpartum Patients

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Background/Objective

- *Contraceptive health literacy* is defined as the degree to which women have the capacity to obtain, process, and understand basic health information and contraceptive methods needed to make appropriate reproductive health decisions.
- Multiple studies support a higher frequency of unintended pregnancy, unintended births, abortions, and teen pregnancies among minorities and women of low socioeconomic status. This demographic is also noted to have poor health literacy levels.
- Studies have also found a relationship between this population and lower rates of contraceptive initiation and efficacy. These patients are less likely to use varied contraception methods, more likely to experience a contraceptive failure, and more likely to discontinue the method. While the reasons for this are complex and multifactorial, many studies suggest this is due to having less knowledge of reproductive health, fertility, and contraception.
- On average, 45% of pregnancies in the United States are unintended. Of those unintended pregnancies, approximately 95% occur in women with incorrect, inconsistent or no use of contraception.
- In Louisiana, where there is a high level of poverty, unmet contraceptive need and poor health literacy, 60% of pregnancies are unintended.

Hypothesis

Women with poor health literacy often have concomitant poor contraceptive literacy. This notably impacts understanding and utilization of contraception in the immediate post-partum period and increases the risk of future unintended pregnancy.

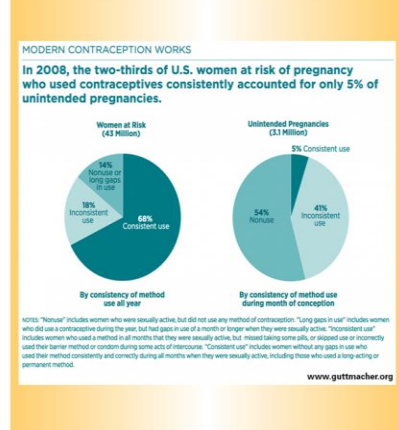
Materials and Methods

- The study will occur on the postpartum ward prior to discharge. Included will be English speaking postpartum patients, age 18 and older, who have received antenatal care at a resident provider clinic.
- Patients will provide demographic information and chart review will be used to document the participant's obstetrical history & antepartum care.
- Health literacy will then be assessed utilizing two well validated tools, the Rapid Estimate of Adult Literacy in Medicine-7 (REALM-7) and The Newest Vital Sign. The REALM-7 tests one's ability to read and properly pronounce basic health terms. The Newest Vital Sign utilizes an ice cream label to assesses numeracy skills, or one's ability to reason and apply numerical concepts.
- Administration of a standardized survey will then assess patient contraceptive history, future pregnancy and contraception plans, personal/partner/physician attitudes towards contraception, and patient understanding of particular contraceptive methods.

Expected Results

- Among post-partum women with poor health literacy or numeracy, we expect to see:
- late initiation of contraception
 - increased incidence of unintended pregnancy
 - increased misinformation regarding specific contraceptive methods
- We expect that women with poor contraceptive literacy feel inadequately counseled on contraceptive options by their healthcare providers or pressured to choose a particular method.
- By gaining understanding of our patients' health literacy, we hope to achieve the following:
- develop skills to appropriately educate and counsel patients on available contraceptive methods
 - Improve contraceptive literacy and subsequently improve contraceptive initiation and continuation
 - decrease contraceptive failures and thus decrease adverse maternal and child outcomes related to short interval pregnancy
 - empower women to utilize contraception to plan their family size

Tables/Graphs



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Background

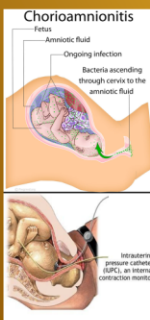
Chorioamnionitis is the inflammation of fetal membranes caused by an ascending polymicrobial infection. It affects as many as 10% of laboring women. It is a clinical diagnosis that is made using specific criteria after the exclusion of other sources of infection. Maternal complications associated with 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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The use of lidocaine gel and pain perception in women during diagnostic flexible cystoscopy.

Division of
FPMRS

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Introduction

The use of anesthetic lubricant during in-office cystoscopy has been heavily studied in the male population. Pain due to cystoscopy can lead to poor compliance and follow-up. Few studies have looked at the efficacy of anesthetic lubricant in women during rigid cystoscopy and there has been no published data on its effect on pain perception in women during diagnostic in-office flexible cystoscopy. Choe et al. studied 144 women undergoing rigid cystoscopy and found that pain was decreased with lidocaine vs placebo, however other studies found no difference in pain perception. There is no standard of care on the use of lidocaine gel during diagnostic flexible cystoscopy in women.

Hypothesis

The use of lidocaine gel will not significantly change the pain perception of women undergoing in-office diagnostic flexible cystoscopy.

Methods and Materials

Prospective double-blinded randomized control trial on women from the age of 18-99 undergoing in-office diagnostic flexible cystoscopy. Patients will be randomized to the use of 2% lidocaine versus standard lubricant gel prior to the procedure. The patients will be prepped according to standard protocol and 9 cc of gel will be retrograde infused intra-urethrally. The remaining 1cc will be applied to the cystoscope. The cystoscopy will be performed per routine protocol 15 minutes after gel application. The patient will fill out a pre-procedure and post-procedure questionnaire using a 11 point NRS score to determine pain perception. For the primary study hypothesis, a Two One-Sided Test (TOST) of equivalence will be used to compare the mean post-procedure pain scores of patients treated with lidocaine gel vs. plain gel. The equivalence limit determined to show no difference in pain perception is a difference of +/-1 on the NRS pain scale. Recruitment is currently in process with a 90% power of 40 patients per arm. The goal is to recruit 100 per arm to allow for drop out and ensure appropriate power.

11 Point Numeric Rating Scale

0	1	2	3	4	5	6	7	8	9	10
No Pain Sensation										Worst Imaginable Pain

Flexible Cystoscope



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Impact of Electronic Health Records on Resident Physicians' Off-Duty Time: A Multi-specialty Resident Survey at a Large ACGME Accredited Institution

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Background

Electronic health records (EHRs) have greatly impacted how we provide care. One potential negative impact has been the amount of time used for documentation of patient care in the office/hospital setting and particularly while off-duty. Little research has been done to investigate whether residents access EHRs remotely while off-duty to complete daily clinical duties. Previous smaller studies have shown that if residents included their off-duty hours spent on patient care, they might violate the duty hour restrictions mandated by the ACGME.

Objective

To evaluate off-duty EHR use among residents in residency training programs at the Louisiana State University Health Sciences Center (LSUHSC), a large multispecialty sponsoring institution with an EHR accessible via the internet.

The ACGME's Commitment to Patient-Centered, Clinically-Driven Standards Statement (MARCH 2017)

"The new requirements further reinforce the patient safety framework already in place in the Common Program Requirements The revisions now provide additional safeguards by **counting work at home as part of the 80 hour weekly maximum**"

This project will be utilized to further clarify and guide the duty work hour restrictions that are mandated by the ACGME

Methods

- A survey instrument was designed based on literature review, current ACGME core requirements, and previous surveys.
- After informed consent was obtained, demographic information, resident perception of EHR, and subjective amount of time spent on EHR in off-duty hours was collected.
- All accredited residency programs within the LSUHSC were invited to participate and printed surveys were administered to residents over a 3-month time frame during their resident education meetings.
- Data analysis:
 - Likert scale responses will be compared for males versus females using the Mann-Whitney U test
 - Responses for medical specialty, reason for access, and method used to access EHR will be compared using the Kruskal-Wallis Test
 - Using the Likert scale responses, associations will be determined among year of training, total work hours, and hours spent accessing the EHR (at home, work, inpatient setting, outpatient setting) using Spearman's correlation

Survey Progress

- ~10% of residents have been surveyed (73/732)
- Goal of >70% participation
- Survey administration is nearly complete at out of town facilities so primary focus will be New Orleans programs

Expected Results

- A significant number of residents access EHR outside of the hospital setting
- >30% of residents would exceed duty hour restrictions if EHR use outside of the workplace was included in those recorded hours
- Residents will state that EHR use impacts their off-duty quality of life
- EHR use outside of the hospital setting will be largely devoted to completing patient charts and following up on patient-related results

Goals



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Readmissions for Postpartum Pre-Eclampsia: Understanding Risk Factors

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Background

Approximately 0.8% of postpartum patients are readmitted to the hospital. Pre-eclampsia, a hypertensive disorder of pregnancy characterized by new-onset blood pressure elevation associated with proteinuria, is a frequent cause of these readmissions. Risk factors for postpartum pre-eclampsia have not been clearly differentiated from risk factors for pre-eclampsia in general.

Materials and Methods

- > Chart review of patients delivered at Touro Infirmary
- > Case-control study
 - > Cases: Patients readmitted postpartum with pre-eclampsia with severe features
 - > Controls: Patients diagnosed with pre-eclampsia with severe features antepartum, intrapartum, or postpartum but prior to discharge
- > Variables of interest:
 - > age
 - > race
 - > parity
 - > BMI
 - > history of pre-eclampsia in prior pregnancies
- > Odds ratio will be calculated for each of the variables

Relevance

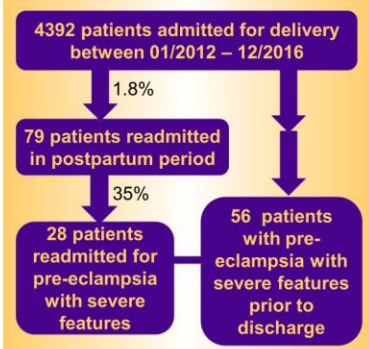
- Better understanding of patients who are at risk for development of pre-eclampsia in the postpartum period could lead to:
- > Improved patient education and awareness
 - > More prompt evaluation and treatment
 - > Prevention of readmissions and further adverse outcomes

Objective/Hypothesis

The objective of our study is to better understand how patients who develop pre-eclampsia requiring postpartum rehospitalization differ from patients with pre-eclampsia in the antepartum, intrapartum, or immediate postpartum period.

We believe that patients who are readmitted for development of pre-eclampsia with severe features after the admission for delivery will possess a different set of demographics and comorbidities than those patients who develop pre-eclampsia with severe features prior to discharge from the hospital admission for delivery.

Preliminary Data



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Lower Genital Tract Dysplasia and Cancer In Women with HIV

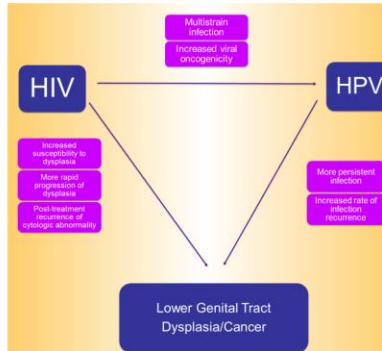
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Background & Objectives

Louisiana has the nation's 6th highest incidence and 5th highest mortality rate due to cervical cancer. The incidence of cervical dysplasia and cancer is higher in the HIV-infected population than in the non-infected population. The relationship between HIV, HPV, and cervical cancer is still being elucidated. Even less is clear regarding the relationship between HIV and vaginal and vulvar cancers. More information about the pathophysiology of these disease processes as well as about prognosis, treatment, and post-treatment surveillance is needed to inform current guidelines for prevention, screening, and management.

The goal of this project is to describe the natural history and response to treatment of lower genital tract dysplasia in women living with HIV. By creating a database of information on HIV+ women with cervical, vaginal, and vulvar dysplasia and cancer, we hope to clarify the utility, safety, and efficacy of screening and treatment practices in this patient population.

Scientific Background



Current Guidelines

- ACOG primarily refers to the recommendations of the Panel on the Prevention of Opportunistic Infections in HIV-Infected Adults and Adolescents for cervical cancer screening:
 - Begin cervical cancer screening within one year of HIV diagnosis or initiation of sexual activity, no later than age 21
 - Younger than 30: screen annually with cytology for 3 years - if all 3 tests are normal, may increase screening frequency to every 3 years with cytology alone
 - 30 and older: screen annually with cytology for 3 years, or 1 time with cotest - if all 3 annual cytologies or 1 cotest are normal, may increase screening interval to every 3 years with cytology or cotesting
 - Screening should continue throughout lifetime
- The Panel provides guidance for management of abnormal results.
- These guidelines are largely based on expert committee opinion and require further validation.
- Novel screening algorithms, such as with primary HPV testing, have gained popularity but have not been assessed in HIV+ women.
- Novel guidelines exist for the management of vaginal cuff dysplasia but these have not been evaluated in HIV+ women.

Materials and Methods

A database of demographic and clinical information from female patients with HIV infection and lower genital tract dysplasia and cancer will be constructed through retrospective and prospective chart review.

Inclusion Criteria: female HIV+ adolescents and adults seen at the LSUHSC Department of Obstetrics & Gynecology Colposcopy Clinic as well as patients of the Division of Gynecologic Oncology at University Medical Center between 1/1/2012 and 6/30/2020.

Exclusion Criteria: none

Patients will be identified by querying the Epic electronic medical record system using ICD codes for "HIV" and "encounter for screening for cervical cancer." Patients will also be identified by residents and attendings in the outpatient clinics.

Some of the data points to be collected include:

- Demographics: age, race, insurance status
- HIV history: duration of infection, CD4 count, viral load, HAART
- HPV history: vaccination, infection history, subtypes
- Lower genital tract history: dysplasia/cancer diagnoses, management, post-treatment surveillance, and recurrence and subsequent management

Research Questions

Basic Science

- What is the distribution of HPV genotypes in the HIV+ population in New Orleans?

Clinical Medicine

- Could HPV testing alone reliably guide diagnosis and management of lower genital tract dysplasia in HIV+ women?
- Is HIV viral load, CD4 count, or the use of HAART associated with severity of lower genital tract dysplasia at diagnosis, persistence of dysplasia, resolution rate, or recurrence rate?
- Are some HPV genotypes more difficult to resolve than others in HIV+ women?
- Do current guidelines adequately inform post-treatment surveillance in patients with HIV? Are these guidelines more or less valid in women with more severe levels of immunosuppression or on HAART?

Disparities in Medicine

- Do women with HIV receive the standard of care in prevention, screening, and management of cervical dysplasia/cancer?
- Are disparities different by race, payer, or socioeconomic status within the HIV+ cohort?

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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.

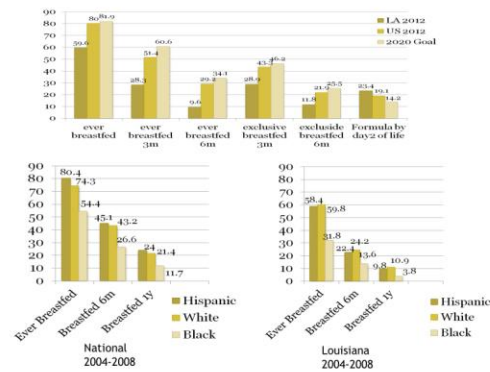
Hypothesis:

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, primgravids, 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.

Breastfeeding Rates



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Post Partum Contraception: A Descriptive Study of Recipients' Method of Choice and Timing of Initiation

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Background

- Short interval pregnancy (SIP) is commonly defined as a pregnancy conceived within 18 months of a prior birth
- SIP is a public health problem in the United States:
 - Across various samples, ~35% of pregnancies conceived meet the definition of a SIP
 - The 2020 Healthy People objectives call for a 10% decrease in SIP
 - Women with SIP are more likely to report the index pregnancy as unintended
- Unintended pregnancies are a public health problem in the United States:
 - 49% of all U.S. pregnancies are unintended
 - 82% of pregnancies in women under the age of 20 are unintended
- Unintended pregnancy and SIP are also associated with adverse maternal and fetal outcomes including:
 - Preterm birth
 - Low birth weight
 - Preeclampsia
- Age, race, educational achievement, marital status and insurance type are risk factors for both SIP and unintended pregnancy.

Materials and Methods

- We examined Labor & Delivery statistics and hospital discharge records from October 2016 to identify patients whose postpartum contraceptive choice had been listed as "undecided", "declined", or "interval".
- We searched the electronic medical records (EMR) of the five health systems that serve our patients to determine if these patients showed up to their six week postpartum appointment and whether or not they initiated a method at that time.
- Additionally, we tracked variables including: age, race, level of education, marital status, zip code, gravidity/parity, clinic, history of third trimester gonorrhea or chlamydia, gestational age at delivery, postpartum hemorrhage and lactation status.
- When sample size permits, we will carry out our primary objective in two ways:
 - Compare SIP rates in women who received immediate postpartum LARC and those who expressed desire for it at a six- week interval using t-test and Pearson's Chi-squared
 - Adjust for demographic and reproductive factors using linear regression

Tables/Graphs

Intention of non-contracepted patients at time of hospital discharge

Interval LARC	8
Undecided	4
Declined	2

Contraceptive status at six weeks postpartum

LARC	4
Other method	6
Declined	1
Lost to follow-up	3

Objective/Hypothesis

- In the long term, our objective is to investigate how implementation of contraceptive counseling and access to immediate postpartum long acting reversible contraception (LARC) affects the SIP rate among patients in a large, urban, academic center in the Southern United States.
- We hypothesize that contraceptive counseling and access to immediate postpartum LARC will result in a decrease in SIP in our patient population.
- We also hypothesize that we will see a decrease in adverse maternal and fetal health outcomes.
- We estimate that we will need 500 patients to study our question. Because postpartum LARC was not implemented until June 2014, an insufficient amount of time had elapsed at the time of this submission from which we could review, analyze and draw conclusions about changes in SIP rates.
- In the interim, we conducted a descriptive study aimed at identifying differences in certain demographic factors among our patient population.

Preliminary Data

- 16% of patients were either undecided, declined contraception or expressed desire for an interval LARC (14/88).
- Patients ranged in age from 21-50yo.
- 50% of patients were African-American (7/14), 14% of patients were Hispanic (2/14), 14% of patients were Caucasian (2/14), 7% of patients were Asian (1/14), 7% of patients were American Indian/Alaskan (1/14) and 7% of patients were identified as Other (1/14).
- 7% of patients were identified as a college graduate (1/14).
- Gestational age at delivery ranged from 36w1d – 40w4d.
- All but one patient were from LA and of the other 13, all came from one of five major neighborhoods in the city of New Orleans and greater metro area.
- None of the patients had G/C in the third trimester or a PPH.
- 71% of patients engaged in breastfeeding to some degree (10/14).
- 57% of patients (8/14) expressed desire for an interval LARC and we can confirm that 50% of them (4/8) received a LARC.

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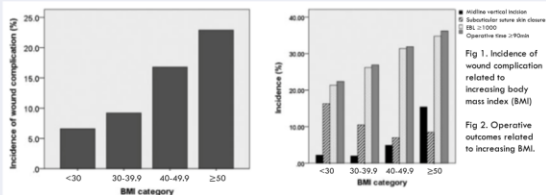
POST-OPERATIVE WOUND COMPLICATION FOLLOWING USE OF NEGATIVE PRESSURE WOUND THERAPY IN OBESE WOMEN FOLLOWING CESAREAN DELIVERY

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Introduction

According to 2014 CDC data, 38% of American women are obese with a body mass index (BMI) greater than or equal to 30. Such trends have a significant effect on the outcomes of these women during pregnancy. One meta-analysis showed that cesarean rates are more than doubled in obese women. Obese women are at a significantly higher risk for post-operative complications including surgical site infections, prolonged hospitalization, venous thromboemboli and death. Interventions that can moderate the risk of delivery for these patients has the potential to greatly reduce morbidity and mortality and also possibly curb the growing cost of providing care for these patients. Woman's Hospital serves the largest obstetric population in Louisiana, a state which currently ranks fourth in the nation in statewide obesity rate (34.9% in 2015). Evaluation of the outcomes of such a patient population may provide valuable insight into the overall efficacy, complication rates, and cost-effectiveness of using negative pressure wound therapy (NPWT) for obese obstetric patients post-operatively.



Hypothesis

We hypothesized that obese cesarean patients with NPWT placed following delivery will have lower rates of post-operative wound complications than similar patients for whom NPWT was not utilized.

Preliminary Results

Preliminary data analysis revealed the distribution shown in the table below. We expect that after analysis is complete, there will be significant differences in post-operative wound complication rates in patients for whom NPWT was and was not used, particularly after adjustment for confounding factors including comorbidities, type of incision/closure, prep used and others. Data will allow us to assess the overall efficacy of NPWT in these patients.

	Number	Frequency
Cesarean Deliveries	5640	-
Prevena	341	6.05%
SSI	75	1.33%
BMI		
<30	1853	32.85%
30-39.9	2646	46.91%
40-49.9	920	16.31%
≥50	207	3.67%
Not recorded	14	0.25%

Methods

We are conducting a retrospective chart review of all cesarean deliveries at Woman's Hospital between April 1, 2014 and January 31, 2016. Adjustment for possible confounding factors will include maternal age, EGA, primary vs. repeat cesarean, GBS and MRSA carrier status, preoperative antibiotics, operative status, incision type, skin prep and closure type, EBL, dressing and presence of comorbidities such as DM and HTN.

Using Woman's Hospital data, we will evaluate NPWT use in obese obstetric patients in an effort to answer several questions:

- What are the rates of infection and wound complication overall following NPWT use in obese cesarean patients vs. those without NPWT?
- Does data demonstrate variation in efficacy between sub-stratifications of BMI, or is there an optimal BMI for use?
- What is the utility of using NPWT as a prophylactic measure in morbidly obese patients vs. the cost of wound care in these patients? (i.e. NNT)

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Incidence and Detection of Hypoxemic Episodes During Cesarean Delivery in Patients with Risk Factors for Obstructive Sleep Apnea

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Background/Objective

OSA is a sleep disorder affecting 1 in 5 adults in the general population. These rates are on a steady rise due to the ever growing epidemic of obesity. Obesity is associated with a 12–30 fold increased risk of obstructive sleep apnea (OSA) and is found in 40% of obese females. Currently there is a paucity of literature that examines OSA in the pregnant patient population. The current body of literature suggests that pregnant women with OSA are at an increased risk of Preeclampsia, NICU admission, and delivery via cesarean delivery (1,2). Additionally, disastrous respiratory outcomes during the perioperative management of gravid patients with OSA are a major concern for anesthesia care providers as it leads to increased morbidity and mortality.

Materials and Methods

After obtaining informed consent, women undergoing routine cesarean delivery will be asked to answer a questionnaire (Berlin and STOP-BANG) to assess their risk for obstructive sleep apnea.

Per hospital protocol patients wear a nasal airflow cannula during their cesarean section. Intra-operatively they were monitored with nasal airflow cannula as well as pulse oximetry to assess oxygen saturation. Number of hypoxic events were recorded during each delivery (> 1-2, > 3-4, > 5- 9, > 10 episodes). Hypoxemic episodes were defined as an oxygen saturation <92% , >3% from baseline, and witnessed events that were not detected by nasal cannula or pulse-oximetry. Maternal demographics, body mass index, and medical comorbidities were all collected. The relationship between positive questionnaire and hypoxic events as well as medical comorbidities were calculated using Fishers exact test with $P < .05$ as significance.

Tables/Graphs

5/26 (19%) patients with data available were positive using the Berlin tool.
3/23 (13%) patients with data available were positive using the STOP Bang tool.

STOP Bang and Berlin scores were not significantly associated with the occurrence of hypoxic events, (> 1-2, > 3-4, > 5- 9, > 10) but the sample size was small yielding lower power to detect such associations. See frequencies and Fisher's exact test p-values below.

Fisher's exact test p = 1.000				Fisher's exact test p = 1.000			
STOP Bang	1-2 episodes		Total	Berlin	1-2 episodes		Total
Frequency	yes	no		Frequency	yes	no	
neg	1	17	18	neg	1	19	20
	5.56	94.44			5.00	95.00	
pos	0	3	3	pos	0	4	4
	0.00	100.00			0.00	100.00	
Total	1	20	21	Total	1	23	24
Frequency Missing = 78							

Chronic hypertension was significantly associated with 3-4 episodes. See below.

Fisher's exact test p = 0.022			
Chronic HTN	3-4 episodes		Total
Frequency	yes	no	
yes	2	0	2
	100.00	0.00	
no	2	20	22
	9.09	90.91	
Total	4	20	24

Hypothesis

The purpose of this study is to evaluate the characteristics and correlation between established OSA questionnaires of gravid patients undergoing cesarean delivery with regional anesthesia and the number of intraoperative hypoxemic episode(s) during the procedure.

With preliminary data we hypothesize the sleep apnea screening tools are not useful nor validated in the obstetric population. Additionally, we hypothesize that obesity and existing comorbidities are strongly correlated with intrapartum hypoxemic events.

Preliminary Data

- A Total of 26 patients were analyzed. 1 Patient was excluded for missing data

Maternal Demographics

Label	N	Mean	Std Dev	Minimum	Maximum
Age	26	29.4	6.9	17.0	47.0
Gravidity	26	3.0	1.5	1.0	8.0
Para	26	1.3	0.9	0.0	4.0

Conclusions

Routine questionnaires often used to screen for OSA may not be useful in predicting hypoxemia or hypoxia in pregnant women at risk. We found chronic hypertension to be a significant risk factor for OSA. A larger sample size is required to detect true associations.

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LSU OB/GYN Residents and Faculty Quality Improvement and Patient Safety 2016 – 2017

Oral Presentations:

1. Holman S, Pruitt ER. *UMCNO Performance Improvement Project: Surgical Site Infection Prevention for Abdominal Hysterectomy*. LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017 (Oral Presentation).

Poster Presentations:

2. Jadauji J, Duhon A, Schachter A, Stafford I. *Risk of Pregestational Diabetes Mellitus among Pregnant Women with the Diagnosis of Gestational Diabetes*. LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017 (Poster).
3. Jones M, Berra A, Rodrigue E, Neuhoff BK, Stafford I. *Cost Analysis: Cepheid GBS Analyzer vs. NICU Admission*. LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017 (Poster).
4. Neuhoff BK, Rodrigue E, Berra A, Stafford I. *Group B Streptococcus Early Onset Disease Rates Among Newborns Delivered at Touro Infirmary*. LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017 (Poster).
5. Odisho R, Nguyen T, Ward K, Stafford I. *Assessing Follow-through of Sickle Cell Screening in Fathers during Prenatal Care*. LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017 (Poster).
6. Oko O, Tompkins E, Squeo G, Fontenot V, Stafford I. *Rescue Steroids: Does Everyone Get Them?* LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017 (Poster).
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41. Navas J, Nguyen L, Hoxsey R. Performance and Retention Skills Amongst Novice and Experienced Residents on a Virtual-Reality Hysteroscopy Training Simulator. Annual Meeting Association of Professors in Gynecology & Obstetrics and Counsel on Resident Education in Obstetrics & Gynecology, Orlando, Florida, March 2012.
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48. 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, Maryland, March 2014.
49. Rodrigue E, Neuhoff BK, Berra A, Stafford I. Group B Streptococcus Unknown Colonization Status at Touro Infirmary. LSUHSC Annual Quality Improvement & Patient Safety Forum, June 2017 (Poster).
50. Rose PG, Mahdi H, Jernigan A, Yang B. Activity of Bevacizumab in Patients with Low-Grade Serous Ovarian Carcinoma. *Int J Gynecol Cancer*. 2016 Jul; 26(6):1048-52.
51. Ryan DH, Yockey SR. Weight Loss and Improvement in Comorbidity: Differences at 5%, 10%, 15%, and Over. *Curr Obes Rep*. 2017 Apr 28.
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53. Scholl J, Durfee SM, Russell MA, Heard AJ, Iyer C, Alammari R, Coletta J, Craig SD, Fuchs KM, D'Alton M, House M, Jennings RW, Ecker J, Panda B, Tanner C, Wolfberg A, Benson CB. First trimester cystic hygroma: relationship of nuchal translucency thickness and outcomes. *Obstet Gynecol* 2012; 120(3): 551-559.
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55. 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 OR Reader. Annual Meeting Association of Professors in Gynecology & Obstetrics and Counsel on Resident Education in Obstetrics & Gynecology, Phoenix, Arizona, February 2013 (Poster). Best Student/Resident Research Award.
56. 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).
57. 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, 2017 (Poster).
58. Tobler KJ, Kaufmann R, Ross R, Dickey RP, Benner AT, Kearns WG. Preimplantation Genetic Screening (PGS) on Day-5 Blastocysts with a Day-6 Embryo Transfer Results in a Clinical Pregnancy Rate of 71%; P-174. Conjoint Meeting of the International Federation of Fertility Societies and the American Society for Reproductive Medicine. Boston, October 12-17, 2013. *Fertility and Sterility* 2013;100:S198.

59. 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).
60. Washington GP, Lewis PL, Miller JM Jr. Obstetric Intensive Care Admission to a Tertiary Center. Central Association of Obstetricians and Gynecologists, Chicago, Illinois, October 2012 (Poster).
61. Washington GP, Maupin RT Jr, Miller JM Jr. Single Umbilical Artery – Left or Right: It May Matter. Central Association of Obstetricians and Gynecologists, Chicago, Illinois, October 2012 (Poster).
62. Wolff, G, Winters, JC, Chesson, RR; Repair of a complex vaginal J-pouch fistula utilizing a gracilis muscle interposition flap. Society of Urodynamics Female Urology (SUFU) March 2017 and American Urologic Association May 2017, Video presentation.
63. Xiong X, Dickey RP, Pridjian G, Buekens P. Maternal age and preterm births in infants conceived by in vitro fertilization in the United States. Abstract Accepted, 142nd Annual Meeting American Public Health Association, New Orleans, Nov.14-19, 2014.
64. Xiong X, Dickey RP, Pridjian G, Buekens P. Maternal age and preterm births in singleton and twin pregnancies conceived by in vitro fertilization in the United States. *Paediatr Perinat Epidemiol.* 2015 Jan; 29(1):22-30.
65. Xiong X, Pridjian G, Dickey RP. Race and ethnic disparities in preterm births in infants conceived by in vitro fertilization in the United States. *Am J Epidemiol* 2012; 175 (11 suppl.): S318.
66. Xiong X, Dickey RP, Buekens P, Pridjian G. Use of Intracytoplasmic Sperm Injection in Women Conceived by In Vitro Fertilization in the US: Frequency, Maternal Characteristics and Birth Outcomes Abstract accepted for presentation at the 48th annual Society of Epidemiologic Research (SER) meeting, Denver, Colorado, June 16-19, 2015.

LSU OB/GYN Resident Research Day Presentations

2016

***** Jay Davis, MD, House Officer III**

Advisor: Asha Heard, MD

Does SSRI Use in Pregnancy Increase the Risk of Preterm Delivery in Male Fetuses?

Leia Harbour, MD, House Officer II

Advisor: Richard Dickey, MD

Uterine Artery Blood Flow Volume in Early Pregnancy

Traci Iwamoto, MD, House Officer IV

Advisor: Florencia Polite, MD

Incidence of Leiomyosarcoma in Patients Undergoing Surgery for Leiomyoma

Ashley O'Keefe, MD, House Officer III

Advisor: Stacey Holman, MD

*Assessment of Preoperative Risk Factors to Predict Surgical Site Infection After Hysterectomy:
A Retrospective Cohort Study*

Delaura Patel, MD, House Officer IV

Advisor: Valerie Williams, MD

Accuracy of Clinical Diagnosis of Bacterial Vaginosis Among LSU Ob/Gyn Residents

*****Tabitha Quebedeaux, MD, House Officer III**

Advisor: Joseph Miller, MD

Cardiopulmonary Disease in Obstetrical ICU Admissions

*****Megan Savage, MD, House Officer II**

Advisor: Asha Heard, MD

Placenta Previa: Does Location Impact Resolution?

Amanda Thomas, MD, House Officer IV

Advisor: Lisa Peacock, MD

An Evaluation of the Effect of Vaginal Packing at the Time of Vaginal Surgery

*****2016 Research Award Recipient**