28th Annual
LSU School of Medicine
Department of Obstetrics & Gynecology

Resident Research Day
Friday, May 20, 2016

LSU Health Sciences Center
1542 Tulane Ave, 1st Floor Auditorium
New Orleans, LA

Keynote Speaker:
Shawn Menefee, M.D.
Director of Female Pelvic Medicine and Reconstructive Surgery
Kaiser Permanente San Diego
Chief of Southern California Pelvic Floor Disorders Group

Shawn Menefee, M.D.

Director of Female Pelvic Medicine and Reconstructive Surgery
Kaiser Permanente San Diego

Dr. Menefee is currently the Director of Female Pelvic Medicine and Reconstructive Surgery at Kaiser Permanente San Diego. He received his medical degree from the University of Tennessee College of Medicine in Memphis, TN. He completed his residency at the Naval Medical Center in Portsmouth, Virginia. He finished his fellowship training in Urogynecology at LSU Medical Center in New Orleans, LA.

His current division is one of the largest in the country with 7 physicians, 2 NPs, and 3 continence RNs. They were recently awarded the Center of Excellence by the patient advocacy group, National Association for Continence (NAFC). He is a partner in the Southern California Permanente Medical Group in which he is an active leader for Pelvic Floor Services. He currently serves as the Chief of Southern California Pelvic Floor Disorders Group, a consortium of over 50 pelvic floor providers in the Permanente Medical Group and National & Regional Lead for the Kaiser Permanente Gynecology Robotics Group. He has served as Co-Director for the UCSD/Kaiser FPMRS Fellowship Program and is the site Primary Investigator for the NIH sponsored Pelvic Floor Disorders Network.

Dr. Menefee is currently an elected Board Member for the American Urogynecologic Society, a member of Society of Gynecologic Surgeons, and member of the Editorial Board for the Journal of Female Pelvic Medicine and Reconstructive Surgery.

Pelvic Floor Dysfunction: Past to Present

Learning Objectives:

1) To review the advancements in the management of Overactive Bladder

2) To review advancements in the management of Stress Female Urinary Incontinence

3) To review the advancements in treatment of Pelvic Organ Prolapse

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7:30-8:00am	**Continental Breakfast & Sign-In**
8:00-8:10am	**Welcome & Introduction of Guest Speaker** Lisa Peacock, MD, Interim Chairman LSUHSC Dept. of OBGYN
8:10-9:00am	***Pelvic Floor Dysfunction: Past to Present*** Shawn Menefee, MD Kaiser Permanente San Diego
9:00-9:10am	**Break**
9:10-9:35am	***Cardiopulmonary Disease in Obstetrical ICU Admissions*** **Tabitha Quebedeaux, MD, PhD, House Officer III** Advisor: Joseph Miller, MD Discussant: Irene Stafford, MD
9:35-10:00am	***Accuracy of Clinical Diagnosis of Bacterial Vaginosis Among LSU Ob/Gyn Residents*** **Delaura Patel, MD, House Officer IV** Advisor: Valerie Williams, MD Discussant: Lakedra Pam, MD
10:00-10:25am	***Assessment of Preoperative Risk Factors to Predict Surgical Site Infection After Hysterectomy: A Retrospective Cohort Study*** **Ashley O'Keefe, MD, House Officer III** Advisor: Stacey Holman, MD Discussant: Danny Barnhill, MD
10:25-10:35am	**Break**

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10:35-11:00am ***Does SSRI Use in Pregnancy Increase the Risk of Preterm Delivery in Male Fetuses?***

Jay Davis, MD, House Officer III
Advisor: Asha Heard, MD
Discussant: Robert Maupin, MD

11:00-11:25am ***Incidence of Leiomyosarcoma in Patients Undergoing Surgery for Leiomyoma***

Traci Iwamoto, MD, House Officer IV
Advisor: Florencia Polite, MD
Discussant: Guy Orangio, MD

11:25-11:50am ***An Evaluation of the Effect of Vaginal Packing at the Time of Vaginal Surgery***

Amanda Thomas, MD, House Officer IV
Advisor: Lisa Peacock, MD
Discussant: Barry Hallner, MD

11:50-12:00pm **Break**

12:00-12:25pm ***Placenta Previa: Does Location Impact Resolution?***

Megan Savage, MD, House Officer II
Advisor: Asha Heard, MD
Discussant: Joseph Miller, MD

12:25-12:50pm ***Uterine Artery Blood Flow Volume in Early Pregnancy***

Leia Harbour, MD, House Officer II
Advisor: Richard Dickey, MD
Discussant: Valerie Williams, MD

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12:50-2:00pm	**Lunch**
2:00-3:00pm	**Poster Viewings and Presentations**
3:00-3:30pm	**Award Presentation and Final Remarks**

Cardiopulmonary Disease in Obstetrical ICU Admissions

Tabitha M. Quebedeaux MD, PhD, Joseph Miller MD

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

Objective: Cardiac disease has emerged as an increasingly prevalent indication for admission of obstetric patients into intensive care units (ICU). These admissions represent near misses, or cases in which lack of significant medical intervention could result in maternal mortality. Cardiac complications in pregnancy remain the leading cause of maternal mortality, and as rates of maternal cardiac disease and other related morbidities continue to rise, so do obstetrical ICU admissions. Our objectives were to determine if the rate of ICU admissions has increased in our patient population, if cardiopulmonary complications are contributing to ICU admissions at a significant rate, and to identify risk factors for women who may have cardiopulmonary complications in pregnancy.

Methods: A retrospective chart review of all pregnant and postpartum patients admitted to the ICU at Touro Infirmary, New Orleans, Louisiana from January 1, 2006 to April 1, 2016 was performed. Primary indications for ICU admission along with demographics, body mass index (BMI), and obstetrical history were extracted by chart review. Statistical analysis was performed using Chi Square and logistic linear analyses with a p value of <0.05 set for significance.

Results: Of the 28,222 deliveries during this time period, 146 patients (0.5%) were admitted to the ICU. The most common indications for admission were hemorrhage (n=42, 28.7%), cardiac complications (n=28, 19%), infection (n=27, 18%), acute respiratory failure (n=27, 18%) hypertensive disorders of pregnancy (n=16, 10.9%), and venous thromboembolism event (n=4, 2.7%). Over the last five years of our study, the rate of ICU admissions with cardiac complications as the primary diagnosis has increased significantly ($p = 0.04$ and $p=0.004$, respectively). While age and race were not related to cardiopulmonary complications, obesity was significantly more prevalent in this population ($p= 0.016$). Obese patients admitted to the ICU are more likely to have cardiac complications or respiratory failure compared to the other diagnoses (odds ratio = 4.21, $p < 0.001$).

Conclusion: Our findings are consistent with recent studies reporting the increasing role of cardiopulmonary disease causing substantial maternal morbidity. Pregnancies complicated by cardiac disease are likely to continue to rise, as comorbidities, including hypertension, diabetes, and obesity, become more prevalent in the obstetrical population. These findings highlight the necessity of detecting cardiac disease in obstetrical patients and developing new diagnostic methods to predict which patients are at risk for cardiac complications of pregnancy.

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

Delaura Patel MD, David Martin MD, Joseph Hagan ScD, Valerie Williams MD

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

Objective: Bacterial vaginosis (BV) is one of the most commonly diagnosed diseases in outpatient Ob/Gyn clinics. The Nugent criteria is considered the gold standard for the laboratory diagnosis of bacterial vaginosis. However, clinical diagnosis with Amsel's criteria can be time consuming. Thus, preparation of a slide and diagnosis of bacterial vaginosis using Amsel's criteria may not be done accurately in a busy resident clinic. The objective of this study is to determine the accuracy of bacterial vaginosis diagnosis by Ob/Gyn residents.

Methods: This study of diagnostic accuracy compared resident clinical diagnosis of BV to Nugent score. Study population included residents working at the LSU Ob/Gyn clinic. For patients suspected of having BV, the resident was to follow his or her usual techniques for diagnosis. The resident then completed a questionnaire indicating techniques utilized and final diagnosis. For comparison, an additional slide was examined using Nugent's criteria in the laboratory. A Nugent score of ≥ 7 was considered diagnostic of bacterial vaginosis. Sensitivity, specificity, positive and negative predictive values were calculated.

Results: From the 7 residents who participated, 67 slides and corresponding questionnaires were collected. Of these, 46 cases of BV and 4 cases of Candida vaginitis were diagnosed based on resident findings. Seventeen cases were interpreted as normal. Residents utilized a modified Amsel's criteria, most commonly with wet prep, physical exam, and whiff test. When residents diagnosed BV using clinical judgment and modified Amsel's criteria, the accuracy was 66% when compared to the gold standard of Nugent score ≥ 7. Resident diagnosis of BV carried a 93% sensitivity and 48% specificity. The positive predictive value was 54% and the negative predictive value was 90%.

Conclusion: Nugent score correlated with resident diagnosis of bacterial vaginosis. Resident diagnosis of BV demonstrated lower accuracy than that of previously published studies. In evaluation of vaginitis, residents in this academic center do not fully utilize Amsel's criteria. Further interventions are needed to improve accuracy of bacterial vaginosis diagnosis in this setting.

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

Ashley E. O'Keefe MD, Leanne Free MD, Valerie Williams MD, Joseph Hagan ScD, Stacey L. Holman MD

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

Objective: Hysterectomy is the most common gynecologic procedure performed in the United States. Infectious complications after hysterectomy are variable but range from 0-22.6%. Multiple factors impact postoperative infection risk including body mass index, antimicrobial prophylaxis, operative times, preoperative patient comorbidities, and route of hysterectomy. The goal of this study is to estimate the effects of preoperative patient factors and intraoperative/postoperative factors on risk of surgical site infection after hysterectomy for benign indications.

Methods: This retrospective cohort study included all patients who underwent a hysterectomy for benign indications from July 2012 to July 2015 at Interim LSU Hospital. Preoperative factors such as body mass index, race, age, previous surgeries, lung disease, tobacco use, hypertension, and diabetes were collected from the electronic medical record. Intraoperative and postoperative factors collected included route of hysterectomy, associated surgical procedures, duration of surgery, blood loss, and length of hospital stay. The primary outcome was surgical site infection classified using standard Infection Control criteria. This was captured at either of two postoperative outpatient visits or an Emergency Department visit. Patient data was then compared to a previously published nomogram to assess preoperative risk of surgical wound infections after hysterectomy using logistic regression.

Results: During the time frame studied, 353 patients were identified. Fourteen patients were excluded due to no postoperative follow up. 339 patients met inclusion criteria. Forty-nine (14.5%) surgical site infections were noted. Type of hysterectomy, use of blood products, higher parity, duration of surgery, and length of hospital stay were significantly associated with increased risk of surgical site complications. BMI was also associated with a risk of wound complications (OR= 1.055, CI 1.008 – 1.105). A nomogram using BMI, albumin, prior surgery, and lung disease was predictive of surgical site complications with area under the ROC 0.656.

Conclusion: In this urban academic medical center, several factors contributed to surgical site infections, including preoperative BMI. Use of a nomogram that is designed for our patient population may further allow us to identify patients at risk and counsel on the probability of risk for an SSI. An ongoing effort is needed to see if modification of these risk factors can reduce the rate of surgical site infection after hysterectomy.

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

Jay Davis MD[1], Bhaskar Toodi PhD[2], Joseph Hagan ScD[1], Asha Heard MD[1]

Department of Obstetrics and Gynecology, Louisiana State University Health Sciences Center – New Orleans[1],
Louisiana Department of Health and Human Hospitals – Baton Rouge[2]

Objective: Depression is a complex disease process that often employs psychotherapy, behavioral modifications, and medical management. Psychiatric medications are currently the most utilized resource for treatment. Many studies have investigated whether the use of selective serotonin reuptake inhibitors (SSRIs) in pregnancy have been linked to adverse pregnancy outcomes such as spontaneous abortion, low birth weight, congenital anomalies, and decreased APGAR scores. There has been an association between the use of SSRIs during pregnancy and increased risk of preterm birth. There have also been studies in the general population that show an increased risk of preterm delivery in male fetuses. However, there have been no published studies to date that look at gender specific outcomes of SSRI use during pregnancy. The purpose of this study is to determine if SSRI use in pregnancy is associated with an increased risk of preterm deliveries in male fetuses.

Methods: Pregnant patients enrolled in Louisiana Medicaid from July 1, 2014 – June 30, 2015 were included in the study. Prescription data from the state Medicaid database was used to identify pregnant women who never used SSRIs, pregnant women with SSRI use from 1 to 3 years prior to delivery, and pregnant women who used SSRIs less than 1 year before delivery. Groups were compared using Fisher's exact test and logistic regression to determine the association between gender and risk of preterm delivery among women presumed to be taking SSRIs. A p-value of <0.05 was considered statistically significant.

Results: 39,593 pregnant patients were evaluated and results were compared between those who took SSRIs in pregnancy for different durations and those pregnant patients who never took SSRIs in pregnancy. Pregnant women with SSRI use for less than 1 year prior to delivery had a significantly higher increased risk of preterm delivery compared to patients who had never used SSRIs in pregnancy ($p < 0.001$). The association of SSRI use with preterm birth did not differ by gender of the fetus ($p = 0.986$). After controlling for SSRI use, male fetuses had only marginally higher odds of preterm birth than female fetuses, but the association did not achieve statistical significance (adjusted odds ratio = 1.06, $p = 0.07$).

Conclusion: As previously suspected, SSRI use in pregnancy is associated with an increased risk of preterm delivery with a possible trend towards higher preterm birth rates in male fetuses. The study was limited in its inability to control for confounding variables. Although the study's main objective of testing gender's influence on the association of SSRI use with risk of preterm birth did not achieve statistical significance, there remains clinical relevance that should take into account a patient's individual characteristics when prescribing medications during pregnancy. Future research endeavors include further understanding the biochemical pathways regarding SSRI use in pregnancy and how it alters preterm birth rates. This information may be a vital step in changing protocols for depression treatment in certain populations.

Incidence of Leiomyosarcoma in Patients Undergoing Surgery for Leiomyoma

Traci Iwamoto MD, Amy Young MD, Joseph Hagan ScD, Danny Barnhill MD, Lisa Peacock MD, Florencia Polite MD, John Couk MD, Ronald Horswell PhD, Danny Jackson PharmD, Jay Besse BS, Yong Yi PhD

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

Objective: Recent information from the Food and Drug Administration (FDA) regarding the safety of laparoscopic uterine power morcellation as a minimally invasive treatment for women with uterine leiomyoma cites a prevalence of leiomyosarcoma of 2.8 per 1,000 persons. The objective of our study is to determine the overall incidence of leiomyosarcoma in the female patient population in Louisiana who underwent hysterectomy or myomectomy for treatment of suspected uterine leiomyoma. Additionally, we aim to identify risk factors of patients with uterine sarcomas.

Methods: A retrospective analysis of data from HarmonIQ data warehouse was performed. This included all female patients who received surgical treatment for uterine disease within the Louisiana State University (LSU) clinics and hospital systems from January 1997 to June 2013. Variables collected included patient demographics, diagnosis history, visit history, procedures, medical history, surgical and pathology reports, age at time of hysterectomy or myomectomy, gravity/parity, age at menarche, menopausal status, indication for surgery, size of leiomyoma and uterus, presence of rapidly growing leiomyoma, ethnicity, presence of medical comorbidities, and concurrent use of hormone treatment. Prevalence of leiomyosarcoma was calculated.

Results: During the time period studied, there were 13,618 cases of patients undergoing hysterectomy or myomectomy. Of these, 324 cases were identified in patients with uterine leiomyosarcoma for a prevalence of 2.38%. The mean age in the leiomyosarcoma group was 43.9 years old versus 50.1 years old in cases without leiomyosarcoma. African Americans composed 6,675 of the benign cases and 137 of the leiomyosarcoma cases, White ethnicity was identified in 5,809 of the benign cases and 150 of the leiomyosarcomas. The data analysis identified only one case of the 324 leiomyosarcomas as having “Tamoxifen citrate” as a medication and this finding was not statistically significant.

Conclusion: The prevalence of uterine sarcomas in the state of Louisiana is comparable to the literature review performed by the FDA. Uterine sarcomas occur in a younger patient population in the state of Louisiana. The concurrent use of tamoxifen citrate is not statistically significant within the cases of uterine sarcoma cases in the state of Louisiana. With the initial data analysis, further chart review into co-morbidities and patient history will be performed to provide an algorithm to better allocate those at higher risk for uterine sarcomas at time of surgery. Further data is needed about the rate of and patient characteristics of unexpected uterine sarcomas in Louisiana.

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

Amanda Thomas MD, Syed Ahmed Hussain MD, Joseph Hagan ScD, Lisa Peacock MD

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

Objective: Vaginal hysterectomy, pelvic organ prolapse repair, and incontinence procedures are common gynecologic surgeries. At the conclusion of reconstructive procedures, it is common practice to place vaginal packing. The anticipated benefit of this intervention includes reduction of blood loss and hematoma formation. Possible adverse postoperative effects include voiding dysfunction, prolonged catheter use, increased blood loss, increased pain, and increased rates of infection. There is a paucity of data regarding the use of vaginal packing after vaginal surgery; to date, no studies have evaluated the effects of packing on postoperative voiding function. The purpose of this study is to describe the effect of vaginal packing on postoperative voiding after vaginal surgery for prolapse and incontinence.

Methods: An IRB-approved retrospective chart review was performed on vaginal prolapse and incontinence surgical procedures at the Interim LSU Hospital and University Medical Center New Orleans between January 1, 2011 and October 31, 2015. The primary objective of the investigation was the effect of vaginal packing on postoperative voiding. Additional data collected included: perioperative blood loss, duration of catheter use, duration of hospital stay, postoperative anemia, febrile morbidity, and number of postoperative UTI's. Data analysis was performed with the Fisher's exact test, Wilcoxon-Mann-Whitney test and logistic regression.

Results: 207 patients met the study inclusion criteria, 63 (30%) of whom had vaginal packing and 144 (70%) who did not have vaginal packing placed. Patients with packing were significantly older ($p = 0.041$), more likely to be postmenopausal ($p = 0.047$), had significantly higher pre-operative hemoglobin ($p = 0.026$) and hematocrit ($p = 0.044$) values and were more likely white, non-Hispanic ($p = 0.037$) than patients for whom packing was not used. Patients for whom packing was used had significantly greater estimated blood loss (EBL) ($p = 0.002$), longer duration of catheter use ($p = 0.002$), and were more likely to fail the voiding trial (odds ratio = 5.7, 95% confidence interval: 1.7 – 19.3, $p = 0.004$). After adjusting for propensity score (computed using age, race, preoperative hemoglobin and preoperative hematocrit), patients for whom packing was used still had significantly higher odds of failing the voiding trial (adjusted odds ratio = 4.9, 95% confidence interval: 1.4 – 17.3, $p = 0.013$).

Conclusion: Vaginal packing is a common practice after vaginal surgery, and the decision for placement is influenced by surgeon preference, complexity of the procedure, and perceived intraoperative blood loss. While confounding variables exist, there are significant potential implications for clinical outcomes regarding the effect of vaginal packing on postoperative voiding function. These include the morbidity associated with re-catheterization, including urinary tract infection, patient discomfort, and financial burden to the healthcare system. Additional inquiries are needed to further define evidence-based recommendations for or against the use of vaginal packing, its indications, and standardized protocols for use.

Placenta Previa: Does Location Impact Resolution?

Megan Savage MD, Tabitha Quebedeaux MD, PhD, Ashley Meyn MS3, Joseph Hagan ScD, Asha Heard MD

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

Objective: Placenta previa is an obstetrical complication of abnormal placentation in the lower uterine segment. Consequences of placenta previa include bleeding, need for cesarean delivery or blood transfusion, and fetal morbidity due to prematurity. Placenta previa affects about 1 in 200 (0.5%) pregnancies at term. The vast majority of previas diagnosed during pregnancy will resolve, or migrate, by the third trimester. Literature regarding factors that influence migration of the placenta is sporadic and inconsistent. Our study aims to assess whether placenta previa location impacts the likelihood of resolution.

Methods: A retrospective cohort study was performed of all pregnant women with a placenta previa diagnosed after 16 weeks gestation at Touro Infirmary and East Jefferson Hospital from January 1, 2011- December 31, 2014. Information about previa location (anterior, posterior, complete, incomplete), gestational age at diagnosis, and gestational age at resolution were obtained. Incomplete previas were further stratified as marginal or partial previas. Demographic information including obstetrical, gynecological, medical, surgical, and social history were also collected. The bivariate association between placenta previa location and resolution was examined using Fisher's exact test. A p-value of <0.05 was considered statistically significant.

Results: During this time period 174 patients met inclusion criteria – 75 posterior and 99 anterior placenta previas. There was no difference in the rates of resolution for anterior (93% resolution) and posterior (89% resolution) previas ($p=0.426$). However, incomplete placenta previas were more likely to resolve during the pregnancy compared to complete previas ($p=0.038$). The gestational age at resolution of the placenta previa was significantly higher for marginal previas (28 weeks) compared to partial previas (26 weeks) ($p=0.005$). Smoking status, gravidity, term pregnancy, history of cesarean section, history of myomectomy, and history of dilation and curettage were not significantly associated with persistence of placenta previa.

Conclusion: Placenta previa location within the uterus, anterior or posterior, does not impact the likelihood of resolution. Compared to complete previas, incomplete placenta previas (marginal and partial) are more likely to resolve prior to term. Marginal placenta previas resolve at a later gestational age. These findings may assist in counseling and managing patients with placenta previa diagnosed during the 2nd trimester of pregnancy. Future studies should consider other factors that may impact resolution such as measurement of the distance of the previa over the cervical os. Additional work will also aim to assess a relationship between maternal and fetal outcomes with regard to location of placenta previa.

Uterine Artery Blood Flow Volume in Early Pregnancy

Leia Harbour MD, Richard Dickey MD, PhD

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

Objective: Abnormal utero-placental circulation after 13-14 weeks gestation is known to be associated with pregnancy loss, low birth weight, and hypertension in pregnancy. We hypothesize that these effects may begin as early as the third week of pregnancy. Only a few first trimester studies of utero-placental blood flow have been performed, and these studies concluded that uterine artery blood flow volumes increase in a linear fashion. The objective of this study was to characterize how blood flow volume in the uterine arteries changes during the first trimester of pregnancy. Secondly, we aimed to determine if differences in blood flow during the 1st trimester are related to parity, history of miscarriage, or adverse outcomes of pregnancy.

Methods: A retrospective chart analysis was performed. Charts from patients who achieved pregnancy at the Fertility Institute of New Orleans between 2006 and 2016 were reviewed. Patients were included in the study if they completed a singleton pregnancy with a live birth and had uterine artery blood flow measurements reported through at least 9 weeks gestation. Uterine artery blood flow volumes were measured in the recumbent position with sequential weekly measurements recorded from post menstrual weeks 3-14. Values were plotted against the gestational age for each patient to characterize a pattern of increase. Patterns were further analyzed to identify any correlation to patient demographics including history of spontaneous abortion (AB), parity, and birth outcomes of weight and gestational age at delivery. Average volumes were analyzed to determine if there was a correlation with specific embryonic events such as first identified heartbeat and crown rump length (CRL).

Results: 52 patients met inclusion criteria. Two notable increases in uterine artery blood flow occurred on average after 9 and 12 weeks gestational age. The average CRL appeared at 6 weeks 5 days gestation with an average blood flow volume of 331 ml/min. Plots of uterine artery blood flow volume identified 4 distinct patterns: a fast steady rise (13%, n=7), a slow steady rise (6%, n=3), an initial slow rise with exponential jump between 9 and 12 weeks (64%, n=32), and blood flow that rises and dips (19%, n=10). There was no association between patterns of blood flow and history of abortion, parity, birthweight, or gestational age at delivery. First trimester peak volumes for uterine artery blood flow in patients with no history of AB (35%, n=18) were on average 709 ml/min at 11 weeks 4 days. Patients with a history of one previous AB (33%, n=17) had average peak flow volumes of 1178 ml/min at 12 weeks 1 day. Patients with a history of 2 or more SAB (33%, n=17) had an average peak flow volume of 947 ml/min at 10 weeks 3 days.

Conclusion: First trimester uterine artery blood flow volumes show marked increase after 9 weeks gestation. The appearance of a CRL and fetal heartbeat are not associated with a significant rise of uterine blood flow volume. Changes in uterine artery blood flow volume during early pregnancy can be categorized into 4 dominant patterns: a fast steady rise, a slow steady rise, an initial slow rise with exponential jump, and blood flow that rises and dips. Peak volumes for uterine artery blood flow were not affected by a patient history of 1 or more spontaneous abortions. There was no association between patterns of blood flow and parity, birthweight, or gestational age at delivery.

Poster Presentations

Natalia Arango MD, House Officer II, LSUHSC New Orleans
Quantification of Mycoplasma Genitalium-Associated Cervicitis in Pregnant New Orleans Patients
Natalia Arango MD, Irene Stafford MD, Stacey Holman MD, Sue Favaloro, Rafael Velasquez, Patricia Dehon and Chris McGowin, PhD

Elise Boos MD, House Officer II, LSUHSC New Orleans
Contraceptive Literacy and Planned Use in Post-Partum Patients
Elise Boos MD, Joseph Hagan ScD, Terri Davis PhD, Stacey Holman MD

Diana Dietrich MD, House Officer III, LSUHSC Baton Rouge
Cross Sectional Study of Breastfeeding Intent in Diverse Low-Income Clinic
Diana Dietrich MD, F.A. Moore 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

Kimberly Hodge MD, House Officer III, LSUHSC New Orleans
Assessment of Staff Perception of Use of Manual Vacuum Aspiration for Treatment of Early Pregnancy Loss in the Ambulatory Setting
Kimberly Hodge MD, Sonia Replansky MD, Valerie Williams MD

Kelly McCune MD, House Officer II, LSUHSC Baton Rouge
Post-Operative Wound Complication Following Use of Negative Pressure Wound Therapy in Obese Women Following Cesarean Delivery
Kelly McCune MD, Sarah Buzhardt MD, F. A. Moore MD

Eliza Rodrigue MD, House Officer I, LSUHSC New Orleans
Genetic and Pregnancy Outcomes Following Preimplantation Embryo Biopsy
Eliza Rodrigue MD, Richard Dickey MD, PhD

Eric Siegel MD, House Officer III, LSUHSC New Orleans
Comparison of Expulsion Rates of Post-Placental IUDs by Body Mass Index
Eric Siegel MD, Andrew Suire MD, Stacey Holman MD,
Joseph Hagan ScD, Valerie Williams MD

Monique Sutherland MD, House Officer II, LSUHSC New Orleans
The Impact of Age and Multiparity as Risk-Factors for Mycoplasma Genitalium Infection in High Risk Urban Pregnant Population
Monique Sutherland MD, Irene Stafford MD, Stacey Holman MD, Sue Favaloro, Patricia Dehon, Chris McGowin PhD

Patrick Tassin MD, House Officer III, LSUHSC Baton Rouge
Correlation of Crown Rump Length and Gestational Age, Without the Use of Obstetrical Sonographic Computations or Lengthy Mathematical Formulations
E. Duane Neumann MD, F. A. Moore MD, Patrick Tassin MD

Diane Thomas MD, Fellow, LSUHSC New Orleans
Active vs Passive Post-Operative Voiding Trials in Women Undergoing Surgery for Pelvic Organ Prolapse
Diane Thomas MD, Barry Hallner MD, Lisa Peacock MD, Ralph Chesson MD, Christian Winters MD, Ryan Krlin MD, Erin Dougher DO, Gillian Wolff MD, Joseph Hagan ScD

Nia Thompson MD, House Officer II, LSUHSC New Orleans
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, Irene Stafford MD

Gillian Wolff MD, Fellow, LSUHSC New Orleans
Barriers to Urinary Incontinence and Pelvic Floor Disorder Care-Seeking in Women from the Urban Southern United States
Gillian Wolff MD, Christian Winters MD, Yu-Wen Chiu PhD, MPH

Quantification of *Mycoplasma genitalium*-associated Cervicitis in Pregnant New Orleans Patients

Natalia Arango, MD[1], Irene A. Stafford, MD[1], Sue Favaloro[2], Rafael F. Velasquez[3], Stacey Holman, MD[1], Patricia M. Dehon[3], and Chris L. McGowin, PhD[3,4]

[1]**Dept of Obstetrics and Gynecology**, LSUHSC, New Orleans, LA; [2]**University Medical Center-NO**, New Orleans, LA, [3]**Dept of Microbiology, Immunology, and Parasitology**, LSUHSC, New Orleans, LA; [4]**Dept of Internal Medicine-Section of Infectious Diseases**, LSUHSC, New Orleans, LA.

Department of Obstetrics and Gynecology

Background and Rationale

Mycoplasma genitalium (MG) is emerging as a highly prevalent sexually transmitted disease worldwide, yet no guidelines exist for screening and treatment during pregnancy. First discovered in the 1980s, recent studies have shown the prevalence of MG to be as high as 3% in low-risk reproductive age women. Among high-risk pregnant women, the prevalence of MG in the urogenital tract has been reported as high as 8%. MG has been linked to pelvic inflammatory disease (PID) and several adverse pregnancy outcomes. Prior studies have demonstrated statistical significance of cervical inflammatory markers in association with the presence of MG infection, however virtually no parallel studies have been conducted in pregnant women. The objective of this study is to assess and quantify the intensity of cervical inflammation, a known risk factor for adverse pregnancy outcomes, in pregnant patients with and without MG infection. The results of this study will aid in determining the need for routine MG screening during pregnancy, and aid in determining the need for nationwide screening programs in the USA.

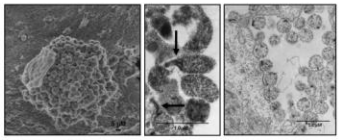


Figure 1. *Mycoplasma genitalium*: an emerging sexually transmitted pathogen. (A) A single microcolony of axenically-grown *M. genitalium* observed by scanning electron microscopy (SEM). (B) The prominent tip organelle, used for gliding motility and cytadherence, is denoted with arrows. (C) *M. genitalium* attached to urogenital epithelial cells with electron-dense tip organelle visible at the cell surface. Substantial basic scientific evidence has been published to show the interactions of *M. genitalium* with urogenital epithelial cells and the resultant inflammatory response elicited during infection. Only recently have these basic findings been corroborated in clinical studies, some of which are presented as preliminary data below. Figures adapted from Dehon, *et al.* 2014 and Dehon, et al 2016.

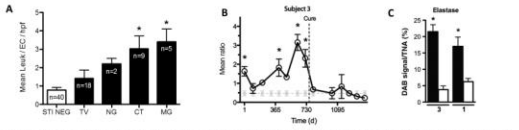


Figure 2. *Mycoplasma genitalium* is associated with cervical inflammation in non-pregnant women. (A) Cellular inflammation was quantified from liquid based cytology (Pap) specimens and expressed as a ratio of leukocytes per epithelial cells per high-powered microscope field. Relative to other common non-viral STIs, *M. genitalium* was associated with significant increases in cervical leukocytes and was similar to *C. trachomatis* infection. (B) In a longitudinal analyses of an individual patient, cervical leukocytes (expressed as the mean ratio of leukocytes to epithelial cells as in panel A) were markedly elevated during visits that the patient tested positive for *M. genitalium* infection. After cure of the infection, leukocyte levels dropped to baseline levels suggesting treatment may resolve inflammation. (C) The predominant cell type recruited during chronic *M. genitalium*-associated cervicitis were neutrophils (detected using immunohistochemistry with an antibody specific for neutrophil elastase). Black bars are during chronic infection; white bars are following cure of the infection. Collectively these data strongly implicate *M. genitalium* as an etiology of cervicitis in non-pregnant women. Figures adapted from Dehon, *et al.* 2014 and Dehon, *et al* 2016.

Study Goals and Hypotheses

1. **Determine whether *M. genitalium* infection is associated with cervical inflammation in UMC clinic obstetric attendees.** We hypothesize that *M. genitalium* infection will be associated with microscopic signs of cervicitis compared to patients without this infection.

2. **Quantify the intensity of cervical inflammation measured from liquid-based cytology specimens collected at initial prenatal visits.** We further hypothesize that the intensity of cervicitis will be on par with levels observed previously from non-pregnant New Orleans women.

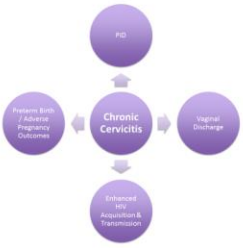
Materials & Methods

This retrospective study will be performed in accordance with an LSU Health Sciences Center IRB approved protocol. De-identified and otherwise discarded ThinPrep specimens collected at UMC Women's Health Clinic for initial OB visits from Feb 2016 to August 2016 (or until 100 specimens have been collected) will be examined. Approximately 100 µl of each specimen will be placed onto a glass microscope slide, air dried for 15 min at room temperature, and stained with Diff-Quik reagents per the manufacturer's instructions. Leukocytes and epithelial cells will be quantified in parallel from 5 representative high-powered fields; a ratio of leukocytes to epithelial cells will be used to quantitatively assess inflammation in the specimens. Cell counts will then be entered into a customized requisition form. Leukocyte counts will be compared among subjects with and without MG infection; significant differences will be determined using T test statistics.

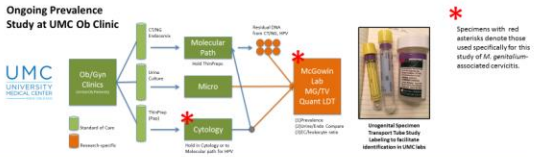
Expected Results and Importance

Pregnant patients with *M. genitalium* infection are anticipated to show significant increases in microscopic signs of cervical inflammation relative to pregnant patients without the infection.

- The clinical importance of cervicitis during pregnancy is largely unknown, but several studies have suggested it to be a risk factor for PID.
- Our long-term goal is to determine whether *M. genitalium* is an etiology of preterm birth and other adverse pregnancy outcomes.
- Results from this study will provide a critical piece of data necessary to further explore *M. genitalium*'s role in inflammation-associated adverse pregnancy outcomes.



Specimen Workflow



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Contraceptive Literacy and Planned Use in Post-Partum Patients

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Background

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 often noted to have poor health literacy levels. These studies have also found a relationship between this population and lower rates of contraceptive initiation and less effective use of contraception. These patients are less likely to use various contraception methods, more likely to experience a contraceptive failure, and more likely to discontinue their contraceptive method. While the reasons for this are complex and multifactorial, many suggest that this is due to having less knowledge of reproductive health, fertility, and contraception.

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.

Materials and Methods

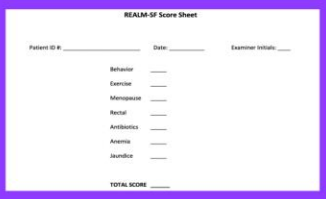
- Inclusion criteria: post-partum patients, age 18 and older, English speaking, antenatal care given in resident provider clinic
- The project will assess health literacy using a validated tool & brief standardized interviews on the post-partum ward prior to discharge.
- Health literacy will first be assessed utilizing a brief and well validated tool, the Rapid Estimate of Adult Literacy in Medicine-7 (REALM-7). One's ability to read and properly pronounce basic health terms is translated into a numeric score. A score of ≤ 6 correct words is consistent with inadequate health literacy and suggests a reading level below the ninth grade.
- In-person standardized interviews will then be administered to evaluate each patient's contraceptive history, pregnancy intention, personal/partner/family attitudes towards contraception, understanding of contraceptive side effects, and future contraception plans.

Expected Outcome

Among post-partum women with poor health literacy, defined as REALM-7 scores less than ≤ 6, there is late initiation of contraception, increased incidence of unintended pregnancy & increased misinformation regarding specific contraceptive methods. Additionally, women with poor contraceptive literacy felt inadequately counseled on contraceptive options by their healthcare providers.

With an assessment of our patients' health literacy and understanding of contraception, we will be better able to appropriately educate and counsel our patients on available contraceptive methods, particularly long acting reversible contraceptive methods.

REALM-7 (Short Form)



REALM-SF Score Sheet

Patient ID #: _____ Date: _____ Examiner Initials: ____

Behavior ____
Exercise ____
Menopause ____
Rectal ____
Antibiotics ____
Anemia ____
Jaundice ____

TOTAL SCORE _____

Scores and Grade Equivalents for the REALM-SF

Score	Grade range
0	Third grade and below; will not be able to read most low-literacy materials; will need repeated oral instructions, materials composed primarily of illustrations, or audio or video tapes.
1-3	Fourth to sixth grade; will need low-literacy materials, may not be able to read prescription labels.
4-6	Seventh to eighth grade; will struggle with most patient education materials; will not be offended by low-literacy materials.
7	High school; will be able to read most patient education materials.

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Cross Sectional Study of Breastfeeding Intent in Diverse Low-Income Clinic

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Literature Review

Despite the numerous known protective health, cognitive and emotional benefits of breastfeeding only 60% of new mothers attempted breastfeeding in Louisiana in 2013 according to the CDC, versus 80% that attempted nationwide. [1] 1285 infants were registered with WIC at the East Baton Rouge Health Unit. Only 168 of those infants were either partially or fully breastfed, meaning only 13.3% of the infants registered in our area were given breast milk which is well below the WIC national average[2]. Our patient population, according to WIC, has some of the lowest rates of breastfeeding in the country.[1]

The objective of our study is to evaluate the pregnant woman's intent and ideas about breastfeeding through our clinic. More specifically we would like to determine the percentage of our pregnant population who intend to breastfeed/pump and the percentage who intend to formula feed. We would also like to investigate why those who are planning to formula feed do not plan to attempt to breast feed.

The World Health Organization recommends breast feeding exclusively until 6 months[5] of age. However, the majority of women (73.6%) stop breastfeeding within the first six weeks postpartum.[6] It is reasonable to assume that by the time many of our patients present for their 6 week follow up visit, they have already stopped breastfeeding. We would like to do a follow up survey at the patient's 6 week postpartum visit, to determine their hospital experience as it pertains to feeding their infant after delivery. We would also determine the percentage of women, who intended to breastfeed, who still breastfeeding and the percentage who stopped breastfeeding. And attempt to understand why they stopped breastfeeding.

Methods and Materials

1. Patient will check in to Health Center for OB-GYN clinic for an obstetrical visit
2. Nurse or a designated assistant will give the patient the survey coversheet to make sure patient meets inclusion criteria.
3. Nurse or a designated assistant will then give patient the antepartum survey that the patient will fill out while she waits for her doctor's visit.
   - Please see attached survey, made of validated questions from Infant Feeding Practices Study II, done by the CDC
   - If the patient is a part of Centering the survey will be given before the Centering meeting about breastfeeding.
4. The patient will complete the survey while waiting for her appointment and give the completed survey to the nurse.

Expected Results

We expect to have similar rates of breastfeeding as seen by the CDC, WIC and WHO. In attempting to understand why women do not initially intend to breastfeed, we may be able to address these specific concerns more fully at the prenatal visit to encourage more mothers to try to breastfeed. We could also use this information to attempt to understand why women who wanted to breast feed were unsuccessful or what obstacles they encountered around the time of delivery and in the first few weeks of the infant's life.

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The use of lidocaine gel and pain perception in women during diagnostic flexible cystoscopy.

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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.

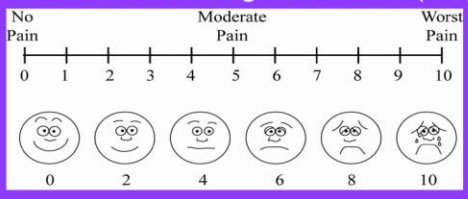
Hypothesis

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 10 point VAS 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 0.4mm on a 10 point VAS scale.

10 Point Visual Analogue Pain Scale (VAS)



Flexible Cystoscope

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Assessment of staff perception of use of manual vacuum aspiration for treatment of early pregnancy loss in the ambulatory setting

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Literature Review

Patients with early pregnancy loss often present to the emergency room complaining of vaginal bleeding and/or pain. Treatment options include expectant, medical, or surgical management [1,2]. Surgical management can be accomplished via electric vacuum aspiration (EVA) in the operative suite or manual vacuum aspiration (MVA) in the outpatient setting. MVA is known to be a safe and effective alternative for management of incomplete abortions [3]. However, there are reservations among clinical staff to offer this form of management to patients. Some barriers noted in other studies include unfamiliarity with the device and the emotional aspect of surgical management being similar to management of induced abortions [6]. There is limited data assessing ED staff perception of the MVA for treatment of early pregnancy loss. In this study, we plan to use a survey to assess clinical staff acceptability of the MVA for treatment of early pregnancy loss in the ED setting before and after introduction of the procedure in the ED.

Hypothesis

Six months after implementation of a protocol utilizing MVA in the ED, we anticipate the clinical staff will be more accepting of the procedure.

Methods and Materials

A survey adapted from the Residency Training Initiative in Miscarriage Management (RTI-MM) have been administered to emergency room nurses and support staff at University Medical Center- New Orleans. The MVA procedure will then be offered to all patients with early pregnancy loss presenting to the emergency room with vaginal bleeding and an open cervical os. The survey will then be re-administered 6 months after implementation. Results will be analyzed to see whether attitudes towards use of the device changed after experience and exposure to the procedure.

Results

This research was approved by the LSU Health Sciences Institutional Review Board October 2015. The pre-survey was distributed electronically via Survey Monkey on April 21, 2016. The survey was emailed to all University Medical Center-New Orleans Emergency Nursing Assistants, Emergency Staff Nurses, and Administrative Staff. This included a total of 119 potential subjects. As of April 25, 2016, one responder has completed the survey. We plan to extend the survey to include Emergency Department Attendings and Residents. We will also have Dr. Replansky will also attend one of the staff meetings to increase our number of participants. Results from Darney's RTI-MM study [5] are listed below.

Table 2: Knowledge, Attitudes, and Barriers: Summary Scores and Select Individual Items

	Mean Scores (SD)	
Summary scores	**Baseline**	**Followup**
Knowledge		
True/false, multiple choice items (nine possible)	7.7 (1.1)	8.2 (0.9)***
Patient scenario score (27 possible)	23.4 (1.8)	22.9 (3.1) *
Attitudes (15 items; 75 possible; higher score indicates more positive attitudes)	56.2 (6.6)	60.4 (7.7) ***
Barriers (10 items; 95 possible; higher score indicates more perceived barriers)	58.0 (9.7)	53.0 (11.6) ***
Select individual items that showed significant change		
Knowledge; proportion answering correctly		
Patient satisfaction is highest when women are offered all treatment options	.80	.99***
I am aware of an oral pain regimen for miscarriage management	.73	.95***
Attitudes; Likert scale, 5=strongly agree		
MVA is appropriate for MM	4.0	4.4***
Nursing staff support MM via MVA	3.4	3.8***
MVA will save time for me and my patients	3.7	4.0***
Women experiencing SAB can tolerate MVA with local anesthesia	3.9	4.2***
MVA requires skills similar to those I already have	3.5	4.1***
Barriers: Likert scale, 5=strongly agree		
Equipment not available	3.6	3.1***
Lack of resident policy/philosophy on office-based MM	3.1	2.7***

*P<.05, **P< .01, ***P<.001 for difference between baseline and follow-up
SAB—spontaneous abortion, MM—miscarriage management, MVA—manual vacuum aspiration

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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.

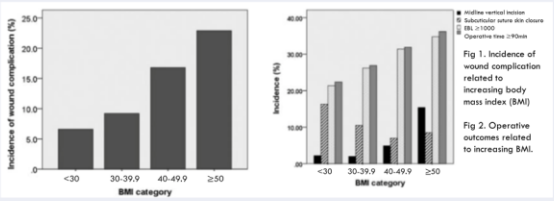

Fig 1. Incidence of wound complication related to increasing body mass index (BMI)

Fig 2. Operative outcomes related to increasing BMI.

Methods

We will be 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, gravidy/parity, primary vs. repeat cesarean, smoking, GBS and MRSA carrier status, preoperative antibiotics, operative status and duration, incision type, skin prep and closure type, EBL, dressing and presence of comorbidities such as DM, HTN and anemia.

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)

Hypothesis

We hypothesize 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.

Expected Results

We expect 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, pre-operative antibiotics, and others. Data will allow us to assess the overall efficacy of NPWT in these patients.

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Genetic and Pregnancy Outcomes following Preimplantation Embryo Biopsy

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Department of Obstetrics and Gynecology

Background

Preimplantation genetic screening (PGS) is used to analyze embryos for chromosomal abnormalities prior to transfer in the in vitro fertilization process[1,2]. Most frequently, PGD is utilized to screen for aneuploidy and another genetic anomalies[2].Prior to implantation, embryos are graded and staged based on morphology[3]. Higher grade embryos are selected for transfer, as they have greater likelihood of yielding a successful pregnancy[4]. The association between risk of aneuploidy and grade/stage of embryo has not yet been established. Additionally, the pregnancy and neonatal outcomes of those transferred embryos have not been determined.

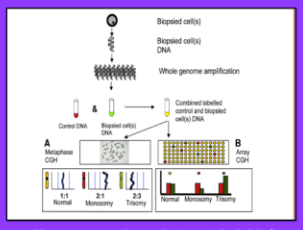
The goals of this study are to:

1. Determine how embryo morphology and stage of development are related to preimplantation euploid (normal) and aneuploid (abnormal) embryo karyotype using PGS.
2. Determine if embryo biopsy adversely affects implantation and development of euploid (normal) embryos.

Methods of Preimplantation Genetic Diagnosis

Cleavage stage biopsy (day 3)[5]

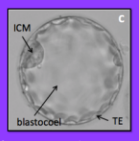
Blastocyst biopsy (day 5-6)[5]



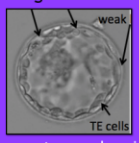
Chromosomal analysis with PGD[6]

Embryo Grading

Embryos are graded based on morphology of cell number and degree of symmetry, fragmentation of cells, and characteristics of zona pellucida[3].



Blastocyst, inner cell mass, trophectoderm[3]



Fragments, overlapping TE cells associated with low grade[3]

Hypotheses

Higher grade and faster developing embryos will be correlated with decreased rates of aneuploidy and improved pregnancy outcomes.

Materials and Methods

Retrospective cohort study to include all patients undergoing PGS at FINO from 2011 to the present. Patient charts will be reviewed for reasons/indications for PGS, PGS results, stage and grade of embryo at time of biopsy. Charts will also be reviewed for pregnancy/neonatal outcomes following implantation with investigated embryos.

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Comparison of Expulsion Rates of Post-Placental IUDs by Body Mass Index

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Background

Contraceptive intra-uterine devices (IUDs) are increasingly being placed immediately following delivery of the placenta after both vaginal and Cesearean section deliveries. This practice has been recommended by the WHO as women made to wait may not return for contraception or may unintentionally conceive. Disadvantages include increased expulsion rate versus outpatient 4- and 6-week insertion[2].

Though literature exists establishing expulsion rates of 25-40%[2], it is unknown if patient BMI is associated with an increased risk of expulsion. Placement of the IUD at the uterine fundus may be technically difficult in obese patients. Establishing the relationship between BMI and post-placental IUD expulsion could aid in patient selection and counseling.

Materials and Methods

This retrospective cohort study will include all women receiving a post-placental IUD at Touro Infirmary on the LSU Ob/Gyn service. Patients will be identified via delivery records and BMIs will be extracted from the electronic medical record. The primary outcome will be assessed via EHR review of the six-week postpartum visit. If no postpartum visit is recorded, patients will be contacted via phone interview. The primary outcome will include expulsion or removal due to misplacement with symptoms. Statistical analysis will be done using logistic regression with BMI as the continuous predictor variable and expulsion as the dichotomous outcome.

Hypothesis

We expect that expulsion rates of post-placental IUDs will increase with increasing BMI.

Data Analysis

Between August 2014 and March 2016 180 immediate post-placental IUDs were placed at Touro Infirmary. This included 167 Mirenas, 11 Skylas, and 2 Paragards.

BMI	Number of patients
Underweight	0
Normal weight	21
Overweight	53
Class I Obesity	48
Class II Obesity	33
Class III Obesity	23

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The Impact of Age and Multiparity as Risk-Factors for *Mycoplasma genitalium* Infection in High Risk Urban Pregnant Population

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Background and Rationale

Mycoplasma genitalium (MG) is an emerging sexually transmitted infection (STI). Among young adults in the United States, the prevalence is as high as 3% in low-risk reproductive age people. The urogenital prevalence of MG among pregnant women at high risk of STI acquisition has been shown as high as 8%, however no detailed risk factor analyses have been conducted. The prevalence of STIs are highest amongst young females during adolescence and the young adult years. In addition, it is known that early onset of sexual activity and multiple sex partners significantly increase the risk of STI acquisition. Similar to other STIs, MG establishes an asymptomatic infection that persists without treatment, ultimately putting young women at an increased risk for gynecological and reproductive sequelae. To this end, MG infection has been linked epidemiologically to pelvic inflammatory disease (PID) and several adverse pregnancy outcomes including preterm premature rupture of the membranes (PPROM), preterm labor, and post-partum endomyometritis. Despite this, there are no guidelines for MG screening in pregnant women. This information may ultimately provide improved guidance for STI counseling during prenatal care.

The aim of this retrospective study is to determine whether:
(1) MG infection is more common among multiparous women (≥4 pregnancies)
(2) MG infection is more prevalent among women < 25 years old

Hypothesis

We hypothesize that MG infection will be associated significantly and independently with both multiparity and young maternal age.

Materials and Methods

- After Louisiana State University IRB approval, the charts of LSU OBGYN pregnant patients delivered at Touro Infirmary, New Orleans, LA, between April 15, 2016 to October 31, 2016 will be reviewed for data abstraction.
- MG infection will be determined using otherwise discarded urine specimens that are routinely collected during admission for delivery. Our analysis will include pertinent demographic variables and outcome information including positive urogenital MG PCR and/or culture results.
- Final sample size will be contingent upon results of the ongoing MG prevalence study at the UMCNO LSU OBGYN clinic. Significant differences in the proportions of each considered variable will be determined using the Fisher's exact test (p<0.05).

Expected Results and Importance

- MG infection may be associated with risk factors known to be present in women with other STIs, namely young maternal age and multiparity.
- Results of this study may demonstrate further support for routine screening and treating of MG in pregnancy.
- MG infection and associated inflammation among young reproductive age women may be linked to adverse pregnancy outcomes such as PPROM, preterm labor or post-partum endomyometritis.

Project Workflow

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Correlation of Crown Rump Length and Gestational Age, Without the Use of Obstetrical Sonographic Computations or Lengthy Mathematical Formulations

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Introduction

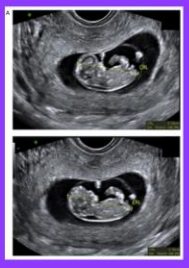
The accurate dating of pregnancy is critically important for management from the first trimester to delivery and is particularly necessary for decision making in pre-term labor and timing of delivery. Unfortunately, many hospitals find themselves lacking the resources and technology necessary to provide proper care for early obstetrical patients. The aim of our research project is to correlate crown rump length to gestation age without the use of costly obstetrical sonographic packages or complex formulas.

Hypothesis

We will be testing the hypothesis that adding the coefficient 6.7 to the mean crown rump length will accurately estimate the gestational age within +/- 3 days.

Methods

Retrospective chart review of 200 singleton pregnancies with gestational ages calculated between 8-13 weeks by ultrasound will be statistically compared to the same pregnancies calculated by adding the coefficient 6.7 to the mean crown rump length (measured in centimeters).



Example: Sonogram shows CRL 2.85 cm, estimated at 9 5/7 WGA

Calculation: 2.85 + 6.7= 9.55

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LSU IRB Approval #9174
Woman's Hospital IRB Approved

Active vs Passive Post-operative Voiding Trials In Women undergoing Surgery for Pelvic Organ Prolapse

Department of OBGYN and Urology Section of FPMRS

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Literature Review

Female pelvic surgery (FPS) requires careful and often extensive dissection into surgical planes surrounding the bladder. Complications involved with surgery include pain, bleeding, infection and voiding dysfunction; specifically urinary retention. Risk factors for postoperative voiding dysfunction include age, anesthesia, type of surgery, and the fluid status of the patient. The incidence of urinary retention after FPS varies widely ranging from 2-47%. Thus, majority if not all FPS patients undergo a voiding trial prior to discharge to determine whether or not post-operative catheterization will be required. Research has suggested that the active voiding trial rather than the passive voiding trial is a more reliable predictor of postoperative voiding dysfunction and subsequent urinary retention. It has been shown that 92% of patients who void at least half of their total bladder capacity can be discharged home without a foley catheter. Despite this information, many institutions, including our own, continue to use the passive voiding trial method. Past studies have had very few patients and at times underpowered to draw definitive conclusions, thus the optimal evaluation for postoperative voiding and the true definition of failure has yet to be determined. As a result, surgeons continue to use either voiding trial method, use varying criteria to determine failure and many patients may be discharged home with a foley catheter when it may not be required.

Hypothesis

- Subjects who void at least 50% of their total bladder capacity will not have urinary retention and will not require post-operative catheterization in the near future
- The active post-operative voiding trial method is more accurate in predicting post-operative urinary retention and post-operative catheterization

Methods and Materials

Female subjects ages ≥ 18 years old who present to the FPMRS outpatient clinics undergoing surgery for pelvic organ prolapse and requiring at least one overnight stay in the hospital will be approached for participation in the study. Informed consent will be obtained. Subjects will be randomized to undergo either a passive voiding trial (allowing the bladder to fill spontaneously) or an active voiding trial (retrograde filling the bladder) on post-operative day #1. After voiding, subjects in both groups with have a post void residual (PVR) checked via an in an out method using a foley catheter. Subjects who void ≥50% of their total bladder volume (voided volume + PVR) will pass the voiding trial and will be discharged home without a foley catheter. Subjects who void <50% of their total bladder volume will fail the trial and will be discharged home with a foley catheter. Subjects who fail will repeat an active voiding trial in the clinic within 7 days. All subjects will be followed in the clinic at 2 weeks and 6 weeks, urinalysis and PVRs will be checked.

Expectations

We expect to show that the active voiding trial method is more reliable at predicting postoperative urinary retention than the passive voiding trial method; that the active voiding trial method is the preferred method amongst patients and ancillary staff; and that patients who void at least 50% of their total bladder volume can be discharged home safely without the need for foley catheterization in the near future.

Post-Voiding Trial Pain Assessment Scale

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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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INTRODUCTION

Obstructive sleep apnea (OSA) is a sleep disorder affecting 1 in 5 adults in the general population.[1,2] 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 research examining OSA in the pregnant patient population. The current body of literature suggests that pregnant women with OSA are at an increased risk of preeclampsia, neonatal intensive care admission, and delivery via cesarean section.[3,4] Unfortunately, there are no screening and treatment guidelines in pregnancy. Additionally, disastrous respiratory outcomes during the perioperative management of gravid patients with OSA risk are a major concern for anesthesia care providers as it leads to increased morbidity and mortality.[5,6]

PURPOSE

The purpose of this prospective study is to evaluate the characteristics established by OSA screening questionnaires in women undergoing cesarean delivery with regional anesthesia as they correlate to the number of intraoperative hypoxemic episode(s) during the procedure.

INCLUSION CRITERIA

- Women undergoing routine cesarean delivery at Touro Infirmary Hospital
- BMI >35

EXCLUSION CRITERIA

- Urgent or Emergent Cesarean Delivery
- General Anesthesia
- Inability to complete consent form or incomplete questionnaires
- Non-English Speaking
- Known diagnosis of OSA

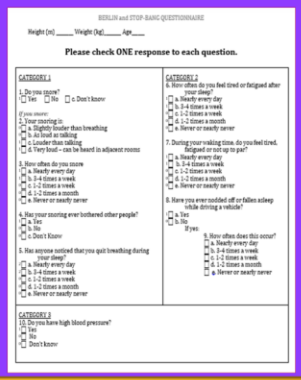
METHODS & DATA COLLECTION

- Enrollment goal: 200 women who are undergoing routine cesarean delivery
- Women will complete questionnaires (Berlin and STOP-BANG) and demographic variable data form prior to the cesarean delivery
- Intra-operatively, patients will be monitored with nasal airflow cannula and pulse oximetry to assess oxygen saturation.
- Number of hypoxic events (Oxygen saturation <94% or 4% change from patient baseline)[7] detected as well as apneic witnessed events will be recorded
- Neonatal Apgar Score and weight will be obtained in the Operating room or from the patient chart

STATISTICAL ANALYSIS

- Risk for obstructive sleep apnea will be assessed by two questionnaires
- Maternal demographics, smoking status, obstetric characteristics, diagnosis of hypertension or preeclampsia, diagnosis of pre-gestational or gestational diabetes, history of asthma, type of narcotic prior to surgery, type of regional anesthesia, length of procedure, neonatal weight and Apgar scores will be examined
- Comparison of aforementioned variables will be assessed for their relationship to hypopnea and apnea episodes

Data Collection Tools



BERLIN and STOP-BANG QUESTIONNAIRE

Height (in) _____ Weight (kg)_____ Age____

Please check ONE response to each question.

CATEGORY 1

1. Do you snore?
☐ Yes ☐ No ☐ c. Don't know

If you snore:

2. Your snoring is
☐ a. Slightly louder than breathing
☐ b. As loud as talking
☐ c. Louder than talking
☐ d. Very loud – can be heard in adjacent rooms

3. How often do you snore
☐ a. Nearly every day
☐ b. 3-4 times a week
☐ c. 1-2 times a week
☐ d. 1-2 times a month
☐ e. Never or nearly never

4. Has your snoring ever bothered other people?
☐ a. Yes
☐ b. No
☐ c. Don't Know

5. Has anyone noticed that you quit breathing during your sleep?
☐ a. Nearly every day
☐ b. 3-4 times a week
☐ c. 1-2 times a week
☐ d. 1-2 times a month
☐ e. Never or nearly never

CATEGORY 2

6. How often do you feel tired or fatigued after your sleep?
☐ a. Nearly every day
☐ b. 3-4 times a week
☐ c. 1-2 times a week
☐ d. 1-2 times a month
☐ e. Never or nearly never

7. During your waking time, do you feel tired, fatigued or not up to par?
☐ a. Nearly every day
☐ b. 3-4 times a week
☐ c. 1-2 times a week
☐ d. 1-2 times a month
☐ e. Never or nearly never

8. Have you ever nodded off or fallen asleep while driving a vehicle?
☐ a. Yes
☐ b. No
If yes:
9. How often does this occur?
☐ a. Nearly every day
☐ b. 3-4 times a week
☐ c. 1-2 times a week
☐ d. 1-2 times a month
☐ e. Never or nearly never

CATEGORY 3

10. Do you have high blood pressure?
☐ Yes
☐ No
☐ Don't know

BERLIN and STOP-BANG QUESTIONNAIRE

Please check ONE response to each question.

Collar size of shirt: S, M, L, XL, or ____ inches/cm
Neck circumference* ____ cm

1. Snoring
Do you snore loudly (louder than talking or loud enough to be heard through closed doors)?
☐ Yes ☐ No

2. Tired
Do you often feel tired, fatigued, or sleepy during daytime?
☐ Yes ☐ No

3. Observed
Has anyone observed you stop breathing during your sleep?
☐ Yes ☐ No

4. Blood pressure
Do you have or are you being treated for high blood pressure?
☐ Yes ☐ No

5. BMI
BMI more than 35 kg/m2?
☐ Yes ☐ No

6. Age
Age over 50 yr old?
☐ Yes ☐No

7. Neck circumference
Neck circumference greater than 40 cm?
☐ Yes ☐ No

8. Gender
Gender male?
☐ Yes ☐No

* Neck circumference is measured by staff

FOR STUDY STAFF

BERLIN scoring	STOP-BANG scoring
Category1: _____ Category2: _____	Category3: _____ +3 (Yes) ☐ 3 or more (Yes) ☐

FUTURE IMPLICATIONS

Analysis of these relationships will provide a framework to establish OSA risk assessment tools in the obstetric patient undergoing cesarean delivery and provide data to facilitate future research

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Barriers to Urinary Incontinence and Pelvic Floor Disorder Care-Seeking In Women From the Urban Southern United States

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Literature Review

Studies have shown that at least 25%-45% of women over the age of 20 years suffer from and are bothered pelvic floor disorders (PFD):. Despite a reported high prevalence and bother, fewer than half of women seek care for their PFDs To explain this discrepancy several factors have been proposed including lack of knowledge and external barriers to care.

Most studies have focused on women already in healthcare networks. The data on barriers and knowledge community dwelling women have been limited to a small number of geographic sites. The greater New Orleans area represents an ethnically and culturally diverse population. We propose to study knowledge and perceived barriers to PFD care in a cohort of community -dwelling women as well as in women already referred for treatment of PFDs .

Hypothesis

Women in the community as well as those in treatment will have limited knowledge about PFDs as well as barriers to care seeking. Gaps in knowledge and barriers to care will be greater in the community dwelling women than in the women already referred. We also expect that the barriers to care will differ from those elicited from studies in other geographic areas.

Methods and Materials

Using a purposive criterion-based sampling strategy, we plan to recruit a homogeneous group of adult women aged eighteen and older who self-identify as having a pelvic floor disorder. They will be screened with validated questionnaires: M-ISI, fecal incontinence, severity index, and the Pelvic Floor Distress Inventory. New patients to the FPMRS clinic will be similarly screened.

Qualifying women will then take the barriers to incontinence care questionnaire (BICS-Q) and the Prolapse and Incontinence Knowledge questionnaire (PIKQ).

Expectations

The expected outcome of this research is to further our understanding of knowledge and barriers to care for community dwelling New Orleans women. This will help guide future outreach attempts.

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2011 – 2016

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25. 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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28. Peacock LM, Thomassee ME, Williams VL, Young AE. Transition to Office-Based Obstetric and Gynecologic Procedures: Safety, Technical, and Financial Considerations. Clin Obstet Gynecol. 2015 Jun; 58(2): 418-33.

29. 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.

30. Scholl J, Durfee SM, Russell MA, Heard AJ, Iyer C, Alammari R, Coletta J, Craigo 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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LSU OB/GYN Resident Research Day Presentations

2015

David Goodyear, MD, House Officer II
Advisor: Ann Chau, MD
Pregnancy Outcomes in Patients Carrying Fetuses with Thickened Nuchal Translucency in a Diverse United States Population

Barry Hallner, MD, FPMRS Fellow
Advisor: Chris Winters, MD
Recurrent Urinary Incontinence after Transvaginal Mesh Revision: A Comparison of Treatment Paradigms

Andrew Jones, MD, House Officer III
Advisor: Ann Chau, MD
Prenatal and Postnatal Course of Isolated Ventricular Septal Defects Diagnosed by Color Doppler Sonography

*****Jessica Jones, MD, House Officer IV**
Advisor: Felton Winfield, MD
Improving the Accuracy of Visual Estimations of Blood Loss through Simulation Training

Adriana Luciano Del-Valle, MD, House Officer IV
Advisor: Ann Chau, MD
Transabdominal Ultrasound Versus Transvaginal Ultrasound in the Cervical Length Evaluation of Patients with Previous Preterm Delivery

Michelle Schussler Taheri, MD, House Officer IV
Advisor: F. A. Moore III, MD
Knowledge of Postpartum Depression in High-Risk Patients and Their Families

*****2015 Research Award Recipient**