The American College of Obstetricians and Gynecologists

Poster Sessions

Tuesday, May 5, 2009
Chicago, IL

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CONTRACEPTION / FAMILY PLANNING

Essure Tubal Sterilization: Comparison of an Urban and Suburban Population

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OBJECTIVE: Essure (Conceptus Inc.) is a sterilization method that requires birth control until a hysterosalpingogram (HSG)is performed to confirm tubal occlusion. Patient compliance is therefore a necessary component of this process. A perception is that urban populations are less compliant in post-surgical follow-up. The objective was to compare the follow-up of patients undergoing Essure sterilization at an urban, academic, and suburban hospital to determine the validity of this perception and identify ways to improve compliance.

METHODS: A retrospective chart review was performed of patients who had Essure sterilization at 3 hospitals from July 1, 2005 to October 31, 2007. Data was analyzed using ANOVA and Chi-square tests.

RESULTS: 106 patients were identified. The urban population was found to be more parous (mean 2.99, P value 0.006) than the academic (mean 2.15) or suburban (mean 1.69) populations. The percentage of patients undergoing a post-operative exam was 78.9, 55.0, and 75.0 (P value 0.100) for urban, academic, and suburban populations, respectively. However, only 33.8, 40.0, and 73.3(P value 0.018) percent completed an HSG in the same groups. While no pregnancies were identified, there were 6 patients who had tubal patency at time of HSG.

CONCLUSIONS: Urban populations reported for post-operative exams as well as, or better, than their suburban and academic counterparts. However, completion of a HSG was less than expected given the initial follow-up. Improved patient education and scheduling are necessary to bolster compliance for this component of the Essure procedure especially with the number of patients with tubal patency.

Breast Cancer Risk Associated with Use of Levonorgestrel-Releasing and Copper Intrauterine Devices

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OBJECTIVE: To compare the breast cancer risk of users of levonorgestrel-releasing intrauterine devices (LNG-IUD) and copper IUDs.

METHODS: Community-based case-control study in Germany and Finland. Approx. 3,500 histologically confirmed breast cancer cases are identified from cancer registries and associated tumor centers; approx. 14,000 age-matched controls are recruited from the same region as the respective cases. Cases and controls are women who were below the age of 50 at the date of diagnosis/index date and who had no history of other malignancies. Logistic regression techniques adjusting for major confounders (e.g., BMI, family history of breast cancer, age at menarche, parity, breastfeeding, socioeconomic factors) are used for statistical analysis.

RESULTS: A planned interim analysis based on 1,471 cases and 4,353 matched controls showed a crude odds ratio (OR) for ever use of LNG-IUD versus ever use of copper IUDs of 0.82 (95% CI, 0.52-1.30), and an adjusted OR of 0.83 (95% CI, 0.49-1.40). A total of 76 and 346 cases had used a LNG-IUD and copper IUD, respectively. LNG-IUD users had a similar risk profile for breast cancer compared to copper IUD users. Application of different index dates had no substantial impact on risk estimates. Risk estimates for current use of LNG-IUD versus current use of copper IUDs were similar to those for ever use. Final results will be presented at the meeting.

CONCLUSIONS: Interim results suggest that ever or current use of a LNG-IUD is not associated with a higher breast cancer risk than ever or current use of copper IUDs.

Factors Influencing Choice of IUD versus Tubal Sterilization

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OBJECTIVE: Investigate the characteristics of patients choosing intrauterine device (IUD) versus tubal sterilization. We hypothesized that women requesting IUDs for contraception would be younger with lower parity than those desiring permanent sterilization.

METHODS: A retrospective chart review of women obtaining gynecology services was performed as part of a larger multi-center study investigating the impact of newer IUDs on the number of tubal sterilizations. For this sub-study, records were reviewed for all women having IUD or tubal sterilization between January 1, 2003 and March 31, 2008 at a single tertiary care intuition to assess identifiable factors that may influence women's choice.

RESULTS: A dramatic increase in IUD use was observed while the number of tubal sterilizations performed remained consistent during the time interval reviewed (311%). Women choosing IUD had significantly lower gravidity and parity (2.49 +/- 1.71, 1.92 +/- 1.14, respectively) than women choosing tubal sterilization (3.76 +/- 1.96, 2.50 +/- 1.45, respectively) ($p<0.01$). Women choosing IUD were significantly older (32.58 years +/-7.97 years) than those desiring tubal sterilization 31.71 years +/- 5.85 years($p<0.01$).

CONCLUSION: We identified an increase in IUD insertions which did not impact the rate of tubal sterilization. Contrary to our hypothesis, we found that women choosing permanent sterilization were younger with higher parity than those desiring less permanent methods (IUD). Women with lower gravidity and parity may prefer the easy reversibility of the IUD, while older women may desire its non-contraceptive benefits such as reduction in menstrual bleeding.

Impact Of a Student's Year in Medical School on Intention to Provide Abortion

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Medical Students for Choice, Philadelphia, Pennsylvania

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PURPOSE OF STUDY: Medical Students for Choice (MSFC) is a bi-national, non-profit organization that works to create abortion providers and pro-choice physicians through a grassroots effort to enhance abortion education in medical school. This study seeks to determine whether year in medical school affects the intention to provide abortions among those students who choose to attend the MSFC Annual Meeting.

METHODOLOGY, INCLUDING STUDY DESIGN AND ANALYSIS: In 2007 MSFC used an online-based confidential survey to collect information from the students before they attended the 2007 Annual Meeting, a two-day educational conference on abortion and family planning. A question regarding the students' intention to provide abortion in their future practices was asked both before and after the conference. Responses to the pre-conference survey questions were analyzed and correlated with the respondents' reported year in medical school.

SUMMARY OF RESULTS: In 2007, 240 of 254 medical student attendees completed pre-conference surveys. 43% were Y1's, 43% Y2's, 15% Y3's, and 3% Y4's. Year in school was significantly correlated with their intention to provide abortion services ($p<.05$) and increased with each year. Among total respondents, there was a significant increase in reported intention to provide abortions after the conference ($p<.05$).

CONCLUSION: Medical students who selected this educational conference, although interested in abortion, report less intention to provide abortions in their early years in medical school. Exposure to abortion education within the medical school curriculum may result in students developing an increased interest in providing this care to patients.

What is the Culture of Abortion Care in Your Practice? Ob-Gyns' Experiences of Professional Barriers

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INTRODUCTION: While many factors make it difficult for practicing physicians to provide abortion, one that has not been extensively documented involves barriers created by other physicians within the culture of medicine. This qualitative study investigates professional obstacles to abortion practice.

METHODS: Ob-gyn graduates five to ten years out of residency were recruited from four residency programs with integrated abortion training. Graduates were interviewed at length about experiences with abortion training, interest in providing abortions, and experience with abortion practice after residency. Transcriptions were coded and analyzed for thematic content using grounded theory.

RESULTS: 30 practicing ob-gyns were interviewed, including 9 from the West, 9 Midwest, 7 East, and 5 South. Professional barriers included threats from other physicians, abortion-specific administrative challenges, and fear of practice failure through loss of referrals and patients. For example, physicians feared being "labeled as an abortionist" and recognized that such identification "…is a great way to make no friends amongst the ob-gyns and to have no family practice docs refer patients to you." One applicant was threatened by a potential employer, "If I ever find out you did elective abortions…you'll never practice medicine in [this state] again." Administrative challenges included decision-making abortion panels, referral policies preventing in-practice abortion provision, and scheduling difficulty with unsupportive partners. Findings will be substantiated with excerpts from interviews.

CONCLUSION: While many ob-gyns would like to provide abortion services for patients in their practice, barriers, including those created by other physicians and practice partners, restrict their ability to provide this service.

A Randomized Clinical Trial Comparing Cycle Control in a 21-Day vs. a 24-Day Oral Contraceptive (OC)

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OBJECTIVE: To compare cycle control attained with a 21-day triphasic norgestimate (NGM)/ethinyl estradiol (EE) 25 mcg OC regimen vs. a 24-day drospirenone (DRSP)/EE 20 mcg OC regimen.

METHODS: In a 3-cycle, open-label, multicenter study, women were randomized to a 21/7-day (NGM/EE) or 24/4-day (DRSP/EE) OC regimen. Demographics, physical examination findings, and previous contraceptive exposure data were collected. Randomization was stratified to assure a balanced distribution between treatments of "fresh starts" and "switchers." Among the exclusion criteria were positive Chlamydia culture and moderate-to-severe dysplasia on Pap smear. Bleeding data were collected daily using an interactive voice response system. Bleeding was defined according to the 2006 FDA Reproductive Health Drug Advisory Committee (RHDAC)-endorsed criteria. Unscheduled bleeding days for cycle 1 excluded days 1–7. Determination of unscheduled bleeding days for subsequent cycles depended on duration of continuous bleeding from the hormone-free interval of the prior cycle. The mean, median, and frequency of unscheduled, scheduled, total bleeding days and bleeding episodes were summarized by treatment group by cycle and across 3 cycles.

RESULTS: Of 355 subjects randomized, 335 were qualified and administered drug. Key bleeding data are presented in the intent-to-treat population as well as adverse-event data in the safety-evaluable population.

CONCLUSION: By comparing cycle control between a 21/7-day and a 24/4-day low-dose OC regimen with different progestins, this trial provides data which will assist clinicians in counseling their patients.

Immediate Versus Delayed Initiation of the Transdermal Contraceptive Patch after Abortion

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OBJECTIVE: 50% of pregnancies in the United States are unintended, and 40% end in abortion. Almost half of all women seeking abortion have had at least one other abortion. Immediate initiation the transdermal contraceptive patch ("patch") during general gynecologic visits does not improve continuation, but this has not been studied in the post-abortion population. To evaluate this, we compared immediate versus delayed initiation of the patch after first- and second-trimester abortion.

METHODS: In this randomized, single-blinded, controlled trial, 300 women who chose patch as their contraceptive method were randomized to initiating the patch either the same day as the abortion, or the first Sunday following the abortion. Follow-up telephone surveys were administered at 2 and 6 months post-abortion. Data was analyzed using Stata v.10. Chi-square and student t-tests (fisher's exact tests) were used to analyze categorical and continuous variables, respectively.

RESULTS: Follow-up rates were 68% and 56% at 2 and 6 months. At 6 months, 41% of women in the immediate group and 42% in the delayed group weren't using any contraceptive method. Nine subjects in the immediate group and 8 in the delayed group had become pregnant after their abortion. P-values are all non-significant.

CONCLUSION: Immediate initiation of the patch has not been shown to improve contraceptive continuation, either during a standard gynecologic visit or after abortion. The patch is safe to use immediately after abortion. Other methods of improving post-abortion contraceptive continuation, like provision of long-acting, reversible contraception, should be employed.

Awareness of and Access to Emergency Contraception among Various Patient Populations

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OBJECTIVE: To assess patient knowledge of emergency contraception among four different outpatient populations.

STUDY DESIGN: Women (n=244) completed a waiting room survey administered at three clinics (Attending, Resident and Teen Healthy) within the UVA health system. Responses were compared to determine whether the knowledge of EC differed among the specific patient populations. Results were calculated using Chi square analysis.

RESULTS: Women who received care in our private practice/attending clinic were more likely to know how to use and access EC. Patients who received care at the Teen Health Center were more likely to have been counseled about EC by a provider, but lacked knowledge about access.

CONCLUSIONS: Women who receive their care in a private practice setting have a higher likelihood of knowing about EC than those seen in a resident clinic or a Teen Center Across all locations, patients lack knowledge about EC and could benefit from education.

Future Contraception Selection by Women after the First Trimester Surgical Pregnancy Termination

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OBJECTIVE: The objective of our study was to assess the type of future contraception preferred by women after the first trimester surgical pregnancy termination and to distinguish it among long-term and short-term reversible methods and sterilization.

METHODS & MATERIALS: This is a retrospective review of patients using medical records. Data were obtained on 1281 patients who underwent a first trimester surgical termination of pregnancy from July 01, 2007 to December 31, 2007.

RESULTS: The percentage of patients who selected long-term, short-term and sterilization was 38.7, 29.5 and 8.9 respectively. Three percent of patients were not sure about their choices. Percentage of patients who did not select any contraceptive method was 19.5.

CONCLUSION: In our study, most patients preferred long-term contraception as their post abortal followed by no contraception in future. Increased access to long term methods must be provided as post-abortal care. A substantial number of women however depart with no contraceptive plans.

DOMESTIC VIOLENCE

Sexual Assault and Evaluation of Quality of Care: STI, HIV and Pregnancy Prevention

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OBJECTIVE: To determine the percentage of sexually assaulted female patients offered prophylaxis for sexually transmitted infections (STIs), HIV infection and pregnancy and to identify factors associated with the provision of prophylaxis.

METHODS: This is a cross-sectional study of 210 women presenting at a large, urban women's hospital for evaluation following sexual assault between April 1, 2006 and April 20, 2008. Data extracted included demographic characteristics and selected quality of care measures, including prophylaxis for STIs and HIV infection as well as pregnancy prevention.

RESULTS: The patient population was young, racially and ethnically diverse, and less likely to be privately insured. Of the 210 women, 188 (90%) were offered prophylaxis for at least one of the following: chlamydia (183/203 or 90%), syphilis (181/203 or 89%), gonorrhea (180/203 or 89%) and trichomoniasis (161/203 or 79%). The need for emergency contraception was assessed in 196 cases, with EC offered to 99% (147/148) of the population at risk for pregnancy. HIV prophylaxis was less frequently offered (66/210 or 31%).Factors associated with decreased likelihood of prophylaxis provision included insurance status (for HIV only: 47/169 (28%) of women with government assistance/self-pay were offered prophylaxis versus 18/39 (46%) of those privately insured, p=.05) and older age (for chlamydia, 5/8 (63%) among women over 50 versus 178/195 (91%) among younger women (p=.03); for gonorrhea, 5/8 (63%) versus 174/195 (89%; p=.05) and for syphilis, 5/8 (63%) versus 176/195 (90%; p=.04).

CONCLUSION: The majority of patients were offered appropriate prophylactic care, although age-related differences emerged with regards to provision.

Increased Intimate Partner Violence Inquiry with Standardized Health Prevention Screening

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OBJECTIVE: To evaluate the impact of patient and provider variables on rates of intimate partner violence screening in an ambulatory gynecology practice.

METHODS: A cross-sectional study of 300 patients chosen randomly from annual healthcare visits during 2007 at a university-affiliated ambulatory gynecology clinic. All encounters were recorded on a standardized health history form which included questions about abuse history. Data on patient and provider characteristics were collected. The association of provider screening with selected patient variables was assessed using multivariable logistic regression.

RESULTS: The median age of the study population was 29 (range 15-73). In general, the cohort was racially/ethnically diverse and the majority was on government assistance. Sixty-seven percent (194/291) had children living at home, and 57% (164/286) were single. Of the 300 patients, 243 (81%) had documentation of abuse screening in their medical records. Variables previously found to be associated with higher rates of partner abuse, such as younger age, increased parity, or substance abuse, did not influence whether patients were screened. Similarly, differences in screening by provider type (NP/resident) or gender did not emerge. Patients were, however, significantly more likely to be questioned about partner violence when they received other preventive screening (adjusted OR 2.50 (1.26-4.99)) or presented with a somatic pain complaint (adjusted OR 2.55 (1.12-5.83).

CONCLUSION: Ambulatory gynecology patients were more likely to be screened for intimate partner violence when providers performed other preventive health screening utilizing a standardized health history form.

ETHICS / PROFESSIONAL LIABILITY / RISK MANAGEMENT

Opinions of Ob/Gyn Residents on Career Related Matters

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OBJECTIVE: To examine self-perception of Ob/Gyn residents regarding various career issues such as degree of professional satisfaction, level of preparedness to enter clinical practice and post-residency career plans.

METHODS: Ob/Gyn residents (n=131) were surveyed during a regional annual Resident Education Day organized by a multi-institutional group of resident educators in May of 2008 sponsored by the Obstetrical Society of Philadelphia. Responses were collected on a 4-point Likert scale such as strongly agree, agree, disagree and strongly disagree.

RESULTS: In regards to career satisfaction, 88.7% residents agree that Ob/Gyn is a rewarding profession and another 77.1% indicated that, given the chance, they would choose Ob/Gyn as a profession again. Almost half (43.9%), feel they will not receive adequate financial compensation after residency. While majority of residents (86.7%) believe that they will be prepared to enter clinical practice post-residency, one third (33.7%) were not satisfied with the surgical case volume. In terms of future plans, most residents (55.6%) plan to join private practice and more than one third (40.8%) expect to work 61+ hours a week; there is very little appeal for academics or advanced training into sub-specialties.

CONCLUSION: Career discontent seems to be fairly prevalent among Ob/Gyn residents. Almost 50% of residents are concerned about inadequate income after residency and a significant number are not satisfied with surgical case volume during their training. Continued satisfaction surveillance is warranted to facilitate addressing these factors and promoting positive attitudes among residents.

The Association between Medical Liability Climate and Obstetrician/Gynecologist Provider Density

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OBJECTIVE: To determine whether trends in ob/gyn practitioner density were different in states classified as having a medical liability 'crisis'.

STUDY DESIGN: A cross-sectional observational study, using population level data. Ob/gyn distribution data for 2000-2005 was obtained from the ACOG membership department. Ob/gyn densities were calculated as the number of providers per 10,000 live births (LB) in a state. States were classified "in crisis", "crisis brewing" or "not in crisis" using a formula utilized by ACOG. 'Crisis' status was determined by a combination of factors including liability premiums, number of lawsuits and tort reform efforts. Malpractice activity data was obtained from the National Practitioner Databank, and population data from the US Census.

RESULTS: In 2005, 14 states were categorized "in crisis", 8 "crisis brewing" and 28 "not in crisis" based on their medical liability climate. Based on Wilcoxon rank-sum tests, "in crisis" states had significantly higher numbers of medical liability payouts relative to states "not in crisis" in 2001 and 2005 ($p=0.0057$ and $p=0.0073$, respectively). The mean change in obstetrician/gynecologist density in the US for 2000-2005 was 6.4/10,000 LB. States categorized "not in crisis" had a population density-adjusted mean increase in ob/gyn density of 9.55/10,000 LB, while states categorized "in crisis" had a significantly lower rate of growth of only 1.16/10,000 LB ($p<0.0001$), as did states categorized "crisis brewing" at 4.51 ($p=0.026$).

CONCLUSION: States classified by ACOG as having either a current medical liability 'crisis' or 'crisis brewing' experienced significantly lower rates of growth of ob/gyn density between 2000-2005.

EDUCATION

Predictors of HPV Vaccination Acceptability in Low-Income and Minority Parents

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OBJECTIVE: To determine HPV knowledge and the predictors of HPV vaccination acceptance in low-income and minority parents.

METHODS: A self-administered survey was distributed to 250 parents of pediatric patients in a community clinic from November 2006 to August 2007.

RESULTS: Two hundred five (82%) surveys were completed and analyzed. The average age of the respondents was 28 years, (range14 -56) and 74% were Hispanic; 90% were female. Significant predictors of HPV vaccination acceptance for daughters included church attendance [OR 2.316; 95% CL 0.741-7.244], insurance status [OR 1.154; 95% CL 0.358-3.721], knowledge of HPV [OR 8.166, 95% CL 1.549-43.037], knowledge of HPV's association to cervical cancer [OR 10.789, 95% CL 2.578-45.153], history of abnormal Pap smear [OR 1.092, 95% CL 0.364-3.282], and being sexually active [OR 3.218, 95% CL 0.968-10.693]. Significant positive predictors of HPV vaccination for sons included foreign-born [OR 1.290, 95% CL 0.480-3.468], knowledge of HPV [OR 4.071, 95% CL 0.907-18.268], HPV's association to cervical cancer [OR 9.350, 95% CL 2.351-37.181], and history of abnormal Pap smear [OR 1.745, 95% CL 0.662-4.598].

CONCLUSION: Low-income and minority parents have a paucity of knowledge of HPV. Many parents are still undecided about having their children receive the HPV vaccine. Educational campaigns should be targeted to low-income and minority parents to increase awareness of HPV and the HPV vaccine.

Medical Student Contribution to Development of Clinically Relevant Obstetric Teaching Resources

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PURPOSE: An elective was designed to provide advanced pharmacotherapy knowledge for a medical student pursuing OBGYN residency training. In addition to the student's learning objectives, the purpose of this project was to capitalize on the student's efforts to enhance obstetric clinical pharmacology teaching materials. Our goal was to use the student perspective and OBGYN clerkship experience to equip fellow students with fundamental knowledge to improve competency in modern obstetric practice.

METHODS: Key topics in general obstetrics were identified. A literature search was performed to find relevant resources, including randomized controlled trials, expert guidelines and reviews. The student had responsibility for evaluating resources and identifying pertinent information to incorporate into teaching materials. Finally, based on the student's recent clinical OBGYN experience she ensured overall content was reflective of contemporary obstetrical practice.

RESULTS: A 41 page document, "Prescribing for Pregnant and Lactating Patients" was created to be used by 100 medical students/ year and complement the OBGYN core clerkship. Thirty-six essential resources were identified and referenced (18 expert guidelines, 14 articles, and 4 books). Key topics include: pregnancy related physiological changes impacting drug pharmacokinetics , general principles for prescribing and drug dosing for pregnant patients, and common diagnoses and chronic conditions occurring in pregnant women. Detailed clinical guidance is provided for managing commonly encountered conditions in pregnant patients, i.e., hypertension, diabetes mellitus, asthma, herpes, HIV, TB, thromboembolism and medication use while breast-feeding.

CONCLUSION: A competent medical student is an effective resource in aiding faculty in creation of up-to-date, clinically relevant, and applicable teaching materials.

A "Hands-On" Skills Workshop for Medical Students: Perceptions and Impact on Career Decisions

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OBJECTIVE: To implement and evaluate a "hands-on" skills workshop for medical students during the Annual Clinical Meeting of the American College of Obstetricians and Gynecologists (ACOG).

METHODS: To reinforce medical student recruitment efforts, a skills workshop was introduced at ACOG's 3rd Annual Medical Student Course. Five faculty-precepted stations engaged medical students in a variety of obstetrics and gynecology (OB/GYN) skills: vaginal delivery, ultrasound, intrauterine device insertion, knot-tying, and laparoscopy. On a continuous scale from 1-10 (1=low value/interest,10=high value/interest), students rated the workshop, individual stations, current interest in OB/GYN, and impact of the workshop on decisions to pursue a career in OB/GYN.

RESULTS: Sixty-six of 72 attendants (92%) completed the questionnaire. Most respondents were female (85%) and clinical (MS3/MS4) students (65%). The workshop was highly valued by students (8.9±1.5). Stations were rated highly by medical students (Table). Students reported a high level of interest in OB/GYN (9.1±1.7), yet the workshop still impacted on decisions to pursue a career in OB/GYN; although not statistically significant, preclinical (MS1/MS2) students reported a greater impact (8.0±1.8) than clinical students (6.7±3.7).

Workshop Station Scores (mean±SD):

Station	**Overall** (n=66)	**Preclinical students** (n=23)	**Clinical students** (n=43)	**P**
Vaginal Delivery	9.2±1.2	9.3±0.9	9.1±1.4	NS
Ultrasound	8.4±1.5	8.5±1.1	8.4±1.7	NS
Intrauterine Device	8.4±1.8	8.2±1.7	8.6±1.9	NS
Knot-Tying	8.3±2.1	8.3±2.0	8.2±2.1	NS
Laparoscopy	8.0±1.8	8.2±1.3	8.0±1.8	NS

CONCLUSIONS: A "hands-on" skills workshop for medical students was highly valued and positively impacted decisions regarding future careers in OB/GYN. Continuing this course may enhance medical student recruitment.

Insight and Direction on Preconception Health among College Aged Women

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OBJECTIVE: To obtain insight and direction on preconception health from college and graduate student women.

METHODS: Three focus groups were conducted. Pre and post questionnaires assessed preconception health behaviors. The groups consisted of a discussion and a survey obtaining demographic information, preconception health knowledge and practices. Comparative and descriptive analysis was performed.

RESULTS: 13 women between 20-30 years (average age: 25) participated in focus groups. 38% (5/13) were White, 31% (4/13) were Hispanic, 23% (3/13) were Asian/Pacific Islander, and 8% (1/13) were biracial (African-American/Hispanic). 23% (3/13) were undergraduates, 77% (10/13) graduate students. In pre-questionnaires, 92% (12/13) knew about preconception health and 84% (11/13) felt it was important to them. After the session, 100% reported preconception health was important to them. Preconception health behaviors included: 31% (4/13) taking a multivitamin, 73% (8/11) using contraception and none smoked or used drugs. 23% (3/13) were overweight. Recommendations given for preconception health messaging included, having television commercials, incorporating messaging into television shows, utilizing Facebook and MySpace sites, preconception health-specific websites, and health education brochures. Images used should include non-pregnant college woman and seeing that woman in the future successful in her career and possibly pregnant. Having spokespersons they could relate to was also recommended.

CONCLUSION: The majority of these women had knowledge and perceived importance of preconception health although not fully practiced. Implementing suggested preconception health messaging aimed at college aged women can potentially promote current healthier lifestyles and help them realize the impact their current behaviors have on their reproductive future.

Is Formal Training For Estimating Obstetric Blood Loss Necessary?

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OBJECTIVE: Underestimation of blood loss places patients at risk for delayed recognition and treatment of obstetrical hemorrhage and suboptimal outcomes. Housestaff often have only bedside training in estimating blood loss. We used a simple pictorial algorithm described by Bose et al to evaluate housestaff physicians´ ability to estimate obstetric blood loss.

METHODS: Digital images of 9 hemorrhage scenarios were included in a lecture on obstetric hemorrhage. Participants' anonymous blood loss estimates were collected and actual blood loss for each scenario was reviewed. Percent errors were calculated. Estimates were considered inaccurate if they varied from actual blood loss by >20%.

RESULTS: Thirty-six housestaff participated. 211 (65%) of 324 responses were underestimates, 65/324 (20%) were overestimates and only 48/324 (15%) were accurate. Blood loss scenarios with distribution of estimates are presented (table). When estimates were stratified by PGY level, seniors (PGY 3-7) scored similarly to juniors (PGY 1-2) (p=NS).

CONCLUSION: Housestaff underestimated significant blood loss in common clinical scenarios. We must create, implement and evaluate educational tools to improve trainees´ abilities to estimate blood loss to reduce preventable maternal morbidity and mortality due to obstetric hemorrhage.

Blood loss estimates

Photo	Actual (cc)	Under N(%)	Over N(%)	Equal N(%)
Pad	30	19(53)	11(31)	6(17)
Full Pad	100	22(61)	9(25)	5(14)
4x4	60	27(75)	6(17)	3(8)
Chux	250	28(78)	6(17)	2(6)
Lap Pad	350	32(89)	1(3)	3(8)
Floor Spill	1500	33(92)	2(6)	1(3)
PPH on Bed	1000	16(44)	9(25)	11(31)
Spill to Floor	2000	20(56)	7(19)	9(25)
Kidney Basin	500	14(39)	14(39)	8(22)

Resident Circumcision Training Methods in the South Atlantic Region

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OBJECTIVE: To determine the method of resident training in male infant circumcision across the South Atlantic CREOG region of the United States.

METHODS: A 25-item questionnaire was sent to Obstetrics and Gynecology residents in the South Atlantic region. Responses to questionnaires on residents' training, skill and comfort level in performing male infant circumcision were analyzed. This study was approved by the Morehouse School of Medicine Institutional Review Board.

RESULTS: A total of 590 questionnaires were mailed out, of which 282 (48%) were completed via a web-based survey. Eighty percent of the respondents were female. There were an equal number of respondents at each level of training. Of the respondents, 249 (88%) performed circumcisions. Of these, 80% perform more than two circumcisions per week and 95% used analgesia. The most common analgesia method was the lidocaine block, used by 85% of the respondents. The most common method of resident training was the "see one, do one" philosophy as per 81% of respondents. The most common method of circumcision taught was the Gomco technique per 80% of residents. In the event of a complication, 49% felt inadequately trained to address the complication.

CONCLUSIONS: Across the South Atlantic region, the most common method of circumcision training is the "see one, do one" philosophy. The most common procedure taught is the Gomco technique. Nearly half of the respondents did not feel adequately trained to address complications.

Effect of the ACGME Core Competency Requirements on CREOG In-training and ABOG Written Exam Scores

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OBJECTIVE: To evaluate the effect of the ACGME core competency requirements (implemented July 2002) on CREOG in-training and ABOG written examination scores.

MATERIALS AND METHODS: Data was obtained from residents completing Ob/Gyn training at Emory University from 1997-2007. Graduates were divided into Group A, those completing training prior to 2003 and Group B, those finishing thereafter. Demographic information, USMLE and CREOG test scores and ABOG written examination pass rates were evaluated.

RESULTS: One hundred-six residents completed training from 1997-2007, 64 prior to 2003 and 42 thereafter. Group A and B did not differ in age at completion (31.2 vs. 30.9, p=0.7), female residents (61% vs. 67%, p=0.6) or U.S. medical schools graduates (95% vs. 91%, p=0.4). USMLE Step 1 scores were higher in Group B (220 vs. 211, p=0.006). Percent correct on CREOG examinations were higher for Group B every year except year four; although the gap narrowed each year. The ABOG written examination pass rates were similar between Groups A and B (98% vs. 95%, p=0.6). Higher CREOG scores during resident training years 2-4 were correlated with passing the ABOG written examination (R=0.28, 0.23, 0.26, respectively, all $p<0.05$). Higher USMLE Step 1 and 2 scores also positively correlated with better CREOG test results.

CONCLUSIONS: ABOG written examination pass rates appear unaffected by the implementation of the ACGME core competency requirements. CREOG examination scores appear to improve since the implementation, but this is likely a function of improved USMLE examination scores of the incoming residents.

Comparison of Teenage Video Gamers versus PGYI Ob/Gyn Residents on a Laparoscopic Simulator

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OBJECTIVE: To compare the performance of teenage video gamers verses PGYI Residents on a laparoscopic simulator assessment procedure.

METHODS: Fifteen teenage (13-19 y/o) experienced video gamers (have beaten expert level) and 15 PGYI Ob/Gyn Residents were timed performing our three laparoscopic simulator assessment procedures: 1. Bead Pom-Pom Drop (BPP), 2. Checker Board Drill (CD), 3. Bead Manipulation (BM). Sample size needed was 8 per group.

RESULTS: Mean (seconds) P B/PP Gamers 95 .07 PGYI 130 CD Gamers 53 .02 PGYI 89 BM Gamers 141 .28 PGYI 204.

CONCLUSION: Teenage video gamers perform equally or better than PGYI Ob/Gyn Residents on laparoscopic simulator assessment procedures. This may favorably impact future residents' laparoscopic skills if they have prior teenage video gaming experience.

Educating Teen Mothers through P.C.M.O.A.: Pitt County Mothers of Action

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OBJECTIVES: PCMOA (Pitt County Mothers of Action), was designed to educate teen mothers and soon-to-be mothers on appropriate child care and other issues. Mentoring was also provided. Data were collected on how comfortable the mothers initially felt about childcare topics and, at the end, how they felt the program improved their knowledge of such topics.

METHODS: Participants included 16 teens. Three home visits with each individual teen mother, as well as three group sessions, were conducted. The participants ranked their level of comfort on topics to be presented throughout the program, at the start and then again at the end of the program. The results were compared.

RESULTS: The average age of the participant was 16.1 years. Participants ranked on a scale of 1-5 their level of comfort with the planned topics of discussion. One was considered “not comfortable” and 5 “very comfortable”. Of the topics addressed, participants initially felt least comfortable with Breastfeeding (2.1), Exercise (3.5), and Child Safety (3.8). They felt most comfortable with Nutrition (4.4), Importance of Immunizations (4.3), and Goal Setting (4.3). Issues where comfort was lacking were addressed during the program in addition to other topics. At the end of the program there was measurable improvement in comfort with Breastfeeding (4.1), Exercise (4.3), and Child Safety (4.3).

CONCLUSIONS: The teen participants reported an increase in knowledge of how to better care for their children and themselves. Educating teen mothers with provision of mentorship may be beneficial to the mothers and their infants.

Microtubal Reanastomosis: Success Rates Compared to In Vitro Fertilization

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The objectives of this study were to determine pregnancy rates and outcomes of Microtubal Reanastomosis (MTR) and compare them to In Vitro Fertilization (IVF); and to identify any clinical variables associated with pregnancy rates in MTR patients. This was a retrospective chart review of patients undergoing IVF or MTR at the Florida Fertility Institute in Clearwater, Florida from 2005 and 2006. There were 263 patients who underwent MTR in the study period and 140 were included in the analysis. There were 313 of non-donor egg cycles performed via IVF in the same time period. When comparing the MTR patients that achieved pregnancy in the first twelve months following the procedure to those that did not achieve pregnancy there were only two clinical variables in which there was a significant difference. When patients were initially sterilized by Filshie or Hulka clips there were 81.8% of patients that achieved pregnancy ($p=0.022$) and when patients underwent bilateral MTR instead of unilateral MTR 84% achieved pregnancy ($p=0.015$). The pregnancy and live birth rates of MTR were 44.3 and 18.6% respectively. For IVF patients, the pregnancy and live birth rates were 38 and 31.3% respectively. There was a statistically significant difference between the live birth rates ($p=0.007$, 82% power). This study showed a significant improvement in the live birth rates of IVF over MTR and that the two clinical variables that improved pregnancy rates of the MTR procedure were: Hulka/Filshie Clips as the mechanism of tubal occlusion and bilateral tubal reversal performed instead of unilateral.

REPRODUCTIVE ENDOCRINOLOGY / INFERTILITY

Is Long Term Oral Contraceptive Use Associated with Adverse Reproductive Outcomes?

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PURPOSE: Oral contraceptive (OCP) use has endured venerable popularity worldwide. Long-term, uninterrupted OCP treatment has now increased with initiation in the teenage years, extending continuously into the 30s and 40s. The purpose of this study was report any impact this may have on reproductive health.

MATERIALS AND METHODS: A forty-item self-administered patient survey was provided at OB/GYN offices and one large university-based reproductive endocrinology (REI) practice. Exclusions included age<21 and non-English speaking. 333 surveys were completed; analysis was limited to those where OCP were started for contraception, then stopped with intent to become pregnant (n=103). Logistic regression and chi square were used with significance at $p<0.05$.

RESULTS: Comparing the group using OCP for 0-5 years, there was no difference in the rate of spontaneous pregnancy following 6-10 years (OR:1.65/CI:0.5-5.1) or 11-15 years (OR:1.47/CI:0.38-5.7). In the OB/GYN and REI population, respectively 90% ($p=0.76$) and 74% ($p=0.82$) reported spontaneous pregnancy within a year after stopping OCP. 76% reported return of menses immediately, 12% after 2 months, and 7% after $\geq$3 months of OCP discontinuation. Of those patients reporting no pregnancies, 5.5% reported a diagnosis of endometriosis and 8.9% polycystic ovarian syndrome, as compared with 0% and 1.9% respectively in the pregnant group ($p=0.007$; $p=0.17$). No significant difference was noted between those reporting ovarian cysts, fibroids or abnormal pap smears.

DISCUSSION: Previous studies show that short term OCP use does not impair fertility. Our study suggests that length of OCP usage does not negatively impact subsequent reproductive outcome. This should reassure women using long-term OCP

Birth Order Gender Patterns in an Urban Population

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OBJECTIVE: To determine if prior live births(s) of exclusively one gender increases the odds for the same gender with subsequent live births.

METHODS: Data was collected prospectively from August 2006 to January 2008. Subjects were grouped as nulliparous (Group 1), multigravid with one male live birth (Group 2), multigravid with one female live birth (Group 3), multiparous with two or more male live births only (Group 4), and multiparous with two or more female live births only (Group 5). All groups were compared with Group 1, and Groups 2 and 3 were compared with Groups 4 and 5, respectively, using z-test for proportions. Logistic regression was used to calculate OR and CI for maternal age, paternal age, and maternal race/ethnicity as predictors of gender in the current pregnancy.

RESULTS: Data from 703 eligible couples was reviewed. Compared to nulliparous controls, the other groups did not show a trend towards a specific gender. The percentage of male live births in Group 2 was similar to that observed in Group 4, as was the percentage of female live births in Group 3 compared to Group 5. Mean paternal age among male live births was statistically younger than that observed among female live births (25.61 vs. 26.78), but no other study parameter predicted gender in the current pregnancy.

CONCLUSIONS: The gender of prior live births is not predictive of a specific gender in subsequent live births; couples considering gender selection should be counseled accordingly. The observation that men with ages closer to the peak age of male fertility (24 years) may be more likely to father male offspring merits further study.

Patient Perceptions of the Effect of Weight on Fertility

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OBJECTIVE: The rate of obesity in the United States has steadily climbed in the last decade. Numerous studies have addressed the association of infertility with obesity. However, little is known about patient's insight into obesity and infertility or the effectiveness of patient education. The main purpose of the research is to determine patient perceptions of the relationship between weight and fertility.

METHODS: After IRB approval, all patients over the age of 19 who visited a university-based Reproductive Endocrinology and Infertility Clinic were asked to fill out a 10 question survey. Demographics and clinical data were obtained from the medical record at the time of the survey completion. Patients were categorized based on WHO/NIH BMI guidelines.

RESULTS: Eighty-eight patients completed the survey. 41% were obese, 22% overweight, 36% normal weight, and 1% underweight. 75% of obese patients underestimated their body habitus status. Approximately 2 out of 3 patients did not perceive a relationship between their weight and fertility. 92% overall and 78% of overweight or obese women reported that they had never been counseled regarding the impact of weight on fertility. Likewise, almost 2 out of 3 women stated that they had never been counseled regarding the impact of weight on their overall health.

CONCLUSION: Many patients who are overweight or obese have limited insight into the effect of weight on fertility. This fact may be due largely to lack of physician counseling. Our results suggest a need for increased patient education regarding the link between obesity and reproductive dysfunction.

Ovulation Suppression and Cycle Control of Ethinyl Estradiol and Levonorgestrel Combination Patches

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OBJECTIVE: To evaluate ovulation suppression (OS), cycle control, and safety of three transdermal contraceptive delivery systems (TCDS) containing differing amounts of LNG and EE; assess patch tolerability/wearability.

METHODS: The multi-center, open-label, randomized three cycles study evaluated 123 women with regular cycles using either Agile TCDS: AG200LE, AG200 and AG200-15 delivering LNG from 75 to 100 ug daily and EE from 15 to 30 ug daily. Serum-progesterone was measured on days 1, 8, 11, 15, 19, 22 and 25. EE and LNG were determined on days 8, 15 and 22. Probable ovulation was defined as two consecutive serum progesterone levels above 4.6 ng/ml. Daily diary cards were used.

RESULT: For the intent to treat population (ITT) wearing AG200LE, AG200 or AG200-15, OS was 72.8%, 88.4% and 90.4% respectively. For the ITT with verifiable compliance, OS was 75.0%, 90.4% and 92.3% respectively. EE influenced LNG pharmacokinetics and pharmacodynamics. No serious adverse events observed. The AG200-15 showed good cycle control with 85% women reporting no breakthrough bleeding/spotting in cycle 3 compared to 71% in the AG200LE and AG200 groups. Skin irritation occurred for 2% of all patches and was mild. Incidence of patch fall-off or detachment were <1% in cycle 3.

CONCLUSIONS: AG200-15 is the optimal formulation for OS and cycle control and with hormone exposure equivalent to oral doses of approximately 100 µg LNG daily and approximately 30 µg EE daily.

GYNECOLOGY

Can Laparoscopic Hysterectomy Replace Abdominal Hysterectomy In Benign Gynecological Surgery?

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OBJECTIVE: Hysterectomy is the second most common major surgery among women of child-bearing age. Total laparoscopic hysterectomy, however, is still not widespread due to lack of experience and fear of complications. The purpose of this study is to sum up our 5-year experience with total laparoscopic hysterectomy for benign gynecological pathology in a suburban gynecological practice.

METHODS: In May of 20003 the author decided to perform all hysterectomies via the total laparoscopic route unless otherwise indicated. Approximately 450 operations were thus performed between May 2003 and July 2008. Data were collected on indication for surgery, operative time, blood loss, uterine weight, patient weight, complications, operative injuries, transfusions, returns to the OR in the first 24 hours postoperatively, readmissions to the hospital, preoperative and postoperative hemoglobin and hematocrit, and pathologic diagnosis.

RESULTS: Operative times for total laparoscopic hysterectomy were comparable or better than with traditional abdominal hysterectomy (except with large fibroid uteri). Blood loss was significantly lower. Hospital stay was significantly reduced. Operative injury rate was low (approximately 1%). The rate of conversion to open surgery was less than 2%. Abdominal hysterectomy rate was less than 3%. Wound complications were minor.

CONCLUSIONS: Laparoscopic hysterectomy is a safe procedure in the hands of a skilled laparoscopic surgeon and can replace abdominal hysterectomy in almost all benign gynecological cases. The current level of abdominal hysterectomies is unacceptably high. Changes should be instituted in the training of gynecological surgeons emphasizing laparoscopic routes and patients need better education about the availability of these minimally-invasive surgeries.

Patient Satisfaction with the Levonorgestrel Intrauterine System for Menorrhagia

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OBJECTIVE: Although the levonorgestrel-releasing intrauterine system (LNG-IUS) is being frequently used for the treatment of menorrhagia, evidence regarding patient satisfaction remains sparse. The aim of this study is to determine patient satisfaction with use of the LNG-IUS for menorrhagia.

METHODS: A convenience sample of 50 subjects using LNG-IUS for menorrhagia was identified at clinic visits or from billing records. Once consented, subjects completed *The Menorrhagia Outcomes Questionnaire*, an instrument designed and validated to assess pre versus post satisfaction following surgical management for menorrhagia. Patient satisfaction was assessed by questions covering symptoms before and after placement, post-procedure complications, quality of life, and overall satisfaction with treatment. The results are reported as proportions.

RESULTS: Subjects reported improvement in all domains with the LNG-IUS. 46 subjects (92%) reported moderate to severe symptoms prior to LNG-IUS placement. 32 of these subjects (64%) reported minimal symptoms after LNG-IUS placement. 45 subjects (90%) reported that their symptoms were better after LNG-IUS placement. 43 subjects (86%) reported that they would recommend the LNG-IUS to a friend with similar symptoms. Only 2 subjects (4%) reported that their symptoms were worse following LNG-IUS placement.

CONCLUSIONS: This is the first use of *The Menorrhagia Outcomes Questionnaire* for patients using the LNG-IUS. Composite scores are similar to those published for surgical management of menorrhagia. The LNG-IUS appears to be an effective treatment in the majority of patients for menorrhagia.

Attitudes of Adult Women Regarding the HPV Vaccine and Cervical Cancer Screening

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PURPOSE: The prevalence of HPV high risk types is as much as 13% in women over 30, and FDA approval for women over 26 is being sought for HPV vaccines. This study examined women's attitudes towards HPV vaccination.

METHODS: Women (n = 38) were recruited from a university-based gynecological practice to participate in a qualitative study regarding HPV vaccine and cervical cancer screening. Semi-structured interviews were transcribed and coded thematically.

RESULTS: Participants had a mean age of 40, with 39% being African-American, 37% Caucasian, and 20% Hispanic; 39% worked in the clinic. Overall, participants believed that women should have access to the HPV vaccine, and most women preferred coverage for four HPV types. Potential barriers to vaccination included cost, competing priorities for their time (i.e. raising children), inconvenience, and lack of education. Most women viewed Pap test screening behaviors as stable and not impacted by vaccination. Concerns about Pap testing were focused on worries about getting negative results and less about the process of obtaining one. Women reported sharing abnormal Pap test results with family, friends and partners and did not perceive it to have the stigma associated with having an STI. Most reported a willingness to share information about HPV vaccination with others, but several would not share this information with their partner.

CONCLUSIONS: Once HPV vaccines are available to women over 26, it will be important to provide education and address barriers to access. Concerns that adherence to cervical cancer screening would decrease with vaccination were not endorsed.

Assessment of the Impact of Severe Premenstrual Disorders on Daily Life and Work

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OBJECTIVE: To assess the impact of severe premenstrual disorder (PMD) on various aspects of the lives of women worldwide, including in the USA.

METHODS: A population-based, stratified sample of women aged 15–45 years from 19 countries in North America, Latin America, Europe, Asia, and Australia were invited to participate in a 2-month web-based survey concerning premenstrual symptoms. Of 16,552 women initially screened, 4,110 were eligible for inclusion in the final analysis set. Recruited women completed, among others, the Daily Record of Severity of Problems (DRSP) (completed prospectively over 2 months), the Premenstrual Symptoms Screening Tool (PSST), and the modified Work Productivity and Activity Impairment (mWPAI) questionnaire (both completed retrospectively). The impact of premenstrual problems on daily life, and work absenteeism and productivity were assessed, and compared in women with moderate-to-severe premenstrual syndrome (PMS) and/or premenstrual dysphoric disorder (PMDD) and women with no/mild PMS.

RESULTS: Moderate-to-severe PMS/PMDD was associated with a substantial impairment of many aspects of daily life and work. In the USA and other countries, work absenteeism and productivity impairment were significantly increased in women with moderate-to-severe PMS/PMDD versus no/mild PMS. Moderate-to-severe PMS/PMDD interfered with hobbies and social activities, and negatively influenced relationships with others. The negative effects were consistent across countries, although subjective perceptions might be less pronounced in Asian countries.

CONCLUSIONS: Severe PMD has a negative impact on various aspects of women's lives and work. There is sufficient evidence to suggest that severe PMD is associated with reduced quality-of-life, and adversely impacts work absenteeism and productivity.

Implementation of a Robotics Program: A Community Hospital Experience

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OBJECTIVE: We contrasted the experience among 5 surgeons in a community practice prior to and after implementation of a robotics program. We sought to determine whether the rate of abdominal hysterectomy decreased after incorporating robotics into our practice.

MATERIALS AND METHODS: Consecutive cases completed by 5 surgeons over a 3 year period prior to implementation of robotics program (N=591) were contrasted to a 2 year period after the implementation of robotics (N=878). The incidence of the method of hysterectomy throughout the 5 years was studied. Rates of abdominal, vaginal, laparoscopic, and robotic hysterectomy were compared for the two periods.

RESULTS: Five hundred and ninety one patients underwent hysterectomy before the start of a robotics program. Abdominal hysterectomy (TAH) accounted for 38% of our practice before implementing robotics. This incidence dropped to 8.5% after incorporating robotics at our institution and was statistically significant ($p<0.0001$). Total vaginal hysterectomy (TVH) shifted from 38% to 20% ($p<0.0001$) while laparoscopic assisted vaginal hysterectomy (LAVH) decreased from 10.5% to 3.5% ($p<0.0001$).The incidence of total laparoscopic hysterectomy decreased to 5.7% from 10.5% and was also statistically significant ($p=0.0005$). Robotic hysterectomy accounted for 62.3% of all hysterectomies after implementation of our robotics program.

CONCLUSIONS: Implementation of robotics has changed our approach to hysterectomy. The most dramatic difference seen is our ability to lower the incidence of TAH to less than 9% of cases. Further reductions were also seen in the incidence of LAVH, TVH, and TLH. These shifts directly affect our ability to treat more patients in a minimally invasive manner.

Predictors of Anemia in Women Presenting for Urgent Evaluation of Heavy Menstrual Bleeding

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OBJECTIVE: To determine factors associated with anemia in women seeking urgent evaluation of abnormal uterine bleeding (AUB).

METHODS: We performed a retrospective cohort study of nonpregnant patients seen in the Women and Infants Hospital (WIH) Emergency Room (ER) for AUB between August 2005 and February 2006 (n=378). Medical record data abstraction included demographic factors, clinical history, physical examination findings, laboratory and radiologic findings, and treatment provided. We compared women with severe anemia [defined as hemoglobin (HgB) less than 10 g/dL] to women without severe anemia. Data on HgB concentration were available for 350 (93%) of the patient population. Data were analyzed using STATA. Prevalence ratios for severe anemia were calculated by log binomial regression. Variables associated with severe anemia were included in a multivariable model.

RESULTS: In our study population, the median age was 32 years and 58% were White, Non-Hispanic. Twenty-four percent received outpatient care for AUB in the previous 3 months and 52% reported passing blood clots. Forty-eight women (13.7%) had severe anemia. Increasing age (RR=1.04, 95% CI 1.02-1.06) and having both tachycardia and hypotension (RR=3.11, 95% CI 1.20-8.04) were associated with severe anemia. No other specific clinical exam findings, including amount of bleeding, or reported symptoms were associated with severe anemia. In the multivariable model, only age (RR=1.03, 95% CI 1.01-1.06) was associated with risk of severe anemia.

CONCLUSIONS: In our ER population of women seeking urgent evaluation of AUB, clinical exam findings and reported symptoms were not associated with whether or not the patient had severe anemia.

Patient Selection Criteria for Outpatient Myomectomy via Mini-laparotomy

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OBJECTIVE: To establish criteria to serve as a guideline for physicians selecting patients for outpatient abdominal myomectomy via mini-laparotomy.

METHODS: We developed an alternative procedure for myomectomy using mini-laparotomy. This procedure includes a 6 cm Pfannenstiel incision, strict hemostasis, avoidance of bowel packing and retraction, exteriorization of the uterus or leiomyoma through the incision, and same day discharge. We performed a retrospective analysis of 45 patients undergoing outpatient mini-laparotomy myomectomy against a control group of 84 patients in the same practice receiving inpatient myomectomy by traditional laparotomy. We compared surgical outcomes, patient demographics, and data regarding uterine leiomyoma available to the surgeon preoperatively.

RESULTS: There were no significant differences in age, gravidity, parity or race between the two groups. Mini-laparotomy and outpatient myomectomy was successsfully performed on 98% of patients attempted. Average operative time using our mini-laparotomy was 80 minutes, average blood loss was 125cc, and average time to discharge was 172 minutes. All parameters were significantly decreased from the inpatient myomectomy group. None of the patients returned for hospitalization or reoperation. All patients were fully ambulatory by one week postop. Predictors of successful outpatient myomectomy included 3 or fewer myomas, largest myoma less than 7 cm, and a BMI less than 28.

CONCLUSION: These parameters describe criteria to use when evaluating a patient for outpatient myomectomy procedure. There was a learning curve of physician acceptance of the outpatient procedure. Patient satisfaction with the outpatient procedure was high, complications were lower, and total cost was significantly decreased.

Impact of Body Mass Index on Charge for Abdominal Hysterectomy

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OBJECTIVE: Surgery in obese women is technically difficult and may result in increased operative complications, thereby increasing the charge for the hospitalization. The objective of this study was to compare hospital charges for women undergoing abdominal hysterectomy based on body mass index (BMI) calculated at the time of surgery.

METHODS: This retrospective review from 2006-2008 identified adult women who underwent abdominal hysterectomy independent of other major operative procedures. Patients were excluded if the medical record was incomplete or if abdominal hysterectomy was performed after attempted laparoscopic or vaginal surgery. Data regarding clinical care and hospital charges were abstracted from the Clinical Data Repository of a single academic institution using CPT code 58150. BMI and details of the procedure were abstracted from the corresponding electronic medical records. Groups (based on BMI) were compared for age, length of hospital stay, and hospital charges using ANOVA (SPSS 16.0). A p-value less than 0.05 was considered significant.

RESULTS: 427 total records were reviewed. 121 records (28.3%) did not meet inclusion criteria. 306 records were included in the final analysis.

Results summary.

Factor	**BMI <30 (n=145)**	**BMI 30-40 (n=100)**	**BMI >40 (n=61)**	**p**
Age	50.57±11.65	48.84±12.27	52.49±10.85	0.154
Length of Stay	4.19±2.2	4.08±1.3	4.44±1.2	0.451
Hospital Charge	19659.69±7733.58	21068.76±6484.17	23848.07±9257.45	0.002

CONCLUSION: Increasing BMI increased the total hospital charge for abdominal hysterectomy. Length of stay was not significantly different. Further research is on-going to determine precisely the source of hospital charge differentials (physician, pharmacy, laboratory, and/or operating room charges).

Pain Pressure Threshold Algometry of the Anterior Abdominal Wall in Chronic Pelvic Pain

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BACKGROUND: The distribution of responses to pain pressure threshold (PPT) testing of the anterior abdominal wall in chronic pelvic pain (CPP) patients is unknown but could be used as a quantitative pain measure to guide diagnosis and follow treatment response. A valid measure should be worse when the condition is present, and improve with symptom resolution.

METHOD: PPT algometry was performed on 14 different anterior abdominal and pelvic wall points from 0 to 3.0 kg/cm2 using a commercially available pressure meter in 47 patients at initial evaluation and following anti-inflammatory (NSAID) or anesthetic trigger point injection (TPI) treatment. The sum of the three upper points (sU3) at the level of the umbilicus (right, left, and central), and the three lower points (sL3), at the level of a pfannenstiel incision, were also evaluated.

RESULTS: The sU3 was significantly higher ($p<0.001$) than the sL3 [means/SD (CI): [U3: 6.2/ 1.9 (5.6-6.8)], [L3: 5.1/ 2.0 (4.4-5.7)]. Following NSAID treatment, the sL3 improved significantly ($p= 0.02$. mean (CI):-1.5 (-0.3 to -2.7) while there was no significant change in the sU3. Following TPI, the PPT for those individual points demonstrated a significant improvement [$p<0.001$, mean (CI): -0.56 (-0.39 to -0.71)].

CONCLUSIONS: PPT algometry appears to be a useful, objective measure of abdominal wall pain in CPP, which can also be called myofascial pain syndrome. The sL3 points are affected in CPP and improve with treatment, providing clinicians and patients with a more objective measure for patients' pain.

Sexual Dysfunction in Women: Practice Patterns and Barriers to Effective Management

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OBJECTIVE AND METHODS: Sexual health is an important aspect of overall women's health. This survey, conducted at the 2008 Annual Clinical Meeting of the American College of Obstetrics and Gynecology, examines opinions of 198 healthcare providers (92% OB/GYNs, 2% other physicians, 3% other healthcare professionals, 3% medical students; 45% male, 55% female) regarding training and practice patterns using 7-point Likert scales.

RESULTS: Most respondents indicated their training in discussing sexual health with patients was inadequate in medical school (68.8%), during residency (73.6%), and via continuing medical education (52.4%). When asked how likely they were to discuss sexual health with premenopausal patients, 90.3% said they would be "somewhat to extremely likely" when patients had sexual complaints. This value was 64.6% for patients seen for annual physicals and 34.3% for patients seen for unrelated problems. The most important barriers to discussion were lack of time (63.5% believed this was a barrier) and lack of effective therapies for female sexual dysfunction (74.4%). Only 8.1% of respondents were highly confident in treating women with hypoactive sexual desire disorder (HSDD); 25.6% were "somewhat confident"; and 39.5% were "less than somewhat confident." There was no difference between male and female health care providers in comfort level when discussing sexual health with patients, but 52% of female practitioners compared with 42% of male practitioners would consider pharmacotherapy in a woman with HSDD.

CONCLUSION: Physicians view their training in discussing sexual health as inadequate and are often unprepared to deal with barriers to discussion with their patients.

Non-Contraceptive Use of the Levonorgestrel Intrauterine System

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INTRODUCTION: Use of the Levonorgesterel Intrauterine System (LNG-IUS) for its non-contraceptive benefits is common in the clinical setting. We attempted to quantify these benefits among women with abnormal uterine bleeding and dysmenorrhea.

METHODS: This retrospective observational study used Kaiser Permanente, Northern California computerized databases and medical records review. We studied utilization changes for inpatient and outpatient gynecologic services for 1,192 women ages 18-55 who were prescribed the LNG-IUS from 2002-2006 and had a history of abnormal uterine bleeding or dysmenorrhea within the year prior to LNG-IUS insertion.

RESULTS: In the year after the LNG-IUS insertion compared with the year before, women averaged 1.5 (SD=4.4) fewer anemia-related labs (p less than 0.0001), and 1.1 (SD=2.0) fewer hormone or GnRH agonist prescriptions (p less than 0.0001). Pelvic examinations, pelvic ultrasonography, hysteroscopic procedures and endometrial biopsies were also significantly reduced, but changes were not clinically meaningful. Pain medication prescriptions, endometrial ablations, myomectomies, and dilation and curettage procedures did not significantly change after insertion of LNG-IUS. In addition, emergency room visits for bleeding and pain and office visits for anemia decreased slightly. Excluding women who delivered a baby in the year prior to LNG-IUS insertion, gynecologic office visits decreased by 1.0 (SD=2.7, p less than 0.0001).

CONCLUSION: In a managed-care system, use of the LNG-IUS in women with abnormal bleeding and dysmenorrhea appears to be associated with non-contraceptive benefits. In the first year after insertion, women with LNG-IUS had lower utilization of inpatient and outpatient gynecologic services than in the year prior to insertion.

Parasitic Myomas

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OBJECTIVE: To report the largest case series of parasitic myomas in the medical literature, and an examination of etiologies, associations, and risk factors.

METHODS: Retrospective chart review was performed on 12 patients found to have parasitic myomas between August 2000 and April 2008. The following data were systematically collected: surgery date, indications for surgery, number, dates, and types of prior surgeries, prior use of morcellation, and locations of parasitic myomas. Pathologic confirmation of all specimens was obtained.

RESULTS: Laparoscopic evaluation confirmed the presence of intraperitoneal and retroperitoneal myomas distinct from the uterus in 12 patients. Ten of the 12 patients had prior abdominal surgery. Seven patients had prior morcellation procedures; five laparoscopic myomectomies, one abdominal myomectomy, and one total abdominal hysterectomy. Three patients had multiple parasitic fibroids, all of whom had a history of laparoscopic myomectomy with morcellation. The majority (12/17) of parasitic myomas were found in the pelvis, although some were found throughout the abdominal cavity including two retroperitoneal myomas, one myoma on the gastric mesentery, and on on the left lobe of the liver.

CONCLUSIONS: Parasitic myomas may occur spontaneously as pedunculated subserosal myomas lose their uterine blood supply and parasitize to other organs. However, this series supports what the literature has suggested; more parasitic myomas may be iatrogenically created after prior surgery, particularly surgery using morcellation techniques. With increasing rates of laparoscopic procedures, surgeons should be aware of the potential for iatrogenic parasitic myoma formation, their likely increasing frequency, and intraoperative precautions to minimize occurrence.

Vaginal Dryness and Sexual Pain: A Comparison of Incidence and Interventions in 11 Countries

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OBJECTIVE: The Global Survey of Sexual Attitudes and Practices assessed women's sexual attitudes, complaints and interventions across eleven countries.

METHODS: 600 respondents from three age groups were recruited from each country. Respondents had to be sexually active in the preceding year and had sexual relations at least once or twice every three months. Data were collected on prevalence and reported distress associated with vaginal dryness and sexual pain, interventions taken to alleviate the problem and willingness to discuss this sexual complaint with a clinician.

RESULTS: Significant differences were noted in both experience and report of vaginal dryness across countries. Women in Brazil, Canada, and Australia reported the highest frequency of vaginal dryness while Italian and Spanish women reported the least frequent. The degree to which vaginal dryness was experienced as bothersome by the respondents varied greatly among the sampled countries. The majority of respondents were willing to discuss their sexual concerns with their physician with the exception of Thailand and Japan, who reported the most reluctance to talking about sexual issues.

CONCLUSION: Overall, there is a significant difference cross-globally in both the experience of vaginal dryness and the degree to which it is experienced as bothersome.

Provider Knowledge, Attitudes and Treatment Preferences for Early Pregnancy Failure

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OBJECTIVE: Early pregnancy failure (EPF) is effectively treated with surgical uterine evacuation in an office or operating room, misoprostol, or expectant management. This study describes health care provider knowledge, attitudes and treatment preferences for EPF.

METHODS: We surveyed a national random sample of 3600 obstetrician-gynecologists (OBGYNs), family medicine physicians (FMPs) and certified nurse midwives (CNMs) regarding their knowledge, attitudes and treatment preferences for EPF.

RESULTS: 1130 survey respondents presently care for women with EPF and were included in the analysis: 306 (27.1%) OBGYNs, 372 (32.9%) CNMs and 414 (36.6%) FMPs. 62.3% of respondents ranked expectant management as the "most preferred" treatment option and 41% ranked office uterine evacuation as "least preferred". Although over 65% of providers view misoprostol treatment positively, less than half reported using it in the past 6 months. Only 8.5 % of respondents offer office uterine evacuations and 32.2% believe that office uterine evacuations are riskier than the same procedure performed in an operating room. Barriers to offering office uterine evacuations and misoprostol included lack of office staff, lack of training and perceived low patient demand for these services. Provider type is predictive of both practices and attitudes towards EPF treatment.

CONCLUSIONS: Providers are not routinely utilizing the full range of safe and effective treatments for EPF, typically using expectant management or uterine evacuation in an operating room. Office uterine evacuations are particularly infrequent. Additional training and better understanding of patient treatment preferences may change current treatment patterns.

Validity and Performance of a New Assessment Questionnaire for Heavy Menstrual Bleeding

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OBJECTIVE: To validate a new self rating 6-item tool, the Menorrhagia Impact Questionnaire (MIQ), for measuring the perceptions and impacts of heavy menstrual bleeding (HMB).

METHODS: The MIQ was developed to assess perception of blood loss, changes in blood loss, limitations on work, physical, and social activities, and the types of activities restricted by bleeding. Psychometric validation of conceptual framework and content validity followed standardized procedures in 2 groups of women, 131 women diagnosed with menorrhagia and treated with 3.9 g/day XP12B-MR (tranexamic acid-modified release) during heavy bleeding, and 131 age-matched normal controls.

RESULTS: Construct-related validation of MIQ items showed strong known-groups validity with mean scores on treatment significantly different than the normal group ($P \leq .001$), which were more strongly associated with a disease-specific Ruta Menorrhagia Questionnaire global score (Pearson's r, range 0.757 – 0.809) and Menstrual Bleeding Diary than generic health status SF-36 instrument. The proportions of women who reported change in the amount of blood loss and their rating of whether this change was meaningful were also identified. The test-retest evaluation of the MIQ items provided evidence of reliability ($r \geq 0.67$). The MIQ items showed sufficient variability in response options and also the ability to detect change from baseline ($P \leq .001$). The calculated effect size for the amount of change for each item ranged from -0.9 to -1.2.

CONCLUSION: The MIQ is a valid questionnaire, able to detect change in women receiving medical treatment for menorrhagia and robustly measures the impact of HMB on quality of life.

XP12B-MR Improves Ferritin and Hemoglobin Values in Women with Heavy Menstrual Bleeding

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OBJECTIVE: Determine the impact of XP12B-MR (tranexamic acid-modified release) on anemia in heavy menstrual bleeding (HMB).

METHODS: This long-term, open label, multisite safety study was conducted at 62 US sites. Women 18 – 49 years of age with HMB were treated with XP12B-MR (3.9 g/day po for up to 5 days/cycle) for up to 27 cycles. Changes in ferritin and hemoglobin were evaluated at baseline and after 6, 15, and 27 treatment cycles.

RESULTS: 233/716 (32.8%) of subjects with low baseline ferritin levels (≤ 9.9ng/mL) and 190/715 (27.6%) of subjects with low hemoglobin levels (≤ 11.9g/dL) at baseline were analyzed (ITT=718 women).
Of women with low baseline ferritin values (mean, 6.07ng/mL), 35.2% after 6 treatment cycles, 51.1% after 15 cycles, and 58.0% after 27 cycles had their ferritin levels increase to the normal range. For these women with a low baseline ferritin level, the group's mean ferritin levels increased to 15.81ng/mL ($P \leq$ .0001), 17.54 ng/mL ($P \leq$.0001) and 15.90ng/mL ($P \leq$.0001) after 6, 15 and 27 cycles of XP12B-MR treatment, respectively.Of women with low baseline hemoglobin values (mean, 10.73g/dL), 41.8% after 6 treatment cycles, 42.2% after 15 cycles, and 45.7% after 27 cycles had their hemoglobin levels increase to the normal range. For these women with a low baseline hemoglobin, the group's mean hemoglobin level increased to 12.76g/dL ($P \leq$.0001), 12.85g/dL ($P \leq$.0001) and 12.76g/dL ($P \leq$.0001) after 6, 15 and 27 cycles of XP12B-MR treatment, respectively.

CONCLUSION: In this study, XP12B-MR improved low ferritin and hemoglobin levels in HMB.

The Use of the YAG Laser as an Effective Tool for Labia Reduction-A 5 Year Review of Outcome Data

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A major deficit in gynecology is the lack of training in Labia Minora reduction and the understanding for the need. This paper reveals nine areas of Labial concern that are under-addressed and under-treated, and reviews outcome data of 488 women who underwent Laser Reduction Labioplasty. A screening history was taken with specific questions to identify patient issues. The consultation reviewed pelvic anatomy, before and after pictures, risks and complications, and included a physical exam with a mirror. The YAG laser was used as the cutting instrument. Vicryl sutures were used for closure. All were outpatient surgeries under general anesthesia, and patients received a dose of pre-op antibiotics. Patients were seen post-op day one and many at eight weeks. All were sent a follow-up questionnaire after three months. Issues identified were length (73%), pigmentation (34%), asymmetry (32%), problems with comfort and function with activities and exercise (34%), clothing (40%) and intercourse (28%). In 2008, (n=66), hygiene (20%), multi-directional urine stream (38%) and emotional distress inhibiting sexual activity (66%) were also identified. Blood loss was between 1 and 3 cc. No burns occurred. Three were treated for skin infections. One had granulation tissue. No major complications occurred. Minor complications were within 1-2%. Appropriate identification of labial issues can be paramount to greatly enhancing physical as well as psychological aspects of women's lives. Treatment of them with the YAG laser is safe, effective and improves comfort, function and appearance.

A Comparison of Vaginal Hysterectomy versus Lap Supracervical Hysterectomy

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HYPOTHESIS/PURPOSE: The purpose of the study is to compare Vaginal hysterectomy (VH) to laparoscopic assisted supracervical hysterectomy (LSH) in terms operative time, recovery time, length of hospital stay, rate of complications, surgery costs and overall hospital costs.

METHODS: Patients who underwent vaginal hysterectomy or supracervical hysterectomy for abnormal uterine bleeding at our institution between the Jan 2005 and Dec 2007 were identified. Their charts were reviewed to obtain information on rates of complications intra-op and short term post op, operative time, duration of hospital stay, amount of post op analgesia required, recovery time from surgery average operating and hospital costs.

RESULTS: 150 patients who underwent vaginal hysterectomy and 50 patients who underwent laparoscopic SCH were identified. The two groups of women were similar in demographic characteristics and uterine size. Patients who underwent VH had significantly fewer operative times (62 mins +-20 mins vs 120 +-60 mins $p < 0.05$), lower rates of intraop complications (2/150 rate of excessive EBL vs 2/50, $p < 0.05$). Analysis of amount of post op narcotic use and average surgical and hospital admission costs in the two groups is ongoing. We hypothesize that vaginal hysterectomy will have lower average costs than LSH. The two groups were found to have similar recovery times and similar number of hospitalization days (2 days).

CONCLUSIONS: Vaginal hysterectomy is a safer and faster procedure than lap supracervical hyterectomy.

Heritability of Age of Menarche in a Subset of African American Twins

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BACKGROUND: Early age of menarche has been associated with disease and future morbidity. Genetic factors account for 50% of the variance of age at menarche in Caucasian girls but less is known about the heritability of age of menarche in African American (AA) girls. We estimated heritability of age of menarche in a sample of AA twins and examined its relationship to later substance abuse and future mastectomy.

METHODS: A total of 126 twin–sister pairs with data for 60 monozygotic (MZ) twin pairs and for 66 dizygotic (DZ) pairs was analyzed. Heritability of age of menarche was calculated using the classic twin model and the variances were decomposed via an ACE model into additive genetic (A), common environment (C), and unique environment (E) components and their confidence intervals were calculated.

RESULTS: Mean age of menarche was 12.8, the correlation of age at menarche was 0.36 (p=0.004) for MZ twin pairs and 0.35 (p=0.003) in the DZ–sister group. The heritability estimate was 12.1% in ACE-model (95% confidence interval 0-0.576) for age at menarche. Parity, later tobacco, alcohol and future mastectomy use were not significantly correlated with age at onset of menarche.

CONCLUSIONS: Genetic influences on age at onset of menarche in AA girls were not significant. These results suggest that environmental factors likely play an important role in the differences observed between AA and Caucasians in age of onset of menarche. The results also suggest that early physical maturation does not account for substance abuse in this population.

HIV / AIDS PROGRAM

Do Protease Inhibitors Affect Infant Birth Weight?

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OBJECTIVE: Over 50,000 HIV-infected women are of child-bearing age in the United States. Although antiretroviral agents have reduced perinatal transmission, questions remain regarding adverse effects in pregnancy, including decreased fetal growth with Protease Inhibitors (PI). Our objective is to compare birth weights of infants to HIV-infected gravidas on a PI with those who did not use a PI during pregnancy.

METHODS: This is a retrospective cohort study of all HIV-infected gravidas receiving prenatal care at our institution from April 1, 1999 to February 21, 2007. Medical history, antiretroviral agents used, gestational age at delivery, birth weight and neonatal weight percentile were collected. Patients with diabetes, hypertension, multiple gestation or delivery prior to 36 weeks were excluded. Mann-Whitney, ANOVA and Chi-square tests were used.

RESULTS: 146 singleton pregnancies of HIV-infected gravidas were identified and 123 met the inclusion criteria. 84(68.3%) were exposed to a PI, 39(31.7%) were not. The two groups did not differ with respect to age, parity, tobacco use or anemia, but the PI group had a higher initial viral load and lower CD4 count. Gestational age at delivery and birth weight did not differ (38.2 vs 38.4 weeks; 3108 vs 3041 grams in the non-PI and PI groups, respectively; p=0.28, 0.57). There was no difference in neonatal weight percentiles (43.4 vs 37.3%, p=0.21). Birth weight and percentile did not differ based on time of therapy initiation (p=0.09, 0.51).

CONCLUSION: PI use during pregnancy does not appear to affect birth weight in our cohort.

MENOPAUSE

Consumer Perception of Healthcare Practitioner Attitude to Black Cohosh for Menopause Symptom Relief

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OBJECTIVE: Identify perceived attitude of healthcare practitioners to use of an isopropanolic black cohosh extract by perimenopausal and menopausal herbal supplement users.

DESIGN: A web-based survey of consumers who had previously registered at a black cohosh product website (www.remifemin.com).

RESULTS: We analyzed surveys from 692 women who indicated they were currently using black cohosh extract. The majority of respondents were age 35-45 (64.7%). The healthcare provider identified as the primary source of information on menopause was the OB-GYN (42.7%), followed by Family Practitioner (15.9%). Two-thirds of the respondents (63.4%) indicated they had discussed their use of black cohosh with the healthcare provider treating their menopause symptoms. Almost one-third (28%) indicated their healthcare provider had specifically asked about the use of dietary supplements. Over half (53.7%) of the respondents said that their healthcare provider was "supportive" or "very supportive" regarding their decision to use black cohosh. Just over one-third of respondents (34.4%) stated that the single most important reason for selecting black cohosh over other alternatives for menopause symptom relief was a desire to avoid hormone therapy. Product satisfaction ratings were positive, with 89.9% stating they were "satisfied" or "highly satisfied" with the product and 88.4% rating it as "effective" or "highly effective."

CONCLUSION: The high percentage of women discussing use of black cohosh with allopathic practitioners was encouraging. The high acceptance rate of its use by healthcare practitioners may be due to the fact that black cohosh is one of the few herbal preparations documented to relieve the symptoms of menopause.

Effect of Gabapentin Extended-Release on Sleep in Postmenopausal Women with Vasomotor Symptoms

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A multicenter, randomized, double-blind, placebo-controlled study was undertaken to evaluate the efficacy of gabapentin extended-release (gER) tablets in the treatment of vasomotor symptoms in 124 postmenopausal women. Women experiencing 7 or more moderate-to-severe hot flashes per day were randomized to receive escalating doses of gER up to 3000 mg daily or placebo for 13 weeks. The Pittsburgh Sleep Quality Index (PSQI), a psychometrically validated instrument, was used to assess the effect of gER on menopause-related sleep problems. Mean global score at baseline (9.1; normal: less than 5) confirmed significant sleep problems in this population. At Week 4, significant decreases from baseline were observed in PSQI global score (3.5 for gER 1200 mg q.d vs. 1.75 for placebo), subjective sleep quality score (0.71 for gER 600 mg q.d, 0.83 for gER 600 mg bid, and 0.94 for gER 1200 mg q.d. vs. 0.27 for placebo), sleep disturbance score (0.41 for gER 600 mg, 0.40 for gER 600 mg bid, and 0.53 for gER 1200 mg q.d vs. 0.03 for placebo) and in daytime dysfunction score (0.51 for gER 600 mg q.d vs. 0.14 for placebo). At Week 10, significant decreases from baseline were maintained in PSQI subjective sleep quality score (0.78 for gER 2400 mg and 0.91 for gER 3000 mg vs. 0.38 for placebo) and sleep disturbance score (0.42 for gER 1800 mg and 0.45 for gER 2400 mg vs. 0.10 for placebo). This study suggests that gER improves several sleep quality components in postmenopausal women with hot flashes.

Placebo Effect on Postmenopausal Symptoms

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OBJECTIVE: This study was to evauate the effect of placebo on menopausal symptoms compared with phytoestrogen(black cohosh combined preparation).

METHODS: Total of 80 postmenopausal women having moderate to severe degree of climacteric symptoms were randomly allocated to receive placebo (n=40) or black cohosh preparation (n=40). Fifty eight subjects completed this clinical study. The Kupperman index including hot flush and the climacteric depressive symptom using Beck Depression Inventory(BDI) were evaluated at baseline, 4 weeks, and 12 weeks of treatment.

RESULTS: The placebo group showed significant reduction of hot flush which was superior to the black cohosh group after 4 weeks' treatment and similar to after 12 weeks' treatment. The placebo group also showed significant reduction of Kupperman index and BDI scores after 4 weeks and 12 weeks of treatment, that was not inferior to the black cohosh group.

CONCLUSION: The placebo showed significant reduction of menopausal symptoms after 4 weeks and 12 weeks of treatment, which was similar to the black cohosh. The placebo seems to effective alternative for menopausal symptom as like black cohosh compound.

Systemic Estrogen Exposure of Synthetic Conjugated Estrogens Vaginal Cream Compared to Oral Tablets

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OBJECTIVE: To compare the pharmacokinetic profile of a 1 gram dose of Bijuva™ Vaginal Cream (0.625 mg synthetic conjugated estrogens, A) to daily oral administration of 0.3mg synthetic conjugated estrogens, A (SCE-A).

METHODS: In a multiple dose, parallel design study, 60 healthy post menopausal women were randomized to either a 1 gram dose of Bijuva cream (contains 0.625 mg synthetic conjugated estrogens, A) administered once daily for 7 days followed by twice-weekly dosing for the remainder of the study, or an oral tablet of 0.3 mg SCE-A administered daily for 27 days. Blood samples were collected from 48 hours prior to initial study dosing (Day -2) for baseline levels and at multiple occasions until 48 hours after the final study dosing (Day 29). Pharmacokinetic analysis was conducted for Day 1, 7 and Day 27. Measured analytes included free estradiol, free and total estrone and equilin.

RESULTS: The mean area under the curve (AUC) and maximum peak concentration (Cmax) at steady-state (Day 27) were lower for Bijuva cream compared to oral SCE-A tablets. At steady-state, systemic estrogen exposure over one week (AUCweekly) was significantly lower with Bijuva compared to oral SCE-A. ($p < 0.0001$, Free Estrone and Free Equilin; $p = 0.0055$, Free Estradiol).

	Bijuva™ Vaginal Cream			**SCE-A Oral Tablets**		
Day 27	B-A Free Estrone	B-A Free Estradiol	Free Equilin	B-A Free Estrone	B-A Free Estradiol	Free Equilin
Cmax (pg/mL)	24.0	7.9	5.5	46.8	6.7	20.1
Tmax (hr)	12.0	12.3	10.5	7.6	11.6	7.4
AUC0-24 (pg.hr/mL)	293.8	92.5	27.3	619.4	92.6	265.8
AUCweekly (pg.hr/mL)	1246.4	350.2	66.8	4335.5	648.1	1860.4

B-A = Baseline-adjusted

CONCLUSION: At steady state, systemic estrogen exposure is significantly lower with Bijuva™ Vaginal Cream compared to an oral daily dose of SCE-A; there is little to nosystemic accumulation of estrogen with twice-weekly Bijuva cream administration.

Breast Cancer Incidence: A Tough Search for Unbiased Data

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OBJECTIVE: We believe the true incidence of breast cancer to be substantially lower than the 10% incidence generally referred to. We sought to identify the true incidence of breast cancer among healthy postmenopausal women in the general population.

METHOD: We analyzed 9 recently published studies covering 1,256,972 women. We calculated the breast cancer incidence found in each study by dividing the total number of women in whom cancer was found, by the total number of women studied; this yields the percentage of women diagnosed with breast cancer throughout that study's duration.

RESULTS: Breast cancer incidence from four sources appears to be comparable: widespread screening (1); placebo and treatment groups in observational (2,3,4,5) and large RCT HRT studies (6/6b); as well as long term observational studies (7,8,9).

	Trial	# Women	Ages	Duration	Incidence
1	UK Million Women Screening	1,000,000 Apx	50-64	3 yrs	**<1%**
2	Danish Nurse's Study Prospective Cohort	19,898	>44	6 yrs	**2.2%**
3	Melboume Cohort Collaborative Study	24,479	40-69	12 yrs	**2.5%**
4	Finnish Registry Study: HX	110,371	>50	7 yrs	**1.87%**
5	French Cohort Study	3175	>49	9 years	**3.3%**
6a	US WHI RCT Intact Women	16,610 Prmpro/placebo	50-79	5.2 yrs Avg.	**1.95%/ 1.53%**
6b	US WHI RCT (Hysterectomized)	10739 Prmrin/placebo	50-79	7.1 yrs avg	**1.96%/ 2.45%**
7	US Nurses Hlth Obs	70,000	>44	20 yrs	**1.4%**
8	U.S Record Review	1200		22 yrs	**1.3%**
9	Australia Record Rev HRT and testosterone	500 99% →	40-79*	25 yrs	**1.4%**

CONCLUSIONS: In 8 of 9 studies which followed women for as little as 3 and as much as 25 years the total breast cancer rate during the time period studied was lower than 2.6%. This contrasts sharply with the general perception of women where Gallup reported that 40% believed that they were going to die of breast cancer. Age, genetic dispositions, exposure to sunlight, dietary habits and exercise practices each profoundly influence a woman's risk for breast cancer. Patient-specific information regarding breast cancer risk should be based on these factors rather than the estimated projections of global population statistics currently used.

OBSTETRICS

Pregnancy Associated Vulvar Edema in Adolescent Females: A Case Series

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OBJECTIVE: Massive vulvar edema is a rare complication of pregnancy. Multiple medical factors may contribute to this event. Historical reports link massive vulvar edema with maternal mortality. Information about this disorder in adolescent females is virtually absent from the literature. We examined five adolescent pregnancies complicated by massive vulvar edema. Possible etiologies as well as management tips to optimize outcome are discussed.

METHODS: Cases of pregnancy associated massive vulvar edema were examined and analyzed. Five adolescent females experienced massive postpartum vulvar edema. Three of the patients were diagnosed with preeclampsia, one with chronic hypertension with superimposed preeclampsia and one with obstructed labor. Four were primigravidas. In each case, the vulvar edema resolved using conservative management. In contrast to historical cases, none of our patients experienced long-term sequelae.

RESULTS: A multitude of factors have been associated with vulvar edema in obstetric and gynecologic patients including trauma, dermatitis, infection, lymphatic blockage, toxic shock syndrome, and Crohn's disease. Our case series highlights young age, preeclampsia and anatomic factors in the etiology of pregnancy associated vulvar edema. Unlike the historical reports of vulvar edema and subsequent maternal deaths, each of our patients had a benign postpartum course with full recovery. No long term sequelae were identified.

CONCLUSION: Conservative management has been effective in decreasing morbidity and mortality associated with massive postpartum vulvar edema. Preeclampsia may be one of the major etiological factors. Parity may be another major factor and requires further investigation. We offer guidelines for management of massive vulvar edema in adolescents.

Is Premature Rupture of Membranes a Risk Factor for Cesarean Section?

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OBJECTIVE: To evaluate modes delivery in a series of pregnancies complicated with PROM to identify possible predictors of cesarean delivery.

METHODS: Seventy-two consecutive singleton pregnancies diagnosed with PROM (34-42 weeks) and induced (cervical ripening and/or oxytocin) after arrested labor were reviewed for significant prognostic factors and delivery outcomes.

RESULTS: Failed inductions leading to cesarean deliveries accounted for 12.5% (9/72), with an average labor of 26.4 ± 9.4 hours. Six of the nine patients were nulliparous. Arrest of labor was reported in nearly all the cesarean patients with most not progressing beyond 6 centimeters. Seven cases of NRFHT were witnessed in the cesarean deliveries. Maternal weight and delivery mode were significant (*p=0.007)*, with cesarean deliveries representing greater BMI's than those delivering vaginally (34.8 ± 2.2 vs 29.31 ± 3.6, *p=0.057*). Cesarean versus vaginal delivery birth weights were significant (3251.1 ± 529.9 vs. 2637.9 ± 95.2 grams, *p=0.002*). Time to delivery, examined at <18 hours and > 18 hours, was not a factor (*p=0.690*), nor was maternal age (*p=0.491*). Prolonged induction of labor resulted in variable decelerations treated with amnioinfusion, and did not predispose to cesarean delivery. Oxytocin was effective for Bishop scores of ≥4, whereas cervidil demonstrated effectiveness for scores less < 4. Apgars of 9/9 were reported in 71 of the 72 cases.

CONCLUSIONS: Maternal weight was a significant predictor of cesarean delivery following PROM. PROM, in and of itself, was not an independent factor in predicting cesarean intervention.

Relationship Between Percentage of Desired Weight Loss and Rate of Pregnancy Complications

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OBJECTIVE: To determine the correlation between the percentage of desired weight loss (PDW=[current weight kg – desired weight)/current weight in kg] x 100%) and pregnancy complications in comparison to body mass index (BMI). We hypothesize that PDW predicts pregnancy complications better than BMI.

METHODS: Women were enrolled with IRB approval. Participants completed a survey containing demographic information and pregnancy history. Significance was $p < 0.05$.

RESULTS: 971women were 28.1 ± 7.9 yrs, with 54.6% Caucasian, 41.8% African-American, and 3.6% other. 12 had BMI <18, 200 normal BMI (18-24.9), 260 overweight BMI (25-29.9), 206 obese 1 BMI (30-34.9), 140 obese 2 BMI (35- 39.9) and 153 obese 3 BMI ³40. The distribution of PDW values showed 71 subjects desired weight higher than their current weight. PDW was 24.6± 11.9%. Women with > PDW were more likely to be Caucasians $p<0.001$. Women, overweight or obese, have a significant desire for ideal body weight $p <0.0001$. Higher BMI correlated with hypertension $p<0.0002$ and not with PDW $p=0.89$. BMI, PDW and age were associated with increased neonatal weight of 9-10 pounds. Maternal BMI correlated with neonatal weight >10 pounds $p <0.0097$. BMI correlated with cesarean $p<0.0008$, preeclampsia $p<0.0024$, stillbirth $p<0.0016$, and diabetes $p<0.0074$.

CONCLUSIONS: PDW was strongly correlated to BMI. BMI predicts medical pregnancy complications. Because of the strong correlation of PDW with BMI requesting patient information on PDW does not add much information to pregnancy complications unless the patient declined to be weighed.

Racial and Ethnic Disparities in Prenatal Care

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OBJECTIVE: Racial and ethnic disparities are strongly influenced by social and environmental factors such as the site of care and care provider. We queried multi-racial pregnant women to determine if racial and ethnic disparities exist in prenatal care by assessing their level of satisfaction with health care services.

METHODS: We developed an anonymous 47 question survey modified from the Multidimensional measure of Prenatal Interpersonal Processes of CARE and scored on a Likert scale. The English/Spanish survey focused on demographics, type of care, satisfaction with care and cultural sensitivity. We studied 273 pregnant women at an inner city resident clinic and several private offices in Hartford, CT from 6/07 to 4/08. Data was analyzed in JMP using Chi Square for categorical data was student "t" test for continuous data.

RESULTS: Of the 273 responses, 208 were clinic ((Hispanic (n=125, 62%), Black (n=53, 26.4%), Caucasian (n=10, 5%)) and 65 were from private offices (Caucasian (n=40, 62.5%), Black (n=9, 14.1%), Hispanic (n=12, 18.8%) p< 0.0001). There were significant differences between clinic and private patients in country of birth, race, education level, income, insurance, employment, home ownership, planned pregnancies and type of provider. Patients felt that their prenatal care was influenced by race (27% clinic vs. 5% private, p <. 0001) and language (24.8% clinic vs. 4.9% private, p=. 0004).

CONCLUSION: Race and language were more likely to influence our clinic patient's perception of the prenatal care they received. Documenting these disparities is the first step toward eliminating them.

Likelihood of Achieving Optimal GBS Prophylaxis in Multiparas with Advanced Labor

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OBJECTIVE: Rapid delivery of GBS carriers (GBS+) with advanced cervical dilation (Cx) may result in neonatal treatment (Rx) for suboptimal GBS prophylaxis (under 4 hrs). To avoid this, some caregivers attempt delayed delivery for these women. We evaluated the impact of admission Cx on labor course to identify when delivery within 4 hours is unlikely or inevitable.

DESIGN: Retrospective review of term multiparas in labor with Cx 4cm or more from 2003-08. Exclusions were: malpresentation, MgS04, twins, immediate cesarean. Uni-/multivariable and ROC analyses evaluated associations between Cx and latency to delivery.

RESULTS: Characteristics of 1,192 gravidas included: mean age-26.2 years, median gravidity-3, mean BWT-3297 grams. 25.3% were GBS+ and 22% had membrane rupture at admission. Delivery after 4 hrs decreased with increasing Cx (Table). GBS+ had longer latencies than GBS- (5.5 vs 4.0 hrs, p below 0.0001). Those with intact membranes were not more likely delivered after 4 hrs (46.8 vs 42.4%, p= 0.21). Delivery after 4 hrs was increasingly likely with decreasing Cx, decreasing effacement, higher station ($p \leq 0.001$ for each), intact membranes (p=0.03), and for GBS+ (p=0.008). ROC of GBS- women revealed an AUC=0.84 and an optimal cut-off of 5cm. For Cx 5cm or less PPV, NPV, SENS and SPEC were: 77, 78, 69 and 85%.

Cervix (cm)	4	5	6	7	8	9	10	
N	283	201	203	188	132	68	117	p-value
Latency (hrs)	7.8	6.2	4.3	2.8	1.7	1.1	0.62	
>4 hrs (%)	85.9	68.7	47.3	22.9	14.4	7.4	1.7	<0.0001
GBS+	93.0	70.0	57.1	20.0	23.1	5.6	4.8	<0.0001
GBS-	82.7	68.1	43.5	23.5	12.3	8.0	1.0	<0.0001

CONCLUSION: Multiparas admitted in labor with a Cx $\leq$5cm are unlikely to deliver within 4 hrs and delivery delay is unnecessary. At 8-10 cm, rapid delivery can be anticipated and conservative Rx likely futile. Risks, benefits of attempted delivery delay at 6-7cm are unknown. This practice is discouraged until proven beneficial.

Reducing Emergency Births by Reducing Oxytocin Utilization after a Change in Clinical Management

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OBJECTIVE: The purpose of this study was to examine the relationship between the prevalence of oxytocin use and emergency vacuum, forceps, cesarean births and neonatal resuscitation and team response to fetal distress.

METHODS: This is a retrospective case control study carried out at a large private university affiliated tertiary care hospital. Data was obtained from vital statistics, labor and delivery, central pharmacy and neonatal intensive care unit (NICU) records and included maternal characteristics, annual birth data, indication and numbers of emergency vacuum, forceps and cesarean births, oxytocin utilization, and number of responses to fetal distress. Additionally, data was collected on the prevalence of cord prolapse, IUGR, preeclampsia and abruption.

RESULTS: The patient characteristics did not differ during the studied period. Data was included from 2005 to 2007. The total number of births during the study period was 14,184. Births were compared by calendar year. The oxytocin utilization showed a reduction from 93.3% to 78.9% from year 1 to year 3(P=0.0001). There was a significant reduction in the number of emergency cesarean deliveries (10.9% to 5.7%), vacuum deliveries (9.1% to 8.5%) and forceps deliveries (4% to 2.3%), as well as responses to fetal distress (P=0.0001). The overall cesarean section rate did not significantly change (29.4%-29.8%) (P=0.14). The number of cases of cord prolapse, IUGR, preeclampsia, and abruption did not significantly change during the time frame.

CONCLUSION: In our patient population, reducing oxytocin usage paralleled a significant reduction of the number of emergency vacuum, forceps, cesarean births and team responses to fetal distress.

Elective Induction of Labor in Low-risk First Birth Women - Risky or Not?

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OBJECTIVE: To study differences in delivery modes and perinatal complications in electively induced NTSV (nulliparous, term, singleton, vertex) deliveries with NTSV spontaneous labor deliveries.

METHODS: Retrospective anonymous chart review of all NTSV deliveries between July 1, 2007 and September 30, 2007 at Franklin Square Hospital was performed (253 charts). NTSV deliveries were divided into 3 groups: spontaneous labor, elective inductions, and non-elective inductions (performed for maternal or fetal complications or uncomplicated pregnancies at least 41 0/7wks).

RESULTS: Of 253 NTSV deliveries, 56 (22.1%) were elective inductions, 62 (24.5%) were non-elective inductions and 135 (53.4%) were spontaneous labors. Cesarean delivery was more likely to occur in induced labors than spontaneous labor (35.7% in elective, 40.3% in non-elective, 20.7% in spontaneous; P=0.006). Operative vaginal deliveries occurred in 5.4% of elective inductions, 8.1% of non-elective inductions, and 14.1% of spontaneous labors (P = 0.15). In terms of adverse perinatal outcomes, no significant differences were observed between elective inductions and spontaneous labors for mean 1 minute Apgar scores (7.88 versus 7.92), mean 5 minute Apgar scores (8.82 versus 8.88) or NICU admission rate (5.3% versus 2.2%). Postpartum hemorrhage, chorioamnionitis and severe laceration rates were non-significantly higher in the spontaneous labor group than in the elective induction group. Spontaneous vaginal delivery length of labor was significantly shorter (733 min) compared to elective induction (1188 min) and non-elective induction (1410 min) (P<0.05). Other variables were also examined.

CONCLUSION: Although the cesarean section rate was increased in elective inductions compared to spontaneous labor, fetal and maternal adverse outcomes were not increased.

Impact of Maternal Incarceration on Preeclampsia in a Very High Risk Obstetric Group

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OBJECTIVE: The purpose of this study is to assess the impact of maternal incarceration during pregnancy on the incidence of preeclampsia in African American adolescents.

STUDY DESIGN: A retrospective cohort study in which we reviewed the clinical record of all African American adolescent pregnant patients 18 years old or younger incarcerated during the current pregnancy delivered during the period between 2000 and 2007 at Staten Island University Hospital. The control group is represented by 40 consecutive age/race matched patient delivered at the same institution.

RESULTS: A total of 79 charts were reviewed. Both groups had similar gravity and parity. The patients in the incarcerated group were younger (mean age 15.9 years, p less than 0.001). Both groups were similar in smoking habits and illegal drug use. The incidence of preeclampsia was less in the incarcerated group (p less than 0.04). Infants born to African American incarcerated adolescents were less preterm (p less than 0.001) and had a higher birth weight (p less than 0.001). Both groups had similar Apgar score at 1 and 5 minutes.

CONCLUSION: African American race, teenage pregnancy and primigravity are well recognized risk factors for preeclampsia. Particular perinatal outcomes appear to be improved in imprisoned African American teenagers compared with age/race matched adolescents. Imprisonment of the mother has a beneficial effect on the birth weight of her baby and decreasing the incidence of preeclampsia. Possible explanations for the decreased incidence of preeclampsia are that prison provides food, shelter, high quality prenatal care and prevents strenuous activities.

Placenta Accreta: Superficial versus Deep Invasion and Neonatal Outcomes

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OBJECTIVE: To test the hypothesis that deeper placental invasion into the myometrium is associated with a higher incidence of adverse neonatal outcomes compared with superficial invasion.

METHODS: We retrospectively reviewed the medical records of all patients diagnosed with placenta accreta at our tertiary care institution between January 1982 and December 2002. Two groups of abnormal placentation were compared: superficial invasion (placenta accreta) and deep invasion (placenta increta or percreta). Neonatal outcomes were examined using the Fisher's exact test for statistical significance, and included gestational age at delivery, birth weight, size for gestational age, admission to the neonatal intensive care unit, neonatal mortality, and 5-minute Apgar score less than 7.

RESULTS: Of 64,359 deliveries, one hundred and three pregnancies complicated by abnormal placentation and which delivered at a viable gestational age were observed (1.6/1000). Of these, there were 86 cases of superficial invasion and 17 cases of deep invasion. The rate of preterm delivery (less than 37 weeks gestation) was 52.3% and 64.7% for superficial and deep invasion respectively; however the difference was not statistically significant. There were also no statistically significant differences in birth weight, size for gestational age, admission to the neonatal intensive care unit, neonatal mortality, or 5-minute Apgar score less than 7.

CONCLUSION: Placenta accreta and increta or percreta are associated with preterm delivery and low birth weight. Our data suggest that deep invasion into the myometrium or through the uterine serosa is not associated with worse neonatal outcomes compared with superficial abnormal placentation.

Cervical Length Screening as a Predictor of Preterm Delivery in Twin Gestations

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OBJECTIVE: To determine if screening cervical length (CL) measurements in twin gestations are a predictor of preterm delivery.

MATERIALS AND METHODS: The study design was a retrospective chart review. Shortened CL was defined as less than or equal to 25mm. Preterm delivery was defined as less than or equal to 28, 30, and 32 weeks. Exclusion criteria included: fetal congenital anomalies, higher order multiples, cerclage placement, and preterm delivery due to a maternal or fetal indication. The Student's t-test was used for continuous variables and Chi square for categorical variables. Post-hoc power and sample size analyses were used when appropriate.

RESULTS: After exclusion, 97 charts were analyzed. There were no statistically significant differences in the demographics, obstetrical risk factors, or mode of delivery. Both one and five minute apgars were statistically lower in the shortened CL group. Birth weight was significantly lower in the shortened CL group (1889g versus 2451g, p=<0.001). There was a significant difference between shortened CL and preterm delivery at 28 weeks (p=0.01) and 30 weeks (p= 0.014). Gestational age at delivery was significantly earlier in the shortened CL group (33.25 versus 35.97 weeks, p= <0.001). The sensitivity of a shortened CL in predicting preterm delivery at 28, 30, and 32 weeks was 100%, 60%, and 42.9%. The negative predictive value for preterm delivery was greater than 95%.

CONCLUSION: This study suggests that twins with a shortened screening cervical length have an increased risk of preterm delivery, while a normal screen has a high negative predictive value.

Obstetric Interventions/Outcomes in Pregnancies Following Loop Electrosurgical Excision Procedure

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OBJECTIVE: To determine whether there is increased risk of preterm delivery and antepartum surveillance/interventions in first pregnancies following LEEP.

METHODS: Pregnant women presenting to labor and delivery at greater than 20 weeks with a non-anomalous, singleton gestation and abnormal pap smear history were considered for inclusion. Exclusions were history of preterm delivery, cervical-uterine anomalies, multiple prior cervical procedures and if the index pregnancy was not the first following LEEP. Exposed subjects had a LEEP-history while unexposed subjects did not. Subjects were identified on presentation to inpatient-care and were followed by record review. Primary outcome was delivery less than 37 weeks. Secondary outcomes were markers of antepartum surveillance/intervention. Study powered to detect doubling in preterm delivery rates (12.5% to 25%).

RESULTS: 417 subjects met inclusion criteria, with 94 (22.5%) LEEP-exposed and 323 (77.5%) unexposed subjects. Exposed subjects were more likely to be white (p= 0.002), married (p=0.01), insured (p=0.02) and diabetic (p=0.01). There was no statistical difference in delivery less than 37 weeks with 17 (18.1%) exposed and 39 (12.1%) unexposed delivering preterm (OR 1.6, 95% CI 0.86-2.99). Potential confounder adjustments did not significantly change magnitude of primary outcome. Exposed subjects had more cervical lengths performed via ultrasound [n=19 (20.4%) vs. n=10 (3.1%), p less than 0.0001], betamethasone administered [n=14 (15%) vs. n=25 (7.7%), p=0.03] and assignment to bed-rest [n=18 (19.2%) vs. n=36 (11.2%), p=0.04) than unexposed subjects, respectively.

CONCLUSIONS: First pregnancies following LEEP are not associated with increased risk of preterm delivery, however they receive greater antepartum surveillance/interventions including cervical lengths, steroids and bed-rest.

Smoking in Pregnancy: Analysis of a Smoking Cessation Project in West Virginia

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HYPOTHESIS: Pregnant women decreasing/quitting tobacco will have improved fetal outcomes.

METHODS: Retrospective analysis of pregnant smokers from 6/1/2006-12/31/2007 who received prenatal care and delivered at CAMC. Variables analyzed from birth certificate data linked to intervention program survey data. Patients divided into four study groups: <8 cigarettes/day with no reduction, <8 cigarettes/day with reduction, >8 cigarettes/day with no reduction, and >8 cigarettes/day with reduction. Analysis preformed using ANOVA one-way test for continuous variables and Chi-square for categorical variables.

RESULTS: Inclusion criteria met by 250 patients. Twelve women (4.8%) quit smoking; 150 (60%) reduced; 27 (10.8%) increased; and 61 (24.4%) no change. Across 4 groups, pre-term births (<37 weeks) statistically significant (p=0.026). Twenty-five percent occurred in >8 no reduction group while 10% occurred in >8 reduction group. Interaction between initial tobacco use and reduction best explains findings. The high rate of preterm birth (25%) in one group depended on 2 factors: >8 cigarettes/day at beginning/no reduction end of prenatal care. Statistically significant difference for birth weights between the >8 with no reduction (2872.6 g) and <8 with reduction (3212.4 g) (p=0.028). Conclusion: Smoking reduction or cessation lowered risk of pre-term delivery (<37 weeks) 2 fold. Encouraging patients who smoke >8 cigarettes/day during pregnancy to decrease prior to delivery provides significant clinical benefit by decreasing preterm birth. These findings support tobacco cessation programs as means to achieve a decrease tobacco use.

SUPPORT: NIH R01 CA124429 and Grant #G080700 West Virginia Department of Health and Human Resources-Division of Tobacco Prevention

Postpartum HA, a Diagnostic Dilemma: 2 Cases of Inadvertent Dural Puncture, Late Eclampsia and PRES

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OBJECTIVE: To review two cases of postpartum headaches related to coincidental inadvertent dural puncture, late eclampsia, and posterior reversible encephalopathy syndrome (PRES).

METHODS: *Case 1:* 32 year old primigravid with GDM admitted at 39.5 weeks in labor. Mild preeclampsia developed, and magnesium sulfate treatment was begun. An epidural was placed for pain relief, and a C/S was performed for arrest of descent. A postoperative spinal headache was managed conservatively. Four days after delivery the patient had grand mal seizures and was readmitted with eclampsia. MRI revealed symmetric increased T2 and Flair signals in the subcortical white matter. Lesions present in the posterior fossa, occipital lobes, and frontal lobes were compatible with PRES. *Case 2:* 17 year old primigravid admitted at 38 2/7th weeks with mild preeclampsia for induction of labor. A second attempt to place a labor epidural was successful. Oliguria developed, and treatment with magnesium sulfate was initiated. C/S was performed for arrest of dilatation. A postoperative spinal headache was managed conservatively. Four days after delivery the patient had an eclamptic seizure and visual changes. MRI revealed patchy, symmetric increased T2 and Flair signals in the bilateral occipital lobes compatible with PRES.

RESULTS: Patients were placed on magnesium sulfate, and hypertension was treated aggressively. Both had full recovery with normal findings on repeat MRIs.

CONCLUSION: Clinicians must be vigilant for the possible coexistence of spinal headache related to inadvertent dural puncture and worsening preeclampsia. Aggressive treatment of late eclampsia and PRES are associated with complete recovery.

Screening and Diagnostic Guidelines: Do We Know Enough?

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OBJECTIVE: Based on ACOG's screening and diagnostic guidelines(1)and physician concerns that their training has not incorporated new information about Down syndrome or delivering such a diagnosis(2),this study extended previous research on the effectiveness of such training for OB/GYN residents. The present study's purpose was to assess residents' knowledge about DS and prenatal testing, and comfort in delivering a diagnosis of DS before and after interaction with a Web-based tutorial that required participants to reflect upon a "virtually-delivered" diagnosis.

METHODS: A team of physicians and educational specialists developed a Web-based interactive tutorial for resident physicians to view virtual patient-doctor sessions, and provide their responses to situations related to DS diagnoses both in utero and at the time of birth. 16 residency programs in OB/GYN and pediatrics participated. Research tools included pre- and post-tests of DS knowledge and comfort level in delivering diagnoses.

RESULTS: The study yielded positive and significant improvement in knowledge and level of comfort (p less than .01 for each). In addition, OB/GYN residents showed no significant differences across program years.

CONCLUSION: OB/GYN residents who participated in Web-based training increased their knowledge and comfort level as a result. The absence of significant difference in pretest scores by residents' year in school suggested that their regular curricula did not incorporate this type of training.

(1) ACOG Practice Bulletin: Clinical Management Guidelines for Obstetrician-Gynecologists. Screening for fetal chromosomal abnormalities. 77(2007). (2) Cleary-Goldman J,et al. Screening for DS: Practice patterns and knowledge of obgyns. Obstet Gynecol 2006;107:11–7.

Use of Non-Prescribed Methods To Induce Labor

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OBJECTIVE: This study sought to identify how frequently patients attempt to induce labor through non-prescribed methods, and what factors are associated with the use of such methods.

METHODS: Surveys were distributed to postpartum patients who had delivered at a Midwestern academic hospital. Patients were asked what methods they had used to induce labor on their own where they heard about these methods, and whether they had discussed it with their physician. Information about demographics and mode and timing of delivery was also collected.

RESULTS: 201 patients responded to the survey. 99 (49.3%) of patients did not try to induce labor themselves, while 102 (50.7%) used some type of non-prescribed method to induce labor. The most common method was walking (43.3%), followed by intercourse (22.9%), ingesting of spicy food (10.9%), and nipple stimulation (7.5%). Very few respondents used laxatives, heavy exercise, masturbation, acupuncture or herbal preparations in order to induce labor. Patients who used any non-prescribed method to induce labor were younger, had a lower parity, greater gestational age, and were more likely to have had a vaginal birth.

CONCLUSION: A substantial portion of patients are using non-prescribed methods to induce labor, often without discussing them with a physician. Providers of obstetrical care may want to inquire about such issues, especially where interventions may do more harm than good.

Local Injection of Vasopressin Reduced Blood Loss During Caesarean Section in Placenta Previa

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PURPOSE: During caesarean section in patients with placenta previa, hemorrhage from the placental implantation site may continue after placenta delivery, because the lower uterine segment is poorer to contract than the uterine body. Resuscitative measures are often required with large volume blood transfusion, and sometimes requiring aggressive operative intervention by hysterectomyto ensure survival. Many gynecologic surgeons use a local injection of vasopressin, which is known as peripheral vasoconstrictor, at time of laparoscopic myomectomy to decrease blood loss. Therefore, we evaluated the effect of local injection of vasopressin on blood loss and secondary impact on complications during caesarean section in placenta previa.

METHODS: 10 patients with placenta previa were recruited, and were undergone local injection of vasopressin solution, in which contained 4 units in 10 ml of saline, into the placental implantation site after placenta delivery. 21 patients, who underwent without vasopressin injection, were analyzed for control groups. The estimated blood loss was recorded, and the blood pressure, heart beat, and total urine volume were monitored to assess the complications.

RESULTS: The estimated blood loss was lower in vasopressin groups than control groups; 1257±361 ml and 1580±713 ml, respectively (P=0.06). Significantly fewer women required blood transfusion in vasopressin groups. Abnormal blood pressure, tachycardia, and oliguria were not obtained in both groups.

CONCLUSIONS: In women undergoing caesarean delivery for placenta previa, the injection of dilute vasopressin solution into the placental implantation site will be effective in reducing blood loss without any complications.

Depression during Pregnancy Predicts an Increase in Antepartum Length of Stay

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OBJECTIVE: The primary objective of this study was to compare the length of hospital stay before and after delivery in women with and without depressive symptoms during pregnancy.

METHODS: This study involved secondary data analysis of a larger cohort examining substance abuse and depression during pregnancy. Each subject completed the Center for Epidemiologic Studies Depression Scale (CESD); we used a validated cutoff score of greater than or equal to 16. Bivariate analyses were used to compare patient characteristics and obstetric outcomes between women with and without an elevated CESD. We also conducted a time-to-event analysis, using Kaplan-Meier curves and the log rank test, to compare the length of stay (LOS) in hours between depressed and non-depressed women.

RESULTS: 18% of mothers scored greater than or equal to 16 on the CESD. Depressed women were more likely to deliver prior to 34 weeks gestation (7.55% versus 3.80%; p=.04). In the time-to-event analysis, a positive CESD was significantly associated with longer antepartum LOS (p=0.03). On average, depressed women had an antepartum LOS 6.6 hours longer than women without depression ($p<0.05$); 8.8% of depressed women had antepartum stays of greater than or equal to 24 hours (versus 3.6% for non-depressed women; p=0.02). There was no difference in postpartum LOS between women with and without an elevated CESD.

CONCLUSIONS: Depressive symptoms during pregnancy are associated with an increase in antepartum LOS. This relationship appears to be mediated by preterm complications. Future work with this cohort will examine multivariate models for this phenomenon.

A Comparison of Amnisure® and Standard Methods for Diagnosing Rupture of Membranes

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BACKGROUND: Failure to diagnose rupture of membranes (ROM) can increase the likelihood of pregnancy complications. Incorrect diagnosis of ROM can lead to inappropriate and unnecessary medical interventions. This study was undertaken to evaluate the efficacy of two different methods for diagnosis of ROM in both term and preterm pregnancies.

METHODS: A prospective trial was conducted including women presenting to a Labor and Delivery triage unit with complaint of ROM. 189 subjects with gestational age of 15 to 42 weeks who were > 18 years old and who had symptoms of ROM were included in this study. Each patient had an Amnisure® swab collected followed by conventional sterile speculum examnination (SSE).

RESULTS: The agreement rate between Amnisure® and SSE across all gestational ages was 91.5% (CI 86.6 – 95.1, p = .03). Amnisure® had a Sensitivity of 78.0% (CI 64.0 – 88.5%), Specificity of 96.4% (CI 91.8 – 98.8%), Positive Predictive Value of 88.6% (75.4 – 96.2%), and a Negative Predictive Value of 92.4% (86.8 – 96.2%). The fidings were similar for subjects with gestational age < 34 weeks versus > 34 weeks gestation.

CONCLUSION: Amnisure® may have a role as an adjunct to conventional testing for ROM, particularly in cases where conventional testing is nondiagnostic. Although not FDA-approved for use in patients with gestational age < 34 weeks, it performed as well in this subset of patients as compared with gestational age > 34 weeks.

Evaluation of Stillbirths in a Teaching Hospital: Impact of ACOG 2007 Guidelines

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OBJECTIVES: ACOG recently published guidelines for investigating the cause of stillbirth (Obstet Gynecol 110:963-6,2007). The purpose of this study was to investigate the practice at our teaching hospital concerning the evaluation of stillbirth.

METHODS: A retrospective review of all cases of stillbirth at our center in 2006 and 2007 was performed after IRB approval was obtained. Evaluation of factors was recorded on our data sheet: family history, maternal history, obstetric history, current pregnancy, maternal laboratory evaluations, fetal evaluation, and placental evaluation. Laboratory evaluation included thrombophilic, immunologic, hormonal, and infectious. Fetal evaluation included autopsy and karyotype.

RESULTS: There were 156 stillbirths out of 10,260 livebirths (15.2 per 1000). Medical records were available on 150(97%). Demographics: average age 22 years (16-40); gravidity of 2 (1-4); BMI of 32 (19-44). An evaluation was documented in each category: family history in 104 (69%); maternal history in 141 (94%); obstetrical history in 147 (98%); current pregnancy in 108 (72%); partial laboratory testing in 141 (94%). Only 4% had a complete laboratory evaluation. The placenta was evaluated in 91%, fetal autopsy in 48%, and karyotype in 4%.

CONCLUSIONS: Laboratory investigation of the cause of stillbirth was incomplete in the majority of cases. Most commonly omitted tests included thrombophilias and antiphospholipid antibodies. Obstacles included limited prenatal care (28%), inconsistent patient follow-up (55%), lack of health insurance (18%), and lack of knowledge of recommended tests (43%). We have instituted a standard protocol for the evaluation of stillbirth at our center to increase compliance with ACOG guidelines and to improve patient care.

Identification of Preeclampsia-Associated Genes Using cDNA Microarray in the Placenta

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OBJECTIVE: To compare the gene expression profiles between the placenta with preeclampsia and normal pregnancy.

STUDY DESIGN: To investigate how the expression of placental specific genes contributes to the mechanisms of preeclampsia, we have analyzed differentially expressed genes using placentas from pregnant women who have preeclampsia and placentas from non-complicated pregnancies. We performed genome-wide expression profiling using high-density oligonucleotide microarrays. The data obtained from 55,000 human genes were normalized and analyzed to identify genes with statistically significant changes in expression. All the analysis was done in FDR (false discovery rate) < 0.01.

RESULTS: Among the 55,000 genes that were screened in the microarray, 132 genes in R 2-fold were found to be differentially expressed between the placentas with and without preeclampsia. Among these candidates, 119 genes were up-regulated and 13 genes were down-regulated. The up-regulated genes included VEGFR-1, PIGF, LEP, and PP-13, which are well-known biological markers for preeclampsia.

CONCLUSION: The predominant changes in gene expression in preeclampsia were genes associated with placental developmental response. At least one of these genes, has a distinct spatial pattern of expression and appears to be associated with the onset of preeclampsia. Other genes expressed in the placenta with preeclampsia may be associated with the pathophysiology of preeclmpsia. To compare the gene expression profiles between the placenta with preeclampsia and non-complicated pregnancies.

Development of Pregnancy-Related Hypertension in Women with Gestational Diabetes

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OBJECTIVE: To examine factors associated with the development of pregnancy-related hypertension (PRH) in women with gestational diabetes (GDM).

STUDY DESIGN: We identified women with a diagnosis of GDM enrolled in an outpatient education and surveillance program for at least 7 days that delivered singleton gestations at greater than 33.9 weeks. PRH defined as gestational hypertension, preeclampsia, or HELLP syndrome. Maternal characteristics [age, race, pre-pregnancy weight, body-mass-index (BMI), prior pregnancy history, daily fasting blood glucose (FBG)] were compared between women developing PRH vs. those without PRH using Student's *t* , Pearson's chi square and Mann-Whitney U test statistics. Significant two-sided *p*-values were used to select factors for testing in a binary logistic regression model.

RESULTS: Of 1077 women studied, 42.7% developed PRH, mean gestational age at initiation of outpatient surveillance was 28.6 ± 4.6 weeks, women reported FBG a mean of 30.0 ± 21.8 days. Mean gestational age at delivery was 38.0 ± 1.5 weeks.

Factor	***p*-value**	**OR (95% CI)**
History of PRH (prior pregnancy)	0.017	3.03 (1.22, 7.510
Mean FBG greater than 110mg/dL	0.033	1.99 (1.06, 3.75)
Pre-pregnancy weight	0.052	1.00 (1.00, 1.01)
Mean FBG 90 – 99.9mg/dL	0.301	0.86 (0.64, 1.15)
Pre-pregnancy BMI	0.341	1.03 (0.97, 1.08)
Mean FBG 100 – 110mg/dL	0.458	0.85 (0.55, 1.30)
Obese pre-pregnancy BMI	0.793	1.06 (0.70, 1.59)

CONCLUSION: In the present study, a history of PRH in a previous pregnancy, mean FBG greater than 110mg/dL and pre-pregnancy weight were the strongest predictors for development of PRH in women with GDM. Management of blood glucose in women with GDM may decrease the incidence of PRH.

Assessing the Prevalence and Practices of Breastfeeding among Young African American Women

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OBJECTIVE: To assess the prevalence and practices of breastfeeding among young African Americans.

METHODS: A series of six focus groups were conducted in November and December 2007 in Los Angeles. A moderator encouraged subjects to share perceptions about breastfeeding topics such as initiation/duration, support and cultural attitudes. Comparative and descriptive analyses were captured in a demographic survey given after the focus groups.

RESULTS: A total of 84 African American women participated. Ages ranged from 15 to 41 years old (mean 22.2), mean education was 11.6 years and average annual income was $10,652. Participants had 2.1 mean pregnancies and 1.3 mean number of children. 71% (60/84) had one or more children, 44% (37/84) were currently pregnant, 24% (20/84) were pregnant for their first time. Of those with children, 38% (23/60) reported breastfeeding postpartum, 2% (1/60) reported breastfeeding longer than 6 months and none reported breastfeeding longer than 12 months. Health, cost-effectiveness and bonding were cited as reasons for breastfeeding. Pain was cited as the primary reason for non-initiation/discontinuing breastfeeding. Social stigmatization, concerns returning to work and lack of convenience were other reasons for discontinuation. These qualitative findings were supported by the demographic analyses revealing decreased rates of breastfeeding.

CONCLUSION: The breastfeeding rates among our participants are up to 90% less than those recommended by Healthy People 2010. By addressing the reasons for breastfeeding discontinuation and promoting the reasons for initiation, efforts to increase breastfeeding among African Americans can be undertaken and the health benefits for mothers and babies can be attained.

Switching from Magnesium Sulfate to Alternative Tocolytics: Effect on Neonatal Outcomes

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OBJECTIVE: Evidence about ineffectiveness and side effects of magnesium sulfate for tocolysis prompted our hospital to phase out this drug, substituting alternatives such as calcium channel blockers, indomethacin, or betamimmetics. The present study compared neonatal outcomes before and after this change.

METHODS: This retrospective observational cohort study examined a random sample of women who received inpatient tocolytic therapy at our hospital and their neonates during 2005 and 2007, that is, before and after the phase-out. Data from the 2006 transition year were excluded.

RESULTS: The study examined 40 randomly selected subjects from each of the two years. A total of 27 patients (67.5%) received magnesium sulfate in 2005, as compared with 4 patients (10.0%) in 2007 ($p<0.0001$). Of the 104 babies delivered by the 80 women, 15 neonatal medical records were unavailable for data collection. None of the maternal characteristics or neonatal outcomes differed significantly between the two groups ($p>0.05$) (table).

	2005	2007
MATERNAL CHARACTERISTICS	N=40	N=40
Age	30.5±4.7	30.3±6.7
Racial Minority	15 (37.5)	16 (40.0)
Received Antenatal Steroid	38 (95.0)	39 (97.5)
NEONATAL CHARACTERISTICS	N=44	N=45
Gestational Age at Delivery (wk)	32.7±5.1	32.2±4.7
Five-Minute Apgar < 5	1 (2.3)	6 (13.3)
Birth Weight (g)	2025±1033	1844±896
NICU stay (days)	38.0±34.7	37.6±37.2
Neonates With Nonfatal Complications†	27 (61.4)	30 (66.7)
Neonatal Deaths	6 (13.3)	4 (9.1)

†Jaundice, RDS, sepsis, IVH, NEC
Table shows mean±SD or number (percent).

CONCLUSIONS: The phasing out of magnesium sulfate tocolysis at our hospital did not adversely affect neonatal outcomes.

Perceptions and Attitudes Toward Breastfeeding Among African-American Fathers and Grandmothers

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OBJECTIVE: To assess the attitudes and influence of African-American fathers and grandmothers on breastfeeding beliefs and practices.

METHODS: Four focus groups with fathers and grandmothers were conducted in January and February 2008 in Los Angeles. A moderator encouraged subjects to share perceptions about breastfeeding topics such as initiation/duration, support and cultural attitudes. Comparative and descriptive analyses were captured in a demographic survey given after the focus groups.

RESULTS: There were a total of 10 fathers and 15 grandmothers in the focus groups. The age for fathers was 17 to 42 (mean 23.6), mean education 11.9 years and a mean of 1.8 children. 80% (8/10) reported having children, of which 50% (4/8) reported those children being breastfed. The grandmothers ranged from 33 to 73 (mean 50.0), mean education 11.9 years and a mean of 5.6 grandchildren. Of the grandmothers, 46% (7/15) reported their grandchild being breastfed. At the conclusion of the focus group, 93% (14/15) of grandmothers and 100% (10/10) of fathers reported wanting to encourage breastfeeding for the baby in their lives. Participants overall were positive and influential towards breastfeeding and gained knowledge about the practice through participation in the focus groups. Both cohorts reported needing more information in order to be more supportive of breastfeeding.

CONCLUSION: African-American fathers and grandmothers play an underappreciated role in influencing breastfeeding. They are influential decision-makers in the lives of African-American mothers and should be a target for breastfeeding messaging and promotion, yet self-report needing more information to do so.

Metoclopramide or Ondansetron for Treatment of Severe Nausea and Vomiting of Pregnancy (NVP)

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OBJECTIVE: To examine treatment outcomes in women with severe NVP receiving outpatient nursing support and either subcutaneous metoclopramide (SMT) or subcutaneous ondansetron (SOT) via micro-infusion pump.

METHODS: From a database we identified women receiving outpatient nursing services, diagnosed with severe NVP and having a Rhodes score of greater than 12 at enrollment, prescribed either SMT or SOT by their physician. Maternal characteristics and response to treatment were compared between medication groups using Mann-Whitney U and Pearson's chi-square statistics; start vs. stop values within medication groups compared using Wilcoxon Signed Ranks and McNemar's chi-square statistics. Allocation to group was based on intention-to-treat protocol.

RESULTS: Maternal characteristics were similar between the groups. Women prescribed SOT were more likely to have history of depression. Days to reduction in Rhodes score levels were similar (median 2 days-SMT, 3 days-SOT, p=0.206). Alteration from SMT to SOT (31.8%) occurred more frequently than alteration from SOT to SMT (4.4%), p less than 0.001. Improvement of NVP symptoms and reduced need for hospitalization was noted with either medication. In table, data presented as median (min, max), or percentage as indicated. [1]=p less than 0.001 start vs. stop of treatment, [2]=p less than 0.05 SMT vs. SOT groups.

	Group	Start NVP TX	Stop NVP TX
Rhodes score	**SMT**	15 (13, 15)	4 (3, 14) [1]
	SOT	15 (13, 15)	5 (3, 15)[1,2]
Urine ketones ≥ 1+	**SMT**	24.8%	4.8%[1]
	SOT	29.4%	4.8%[1]
Regular diet	**SMT**	9.0%	34.9%[1]
	SOT	4.0%[2]	28.6%[1]
Hospital Admission	**SMT**	67.0%	14.4%[1]
	SOT	74.1%[2]	19.2%[1]

CONCLUSION: Both treatment groups showed significant improvement of NVP symptoms. Alteration in treatment was significantly greater in patients initially prescribed SMT. Treatment alteration was less likely in patients initially prescribed SOT.

Outcomes of Preterm Premature Rupture of Membranes Electively Delivered at 35 Weeks Gestation

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OBJECTIVE: To compare common morbidities, mortality and costs between neonates with diagnosed and managed PPROM spontaneously delivered at 32 to 34 weeks gestation with those diagnosed and managed for PPROM electively delivered at 35 weeks gestation.

METHODS: Patients with diagnosed PPROM at 32 to 35 weeks gestation admitted to Geisinger Medical Center from 2001 to 2006. 71 study objects were identified in our OB data base, including information on neonatal sepsis, intraventricular hemorrhage, respiratory distress, neonatal death, necrotizing enterocolitis, infant NICU length of stay, maternal length of stay, maternal smoking status and costs of infant NICU and maternal length of stay. Categorical data obtained were analyzed using Fisher' exact test and continuous, ordinal data by Wilcoxon rank sum tests.

RESULTS: There were 71 subjects of which 10 were electively delivered at 35 weeks. Infants spontaneously delivering between 32 to 34 weeks had longer NICU stay (p=0.011) and a longer total (Mother-Infant) length of stay (p=0.044). Mothers that delivered between 32 to 34 weeks had a shorter total length of stay (p=0.035). Although infants delivered between 32 to 34 weeks had higher hospital charges ($64.6K) compared with those delivered at 35 weeks ($31.2K), the difference was not statistically significant (p=0.066). There was no statistical significance in morbidity and mortality between both groups.

CONCLUSIONS: Neonates with PPROM delivered before 35 weeks spend more time in NICU and cost on average $33K higher than those delivered at 35 weeks. No statistical significance found in morbidity or mortality between the two groups.

Impact of Simulation and Team Training on the Recognition and Management of Post-partum Hemorrhage

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OBJECTIVE: Prompt recognition and response to post-partum hemorrhage (PPH) are vital in preventing maternal morbidity and mortality. We conducted a multi-center study to evaluate the effect of in situ simulation and team training on the recognition and treatment of PPH.

STUDY DESIGN: Clinical teams from 6 Oregon hospitals participated in this pre-post training study. All teams responded to a simulated PPH in a hypertensive patient between Fall 2006-Spring 2007 (before) and 9-12 months later (after). Videos of simulations were reviewed independently by 2 uninvolved obstetricians using a structured evaluation form. PPH recognition and management was compared using paired t-test and McNemar's test.

RESULTS: Team training significantly improved response times in the management of PPH (see Table). Medical management improved after training (27.3 vs. 63.6%, p=0.01). Although not statistically significant, use of Methergine, contraindicated in this patient, was reduced by 45% after training.

CONCLUSION: Simulation and team training significantly improved the management of postpartum hemorrhage.

Time from delivery of body (Seconds)	Pair n	Before Mean ± Std	After Mean ± Std	Improvement %	P value (Paired t)
Recognized PPH	22	124.8 ± 51.7	94.5 ± 35.5	24.3	0.02
Used 1st medication*	22	135.4 ± 42.4	87.3 ± 49.2	35.5	0.003
Used 2nd medication*	22	206.5 ± 60.9	148.9 ± 48.4	27.9	0.0007
Performed uterine massage	22	134.1 ± 34.9	105.7 ± 45.2	21.3	0.01

*Medications included Pitocin, Misoprostol, Methergine, Hemabate

Comparison of Cesarean Section Rates between Private Attendings and Residents

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OBJECTIVE: To compare cesarean section rates between private attendings and residents in a community teaching hospital.

METHODS: A retrospective review of live births from 2003 to 2008 was performed. Data collection included patient demographics, perinatal complications, indications for cesarean section, delivery personnel, and complications at delivery.

RESULTS: A total of 12,016 deliveries were reviewed. Eighty percent (9616) were private patients and 20% (2400) were resident patients. Private attendings performed more cesarean sections than residents (30% vs 24%, p less than 0.05). Multiple logistic regression analysis also revealed that private attending care (OR 1.4, 95% CI 1.2-1.6), advanced maternal age (OR 2.5, 95% CI 2.1-3.1), black race (OR 1.3 95% CI 1.2-1.4), pre-pregnancy obesity (OR 2.1, 95% CI 1.7-2.7), gestational diabetes (OR 1.5, 95% CI 1.2-1.8), hypertension (OR 2.0, 95% CI 1.8-2.3), and labor arrest disorder (OR 10, 95% CI 8.7-11.6) were significant independent predictors of cesarean section.

CONCLUSION: Our private attendings appear to have a higher cesarean section rate than residents. Patient comorbidities also significantly impact the mode of delivery.

Patient Compliance in a Diabetes in Pregnancy Care Program

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OBJECTIVE: To assess patient compliance in a Diabetes in Pregnancy Care Program.

METHODS: A retrospective chart review of diabetic patients referred to a Diabetes in Pregnancy Program was performed. Patient compliance was measured by frequency of glucose monitoring and nutrition class attendance. Patient demographics, referral source, class of diabetes, antepartum comorbidities, and significant obstetric history were also reviewed.

RESULTS: From 2006 to 2008, 471 patients were enrolled. Patients who were undelivered, miscarried, transferred care, or were lost to follow-up were excluded from the study. Of the 377 remaining, 91% were registered into the program within 3 days of physician referral. Ninety-six percent were English-speaking and 20% reported English as a second Language. Diabetes Class A1, A2, B, C or higher accounted for 44%, 37%, 14%, and 5%, respectively, of all patients. Sixteen percent were referred by the resident clinic and 84% by private physicians. The overall patient compliance rate was 61%. After multivariable logistic regression analysis, positive predictors of compliance were referral by private physician (OR 2.9, 95% CI 1.4-5.7), diabetes class A2 (OR 2.1, 95% CI 3.7-6.5), and family history of diabetes (OR 1.7, 95% CI 1.0-2.8). Using chi-square analysis, compliance among multiparous patients was significantly lower than nulliparous patients, (55% vs 67%, p =0.05.

CONCLUSION: Patient compliance in the management of diabetes in pregnancy could be improved. Further study is needed to investigate barriers to compliance with a goal towards improving perinatal outcome.

Practice Pattern of Thrombophilia Testing in Reproductive-Aged Women

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OBJECTIVE: Inherited thrombophilias have been estimated to be present in 10 to 18% of women in the US. Numerous studies have implicated various thrombophilias as important factors associated with adverse obstetrical outcomes, however there are no generally accepted quidelines for practicing Ob/Gyns. The purpose of this study was to determine the current practice patterns of thrombophilia testing and treatment used by US Reproductive Endocrinologists.

METHOD: A comprehensive survey was distributed at the 2007 ASRM meeting and the 2008 ACOG meeting to physicians who participated in a postgraduate course on pregnancy loss. The survey included physician demographics, candidates physicians selected for screening, laboratory tests ordered, and abnormal tests that physicians treated when women became pregnant. Completed surveys were received from 162 of 204 (79%) of the participants.

RESULTS: Testing was offered by 97% of participants while 3% referred to hematologists. Over 80% tested those with a history of recurrent pregnancy loss, personal or family history of thrombosis, prior stillbirth, or family history of thrombophilia. Physicians were more likely to evaluate women who had an abruption if it was associated with a fetal demise (61%) than with a live birth (40%). Over 80% ordered factor V Leiden, anticardiolipin antibodies, antiphospholipid antibodies, lupus anticoagulant, and factor II DNA. Over 50% obtained functional tests for protein C, protein S, and antithrombin.

CONCLUSIONS: In the absence of clear clinical guidelines, the majority of physicians are screening at risk individuals for thrombophilias. The same physicians provide thromboprophylaxis for women who are pregnant.

Predictors of Postpartum Weight Retention in Adolescent Pregnancy

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OBJECTIVE: To investigate predictors of weight retention at 1-year postpartum in an adolescent cohort.

METHODS: Subjects included adolescents who delivered at a central Massachusetts tertiary care center between 4/06-3/07. Exclusion criteria were: missing pre-pregnancy or pregnancy weight/height data; non-English speaking; multi-fetal gestation; fetal demise; and/or adoption intentions. Subjects were telephone surveyed regarding postpartum breastfeeding, contraception, and weight. Subjects were classified per Institute of Medicine (IOM) BMI-categories and gestational weight gain (GWG).

RESULTS: Of 160 eligible subjects, 51 consented and were surveyed. At 1-year postpartum: 1) 20% (n=10) had subsequent pregnancy and 1 was without weight information (excluded from further analyses); 2) 72% (n=13) healthy, 46% (n=6) overweight, and 40% (n=15) obese adolescents returned to their respective pre-pregnancy BMI-categories postpartum; 3) 60% (n=3) of pre-pregnancy obese adolescents increased 5 or more BMI-units. Univariate linear models indicated that adherence to IOM GWG guidelines (p=0.02) and breastfeeding-time (p=0.05) had significant effects on weight retained postpartum. Per IOM BMI-specific guidelines, of 40 analyzed-subjects, 35% (n=14) had appropriate-GWG and 56% (n=22) over-gained. At 1-year postpartum, 86% (n=12) of appropriate-gainers returned to their pre-pregnancy BMI-category relative to 36% (n=8) of over-gainers (p=0.06). Absent breastfeeding resulted in an average 25-pounds retained at 1-year.

CONCLUSIONS: We observed important trends between excessive GWG in adolescents and absent breastfeeding, with retained weight at 1-year postpartum. Regardless of pre-pregnancy BMI, over-gainers were more likely to increase their BMI. In view of long-term health implications for mother and infant, further investigation appropriate adolescent GWG and postpartum breastfeeding encouragement is warranted.

Participation in Pregnancy Drug Exposure Registries by Obstetrical Healthcare Providers

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OBJECTIVE: Pregnancy drug exposure registries (registries) are prospective, observational studies that provide critical data on the safety of drugs in pregnancy. Registry data is often the only human safety data available to obstetrical (OB) providers who counsel reproductive age women. These registries rely upon healthcare providers to identify and enroll patients who have experienced pregnancy drug exposures and to provide follow-up of their birth outcomes. This study examines how OB providers contribute to this process.

METHODS: Data from several ongoing registries in which enrollments are initiated by healthcare providers were examined. The distribution of healthcare reporters by specialty was determined and their reporting performance assessed through measure of their lost-to-follow-up (LTFU) rate.

RESULTS: Of 1595 registry enrollments closed in a one year period during 2007 and 2008, 414 (26%) were from OB providers, 591 (37%) from specialists that prescribed the drug, 65 (4%) from family medicine providers, 315 (20%) from other reporters (e.g., pharmacists, pediatricians, researchers, geneticists, drug manufacturers), and 208 (13%) from unidentified reporters. While the overall LTFU rate for these reports was 17.5%, OB providers had the lowest rate of 12% compared to specialists-18% and family medicine providers-29%.

CONCLUSION: Pregnant patients are routinely assessed for potential teratogenic exposures during prenatal care yet OB providers contribute a surprisingly small share of reports to registries. When they do participate, their reports are valuable because they are most often complete through birth outcome. Education and incentives should be focused upon encouraging increased participation in pregnancy drug exposure registries by OB providers.

Decreased Neonatal and Maternal Morbidity with Delivery in 41st week vs 42nd Week of Gestation

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OBJECTIVE: Controversy exists regarding management recommendations for uncomplicated postdates pregnancies. We attempt to determine the optimal gestational age for delivery of postdates pregnancies.

METHODS: All singleton deliveries between April 2006 and November 2007 with their relevant clinical details were compiled from the L&D log. A subset who delivered in their 41st (41wk) and 42nd weeks of gestation (42wk) were compared.

RESULTS: 979 women delivered in their 41st or 42nd weeks of gestation, 666 (68%) in the 41wk group and 313 (32%) in the 42wk group. 10.4% and 16.3% of neonates in the 41wk and 42wk groups, respectively, were admitted to the NICU (p=0.008). Logistic regression controlling for induction of labor, GDM and meconium demonstrated that infants in the 42wk group had an OR of 1.76 (95% CI: 1.15, 2.69) of NICU admission. Infants in the 42wk group spent on average 0.32 days more in the NICU compared to the 41wk group (0.85 vs 0.53 days, p=0.02). Controlling for induction of labor, women in the 42wk group had an increased risk of delivery via cesarean section, with an OR of 1.87 (95% CI: 1.37, 2.56).

CONCLUSIONS: Neonates in the 42wk group had significantly increased risk of NICU admission and longer NICU stays as compared to those delivered in the 41wk group. Women in the 42wk group had a significantly increased risk of undergoing cesarean section. Delivery in the 41st week of gestation may decrease the number and length of NICU admissions and the number of cesarean sections.

Cesarean Hysterectomy: A Review of Planned vs. Unplanned Cases

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OBJECTIVE: To review all cases of cesarean hysterectomy within 1997-2007 at a community teaching hospital.

METHODS: We performed a retrospective chart review of all cases of cesarean hysterectomy occurring between July 1, 1997-June 30, 2007 at Abington Memorial Hospital. All charts were reviewed for indications, preoperative planning, perioperative complications, and postoperative complications. Cases were divided into 2 groups: Planned cesarean hysterectomy vs. Unplanned cesarean hysterectomy. The Planned group was subdivided according to timing of procedure: at scheduled vs. unscheduled time. The following outcomes were compared between groups: indications, intraoperative blood products, intraoperative and postoperative complications.

RESULTS: Sixty cases of cesarean hysterectomy were observed in 48, 679 deliveries (1.2/1000). Thirty-nine cases were unplanned (65%), thirteen cases were planned and occurred as scheduled (21.6%), and nine cases were planned but occurred at unscheduled times (13.3%). The primary indication was suspected accreta in the planned groups (84.6% scheduled and 75% unscheduled). The primary indication in the unplanned group was uterine atony (56.4%). Mean intraoperative blood products was highest in the Planned/Unscheduled group (10.8U packed red blood cells), and lowest in the Planned/Scheduled group (4.3U). The most frequent intraoperative complications were atony (43.3%), and cystotomy (16.6%). Ileus (11.6%) and fever (13.3%) were the most frequent postoperative complications.

CONCLUSIONS: Suspected accreta was the primary indication for a planned hysterectomy, whereas atony was the primary indication for an unplanned hysterectomy. Intraoperative blood products were highest in the planned/unscheduled group, and lowest in the planned/scheduled group. Intraoperative and postoperative complications occurred equally in all groups.

Finger Length in Gestational Diabetics

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OBJECTIVE: The ratio between the lengths of the 2nd (index finger, 2D) and 4th (ring finger, 4D) digits are lower in men than women and are fixed by the in utero exposure to sex steroids. The 2D:4D ratios have been correlate to systemic disorders such as autism PCO, and breast disease. We hypothesis that females with a lower 2D:4D ratio would be more likely to develop gestational diabetes (GDM) due to increase in utero exposure to testosterone creating elevated insulin resistance. Clinically this could be an additional screening criterion for GDM.

METHODS AND MATERIALS: Using a digital caliper, the 2nd and 4th digits of the right and left hands were measured in GDM and non-GDM pregnant patients. Family history of diabetes, and prior history of GDM were obtained. Other information collected included ethnicity, weight and height at time of measurement, and gestational age.

RESULTS: Thirty-one GDM and 314 non-GDM pregnant patients were included in the study. The GDM patients did not differ from the non-GDM patients as far as age, ethnicity, height, family history and parity. GDM subjects had significantly higher BMI (35.1 v 28.6 kg/M2, p=0.001). The 2D:4D ratios for GDM patients were less than for non-GDM pregnant patients (0.976 v. 1.04, p=0.15).

CONCLUSIONS: Although GDM patients had decreased 2D:4D measurements as compared to controls, hence suggestive of “male pattern” ratio; it did not reach significance. An increase number of GDM patients may need to be studied before digit ratios can be considered a risk factor for GDM

Maternal and Neonatal Complications Associated with Elective Induction in Normal Term Pregnancies

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OBJECTIVE: Elective induction rates appear to be rising, yet the risks associated with this practice have not been extensively explored.

METHODS: Women with uncomplicated pregnancies ≥ 37 weeks and no history of a prior cesarean were selected from a database of linked maternal and neonatal data based on chart review for all women delivering singleton, liveborn neonates at a single institution over 8 years. Women who were electively induced were compared with women who underwent spontaneous labor.

RESULTS: Of the 21,033 deliveries in the database, 1,041 (4.9%) were uncomplicated elective inductions, and 7,609 (36.2%) were uncomplicated pregnancies that underwent spontaneous labor. Women with elective inductions were 3 times more likely to undergo cesarean delivery (11.0% vs. 3.4%, RR 2.9 [2.4-3.6], P ≤ 0.0001). Maternal complications more common in the induction group were: fetal distress (4.3% vs. 2.6%, RR 1.7 [1.2-2.3]), dystocia (7.7% vs. 3.6%, RR 2.2 [1.7-2.8]), ruptured membranes ≥ 24 hours (5.4% vs. 2.1%, RR 2.5 [1.9-3.4]), postpartum hemorrhage ≥ 1000 cc (3.0% vs. 1.1%, RR 2.6 [1.8-4.0]) and maternal length of stay (LOS) ≥ 5 days (7.2% vs. 1.6%, RR 4.4 [3.3-5.9]). Neonatal complications more common in the induction group were respiratory distress syndrome (2.4% vs. 1.4%, RR = 1.8 [1.1-2.7]), perinatal infection (7.5% vs. 5.5%, RR = 1.4 [1.1-1.7]), and prolonged neonatal LOS ≥ 5 days (10.7% vs. 8.6%, RR 1.3 [1.0-1.5]).

CONCLUSIONS: Women and their physicians should be aware of the multiple risks inherent in the use of elective induction as an alternative to awaiting spontaneous labor.

Obstetrical Outcomes in Patients Diagnosed with Gestational Diabetes by Glucose Challenge Test

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OBJECTIVE: Diagnosis of gestational diabetes (GDM) is made by many clinicians when the glucose value exceeds 180 mg/dL on a 1 hour 50 gm glucose challenge test (aGCT). This aGCT value has been associated with a 50-95% abnormal oral 3-hour glucose challenge test (aGTT). We wanted to determine if patients with GDM diagnosis by a GCT or GTT differed in obstetrical outcomes.

METHODS: All patients with GDM diagnosed by a GCT glucose of between 180-200 mg/dL during the last 6 years and placed in our GDM treatment pathway were included in the study group. The comparison group was selected from GDM diagnosed by an aGTT and placed in the GDM treatment pathway during the same time period. Non-GDM obstetrical outcomes were determined from deliveries during this time period at our hospital.

RESULTS: 230 patients were in the study group. The comparison group of 230 selected from the aGTT patients did not differ in age, weight, parity, and ethnicity. The study group did not differ in cesarean section(C/S) rate (aGCT 48.2%, aGTT 47.3%) or operative vaginal rate (7.8%, 11.5%). The aGCT group did differ in average birth weights (3440 gm, 3200 gm, p=.006) and in birth weights greater than 4000gms (11.5%, 5.4%, p=0.049). The C/S rate for both aGCT and aGTT group differed significantly from our hospital C/S rate of 25.3%.

CONCLUSIONS: The increase in birth weights may be of clinical concern in aGCT diagnosed GDM patients, although we did not see a difference in route of delivery.

The Predictive Value of Injury Severity Score on Outcomes in Pregnant Trauma Patients

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OBJECTIVE: Injury Severity Score (ISS) directly correlates with mortality in nonpregnant trauma patients, with an ISS ≥ 25 having a 50% risk of death. Our objective was to determine the ISS that is most predictive of complications when trauma occurs in pregnancy.

METHODS: A retrospective study of all pregnant patients admitted to a level I trauma center from 1985 to 2007 was performed. Data abstracted included maternal demographics, ISS, laboratory and radiologic studies, immediate pregnancy complications and delivery information. Statistical analysis was performed with standard (SPSS) software.

RESULTS: 292 patients were identified. Mean gestational age at trauma admission was 22.4 ± 5.5 weeks (wk). The median number of injury sites was 1 with 16.1% having 3 or more. Median ISS was 1 with 21% having an ISS ≥ 6, 13% ≥ 10 and 10% ≥ 16. 11.6% were delivered due to the trauma, and 46.9% delivered prematurely. 6.1% received blood products. 8.2% had an abruption and/or fetal demise (IUFD). Receiver operator curve demonstrated that a cutoff of 10 gave the best combination of sensitivity and specificity for the primary outcome variables.

	ISS < 10	ISS > 10	P value	Sensitivity	PPV
Delivery < 24 hr	2.6%	21.3%	<0.0001	62.5%	21.3%
IUFD/ Abruption	2.0%	20.8%	<0.0001	66.7%	20.8%
Delivery < 37 wk	33.3%	72.7%	<0.05	53.3%	72.0%

CONCLUSION: In obstetrical trauma an ISS ≥ 10 is most predictive of delivery within 24 hours, IUFD or abruption and preterm delivery. These patients warrant closer observation after a trauma admission.

Cesarean Hysterectomy: Does Supracervical Hysterectomy Confer any Advantage Over Total Abdominal Hysterectomy?

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OBJECTIVE: To compare the risk factors, indications, operative outcomes and complication rates of supracervical (SCH) and total abdominal hysterectomy (TAH) performed during emergency cesarean hysterectomy (CH) in our institution.

MATERIALS/METHODS: This is a cohort study of 158 women who had CH in three different hospitals of Detroit Medical Center from 1991-2007. Following IRB approval, data were obtained from patients' medical records, and the study period was divided into 3 periods of 6 years each except the last period that was 5 years. The data was analyzed using SPSS 11.5 program and statistical significance was set at a p value of 0.05.

RESULTS: Of 202,356 deliveries, 42,599 were cesarean operation, of which 158 were CHs. Ninety one of the CH were performed emergently and are the subject of this study. The proportion of TAH and SCH was 54.9% and 45.1% respectively. There was significant decrease in the proportion of TAH performed over time (71%, 56% and 25%, $p < 0.001$). There were no differences in the demographic characteristics, risk factors, indications for and operative outcomes of CH between the two groups. Intra and postoperative complications including bladder/ureter (15.4% vs 13.9%) and bowel injury (9.2% vs 8.9%) were not dependent on the type of hysterectomy performed.

CONCLUSION: The notion that SCH is faster and associated with less morbidity is not validated by the findings in this study. Given that TAH obviates the need for annual cervical cytological evaluation and the possibility of future cervical cancer, efforts should be made to perform TAH whenever possible.

Incision Type and Perioperative Morbidity among Morbidly Obese Women Undergoing Cesarean Delivery

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OBJECTIVE: To compare perioperative morbidity among morbidly obese women having vertical (VSI) to those who undergo transverse skin incision (TSI) at the time of cesarean delivery.

METHODS: This is a cohort study of morbidly obese women (body mass index > 35.0 kg/m2.) who had a cesarean operation between June 2004 and December 2006 at the Medical College of Georgia. Data on patient demographics, medical history and perioperative complications were obtained from medical records.

RESULTS: During the study period, 424 morbidly obese women underwent cesarean operation. Patients with VSI were older (age 31.0±6.2 vs. 26.7±5.8, p<0.001), heavier (BMI 48.2±9.1 vs. 41.7±6.7, p<0.001), more likely to receive a blood transfusion (9.8% vs. 1.6%, p=0.01), or to suffer wound separation or infection (14.6% vs. 7.6%, p=0.03). In addition, women undergoing VSI were more likely to have vertical uterine incision than a low transverse uterine incision (65.9% vs. 7.3%, p<0.001). Even after controlling for BMI, age, receipt of a blood transfusion and anesthesia type, women with VSI were more likely to undergo vertical uterine incision [unadjusted odds ratios (95% CI):24.45 (11.53-51.84)].

CONCLUSION: VSI in morbidly obese patient may be associated more morbidity after cesarean section and is associated with vertical uterine incision. The choice of vertical skin incision may reduce access to the lower pole of the uterus necessitating a vertical uterine incision, which is known to have greater long term morbidity than a low transverse uterine incision.

Postpartum Persistence of Clinical Symptoms among Women with Hyperemesis Gravidarum

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OBJECTIVE: To describe the prevalence and duration of symptoms persisting postpartum among women with hyperemesis gravidarum (HG).

METHODS: Data were obtained from an on-line survey conducted from 2003-2005. HG was defined as weight loss during pregnancy due to severe nausea and vomiting. Women were excluded from analysis if they experienced a pregnancy loss. Women with HG were subdivided into those who did and did not require parenteral nutrition as a marker of severity of the disease. Controls were recruited from women who subscribed to on-line parenting groups.

RESULTS: The study population consisted of 819 cases and 541 controls. Of these cases, 162 (20%) were treated with parenteral nutrition. Among women with HG, postpartum gastrointestinal symptoms were significantly more prevalent and of longer duration. These symptoms included food aversions (34% vs. 6%), gastroesophageal reflux (23% vs. 5%), digestive problems (21% vs. 3%), nausea (13% vs. 5%), and gallbladder problems (9% vs. 2%). Women with HG were also more likely to report persistent fatigue (52% vs. 25%) and muscle weakness (24% vs. 8%). Fatigue, nausea, and muscle weakness were more prevalent among women with HG treated with parenteral nutrition compared to those who were not. Women with HG who were treated with parenteral nutrition reported that the following symptoms lasted $\geq$ 1 year: fatigue (23%), food aversions (17%), muscle weakness (15%), digestive problems (12%), and nausea (7%).

CONCLUSIONS: Contrary to the common clinical impression, clinical symptoms associated with HG may persist long after delivery. The etiology of these symptoms requires further exploration.

Pregnancy Outcomes Post Roux-en-Y Gastric Bypass (RYGB) Surgery

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OBJECTIVE: As bariatric surgery becomes more prevalent in younger obese women, medical providers are left to ponder its potential effects on future pregnancies. Our objective was to investigate the safety of pregnancy after RYGB surgery and its effect on delivery mode and maternal and neonatal outcomes.

METHODS: A total of 86 post-bariatric surgery patients with a subsequent pregnancy were identified. Pregnancy and neonatal outcomes were compared to those of two control samples who had not undergone weight loss surgery: normal weight women with a pre-pregnancy BMI = 18 – 24.9 kg/m^2 and obese women with a pre-pregnancy BMI of >40 kg/m^2. Controls were matched to cases by ethnicity, gestational age, and maternal age.

RESULTS: Fifty-six women, representing 67 pregnancies, met the inclusion and exclusion criteria and were matched to 134 control patients. Compared to their obese counterparts, post-RYGB patients had significantly lower rates of cesarean section ($p=0.025$) and gestational diabetes ($p<0.001$), higher rates of low hemoglobin ($p=0.003$), and similar rates of gestational hypertension and preeclampsia. Compared to similar normal weight women, post-RYGB patients had significantly higher rates of cesarean section ($p=0.042$), low hemoglobin ($p=0.017$), and preeclampsia ($p=0.013$) and similar incidence of gestational diabetes and gestational hypertension. Post-RYGB patients' first prenatal visit occurred significantly sooner than those of both control groups ($p<0.008$). In general, neonatal outcomes for RYGB patients were similar to those of normal weight controls and lower than extremely obese controls.

CONCLUSION: These results provide reassurance to women planning childbearing after RYGB, as well as clinicians providing their care.

Risk Factors for Peripartum Transfusion and Potential Impact of Antenatal Intervention

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OBJECTIVE: Peripartum transfusion is a marker for significant maternal morbidity. This study sought to identify maternal risk factors for postpartum transfusion and to estimate the potential impact of antenatal intervention.

STUDY DESIGN: This is a retrospective cohort study of women delivering after 20 weeks at a large regional obstetrical hospital between 2000 and 2008. The most recent pregnancy was chosen for each woman; excluding women with sickle cell. Maternal hemoglobin (Hgb) was measured upon admission for delivery. Chi-squared and logistic regression were used to identify risk factors for peripartum transfusion; population attributable risk associated with major risks was determined.

RESULTS: We identified 44,068 deliveries, including 62% white, 22.4% black and 9.4% Hispanic women. Overall, 575 cases received transfusion, a rate of 13 per 1,000 deliveries. Transfusion was significantly higher for black women, women with Hgb < 10 g upon admission, women with multiple gestation pregnancy, and women delivered via c-section (all $p<0.0001$). Logistical regression modeling of risk factors identified admission Hgb <10g (aOR= 5.8, CI 4.6-7.2), cesarean delivery (aOR=4.4, CI 3.6-5.4), multiple gestation (aOR= 2.3, CI 1.6-3.1) and black race (aOR=1.1, CI 1.1-1.6) as significant risk factors. Population attributable risk indicated that cesarean delivery accounted for 54% of transfusions; anemia accounted for 23%.

CONCLUSION: Identification of modifiable risk factors is critically important to minimize maternal risk associated with delivery. This study suggests that aggressive management of anemia during the prenatal period could significantly impact rates of postpartum transfusion. Furthermore, the higher risk of transfusion for black women warrants further exploration.

Post-Pregnancy Body Contouring Using a Combination of RF, IR and Tissue Manipulation

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BACKGROUND AND OBJECTIVE: Non-invasive body contouring is an increasingly popular application. This trial's objective was to evaluate the performance of a new version of a device for contouring and improving skin texture/laxity of abdomen, buttocks and thighs of women suffered post-partum body dimensions change.

MATERIALS AND METHODS: Twenty women passed five weekly treatments, on two anatomical areas each, using a combination modality of bipolar radiofrequency (RF), infrared light (IR) and mechanical manipulation (VelaShape™, Syneron Medical Ltd.). The 40 treated areas were evaluated during treatment, and at 4 week follow up, for their circumferences, scores of cellulite and general skin improvement. Data was also collected regarding treatment comfort, safety, patients' weight, their diet/exercise habits and satisfaction.

RESULTS: After two treatments the mean circumferences reduction of all the treated areas was 2.8±0.6 cm ($p<0.001$), and at the 4 weeks follow up that mean was 5.4±0.7 cm ($p<0.001$) and none of the patients were no-responders. Cellulite has also been significantly improved by the follow-up ($p<0.02$). Improved laxity and skin tightening was observed by both physician and patients. There were no safety concerns and treatments were well tolerated by patients.

CONCLUSIONS: The enhanced capabilities of the evaluated device, including deep (RF) and superficial heating (IR) and mechanical manipulation enabled significant results of post-partum body contouring via circumferences and cellulite reduction, as well as improvement of skin laxity, without compromising safety or patient comfort.

The impact of the Postpartum Visit on Perinatal Health

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BACKGROUND: The postpartum visit is an important opportunity to assess maternal physical and psychosocial health, provide necessary counseling for neonatal care, family planning and treatment of ongoing medical complications. Patients who miss the postpartum visit may enter a subsequent pregnancy in a suboptimal state, increasing the risk for a neonatal complication.

OBJECTIVE: Our primary objective is to determine whether women who have a complicated obstetrical course have a higher rate of missed postpartum appointments and therefore a higher rate of newborn complications in a subsequent pregnancy.

METHODS: We reviewed DRG data of 1,154 patients who delivered in 2005 and had a subsequent pregnancy between 2006-7. Women were grouped by DRG code with cesarean section, vaginal delivery or high risk cesarean section with complicating diagnoses. We compared the cohort of women by code who attended their postpartum visits with those who did not.

RESULTS: No difference in show rates was seen in women who had a complicated obstetrical course versus women with an uncomplicated obstetrical course. However, when we compared the women who had a complicated obstetrical course and attended their postpartum visits versus the women who had a complicated obstetrical course who did not attend their postpartum visits, we found a statistically significant difference in neonatal outcome as defined by preterm delivery and NICU admission in the subsequent pregnancy.

CONCLUSION: Our conclusion is that for women who have had a complicated obstetrical course, the postpartum visit may be an important intervention that can affect neonatal outcome in a subsequent pregnancy.

OFFICE PRACTICE

Gestational Weight Gain Advice: Are We Providing IOM and ACOG Recommended Guidelines?

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OBJECTIVE: To evaluate providers' ability to accurately make BMI-specific gestational weight gain (GWG) recommendations and frequency of weight and GWG discussions/documentation.

METHODS: Retrospective record review of 477 randomly selected patients who received care in faculty and resident clinics at a central Massachusetts tertiary care center. Eligible subjects entered prenatal care prior to 14 weeks gestation and delivered between April 2007 and March 2008.

RESULTS: Our study sample had a mean age of 27.74 years (sd 6.35), were 70% multigravida, 45.1% Caucasian, 15.9% Hispanic, and 6.7% African American. Mean gestational age at initial visit was 9.58 weeks (sd 2.11) and mean prenatal visits attended were 12.57 (sd 2.7). BMI was not calculable for 41.7% of subjects as a result of missing height (28.3%), prepregnancy weight (28.1%) or both (14.7%). Despite 58.3% having a calculable BMI, the total population had no documentation of BMI, GWG goals, and discussions on weight or GWG in 95.6%, 89.5%, and 88.9% and 85.1% of charts respectively. For those with a calculable pre-pregnancy BMI, 41.0% were overweight or obese (BMI greater than 26). Analysis of actual GWG stratified by BMI revealed that 79.82% of overweight/obese patients gained more than the IOM/ACOG recommendation.

CONCLUSION: Prenatal care providers can do better to meet IOM and ACOG guidelines for BMI-based GWG recommendations. As IOM and ACOG guidelines are currently under review, further study is needed to understand the barriers providers face in calculating BMI and providing counseling about GWG.

OB/Gyn Gender and Age Do Not Correlate with Patient Satisfaction or Physician Productivity

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OBJECTIVE: Patient satisfaction is an important metric when evaluating success of physician-patient interactions. Patients who give physicians a "perfect" score have been shown to be more likely to return for further care and implement care recommendations. We sought to evaluate if relationships exist between an OB/Gyn's ability to achieve a perfect satisfaction score and their productivity relative to gender, length of hire, and age.

METHODS: A large OB/Gyn practice contained within a multi-specialty group served as the platform for evaluation. Thirty-one OB/Gyns and 14,898 unique patient satisfaction questionnaires were evaluated over a 66-month period for physician productivity and patient satisfaction using validated nationally accepted tools.

RESULTS: After controlling for patient age, waiting room times, and 6-month time interval, physician age and physician gender were not correlated with patient satisfaction. However, productivity was correlated with patient satisfaction for different categories of length of time from hire. For those with length of hire less than 2 years and 2-5 years, productivity was positively correlated with satisfaction ($p=0.037$ and $p=0.010$). For those with length of hire greater than 10 years, productivity was negatively correlated with satisfaction ($p=0.0001$).

CONCLUSION: The ability of clinicians to be clinically productive and achieve patient satisfaction is important for practice success. Physician age and physician gender were not correlated with patient satisfaction or productivity. Length of time since starting in a practice is an important factor in measuring the correlation between satisfaction and productivity.

Perinatal Depression Screening in an Urban Setting

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OBJECTIVE: Determine the incidence of perinatal depression in an inner city population using the Edinburgh Postnatal Depression Scale (EPDS).

METHODS: The EPDS was administered at 28 – 32 weeks (AP; antepartum screen) and at the 6 week postpartum visit (PP; postpartum screen) from 3/2007 through 3/2008 in the Women's Health Center at Jacobi Medical Center. If the total score was > 10 or if the patient had thoughts of self-harm / harming others, she was considered a positive screen and referred to social work for a full mental health evaluation. The study was IRB approved.

RESULTS: A total of 1308 EPDS exams were completed with 470 (36%) AP, 838 (64%) PP, and 150 women screened both AP and PP. Overall, 288 (22%) women screened positive with 139 (30%) at the AP visit compared with 149 (18%; $p<.01$) at the PP visit. The thoughts of self harm were similar when comparing AP (n=20: 4%) and PP (n=39: 5%; $p=.84$). In women screened twice: 119 AP-/PP- (79%), 25 AP-/PP+ (17%), 2 AP+/PP+ (1%) and 4 AP+/PP- (3%).

CONCLUSION: Overall there is a high incidence of perinatal depression in our population with almost 1/3 of women screening positive during the 3rd trimester of pregnancy. AP screening did not predict PP results.

ONCOLOGY

Epidemiologic Risk Factors in Iranian Women with Cervical Cancer

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OBJECTIVES: To evaluate the epidemiologic risk factors related to cervical cancer in Iranian women. Study

METHODS: 80 women with cervical cancer (case group) and 80 healthy women with normal Pap smear (control group) were included in this study. The cases were from three academic clinical centers in Tehran. The control group matched the study group with regard to age, types of obstetric delivery, religion (Moslem with circumcision in men), etc. The epidemiologic factors for the cases and the control groups were evaluated and compared.

RESULTS: Early age at marriage, and early age at first delivery (OR= 1.8: 0.58-0.32 for age <=18 vs. 19+) were associated with an increased risk of cervical cancer ($p < 0.0005$). Socioeconomic status and level of education had significant a relationship with cervical cancer (99.5% CI). The relative risk for the use of OCP was 0.70 (95% CI) vs. 0.42 (OR= 1.6) for those who had never used the OCP. Sexual activity during menses and the number of coitus/week were also associated with increased risk of cervical cancer ($p <0.0005$). History of BCG vaccination was higher among control group. There was no significant relationship between smoking and family history of cervical cancer.

CONCLUSIONS: Despite monogamous relationships, no premarital sexual exposure and male circumcision, the rate of cervical cancer was higher in Iranian women of lower socioeconomic status, lower educational level and with early age of first intercourse, early age at marriage, and higher frequency of coitus/week.

Malnutrition as a Predictor of Poor Postoperative Outcomes in Gynecologic Cancer Patients

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OBJECTIVE: Poor nutritional status has been associated with increased postoperative morbidity and mortality in surgical patients. Most studies have evaluated nutrition status and postoperative outcomes in surgical and geriatric patients, but literature specific to the gynecologic oncology patient population is limited. The purpose of this study is to evaluate if decreased preoperative albumin and body mass index (BMI) in various stages of gynecologic cancers correlate with increased postoperative complications.

METHODS: A retrospective chart review was performed among women who underwent surgical management for gynecologic malignancies from April 2007 to April 2008. Outcome measures included age, race, medical comorbidities, cancer type, preoperative albumin and BMI, estimated blood loss (EBL), intraoperative blood transfusion (BT), postoperative complications, intensive care unit (ICU) admissions, readmissions, and hospital stay duration.

RESULTS: One-hundred seventy gynecologic oncology patients with preoperative nutritional parameters were included in the study. Postoperative complications and ICU admissions were more common in patients with decreased albumin ($p=0.001$, $p<0.001$) and higher EBL ($p=0.02$, $p<0.001$). More BT and hospital readmissions were associated with decreased albumin ($p=0.03$, $p=0.04$). Cancer recurrence was also found to be associated with lower albumin ($p=0.001$) and lower BMI ($p=0.04$). Increased EBL and low albumin were both associated with increased hospital stay length ($p=0.04$, $p<0.001$). Multivariable logistic regression found preoperative albumin to be an independent predictor of postoperative complications ($p=0.05$).

CONCLUSION: Decreased albumin is associated with more postoperative complications, ICU admissions, BT, hospital readmissions, cancer recurrence, and longer hospital stay. This nutritional parameter is an important predictor of postoperative morbidity and mortality.

Unexpected Pathology after Supracervical Hysterectomy

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OBJECTIVE: Our goal was to identify patients who had undergone supracervical hysterectomy (SCH) for presumed benign disease, then were subsequently diagnosed with a gynecologic malignancy or high-grade dysplasia. We sought to make observations regarding outcomes, as well as identify screening and surveillance that would assist in surgical planning.

METHODS: We performed a retrospective analysis of patients referred to our institution from 1998-2008 with a gynecologic malignancy or who previously underwent SCH. Our patient population was divided into two groups; the first included 9 patients diagnosed within 6 months of their SCH, the second included 6 patients diagnosed between 6 months and 10 years post-surgery.

RESULTS: (Table 1) Group 1 Group 2 Clinical Diagnosis prior to SCH: Fibroids 3 3 Menorrhagia 4 0 Endometrial Hyperplasia 2 0 Benign Mass 0 2 Unknown 1 1 Pathology Cervical Cancer/CIN II/III 2* 5 Endometrial Cancer 3 0 Ovarian Cancer 2* 1 *One patient with concurrent cervical and ovarian cancer

DISCUSSION: Twelve of the fifteen patients required an additional surgery after diagnosis. Eight of these patients were upstaged. Three (33%) patients in group 1 presented with gross cervical lesions that were not biopsied. In this group, five (55%) patients had preoperative cytology screening and five (55%) had endometrial sampling. In group 2, all patients had a record of normal cytology prior to SCH, but only one (13%) had cytology within 2 years of SCH or the diagnosis of gynecologic malignancy/CIN.

CONCLUSIONS: The importance of preoperative assessment before SCH, including cytology screening and endometrial biopsy cannot be overemphasized. Patients should be counseled regarding the need for cytology screening after SCH.

Primary Mucinous Carcinoma of the Vulva Mimicing a Benign Hidradenoma

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Primary adenocarcinomas of the vulva are uncommon malignancies. They account for about 3 to 5 % of all gynecological malignancies and about 1% of all malignancies in women. We report here a case of a primary vulvar adenocarcinoma presenting clinically as a benign hidradenoma. To our knowledge this is the first report of such a presentation. A 50 y/o caucasian female presented with six months of vaginal itching and a whitish discolored nodular elevation in her right interlabial sulcus. The patients gynecologist, assuming that the nodule was a benign hidradenoma, expressed a cream-colored substance by putting pressure on the nodule. The pathology results showed a mucinous carcinoma of the vulva. Immunohistochemistry results were positve for estrogen as well as progesterone and showed an expression of the surface marker CK7 and a spotty reaction to CEA staining. The tumor cells were negative for CK20, S-100 and HER-2/neu antigens. An abdominal CT-scan and upper and lower GI studies were performed to rule out any primary intestinal tumor. A bilateral mammogram was negative, excluding the breast as the origin of the primary tumor. The patient underwent wide excision of the tumor site. Because of the small tumor size no bilateral inguinal lymph node dissection was performed. Histology reports confirmed the original diagnosis of a 14 mm primary mucinous vulvar carcinoma. The patient has been without recurrence for 18 months with no further treatment

Diagnosis of Thyroid Nodules in a Private Gynecological Practice in the Dominican Republic

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OBJECTIVE: To identify and classify the prevalence of thyroid tumors in a gynecological private practice from August 1998-2008. Describe the characteristic of a female gynecological population in which thyroid nodules were identified during a routine physical examination. Describe the protocol used to classify the tumors, its characteristics and value of the diagnostic methods.

METHOD: A total of 70 patients were drawn from the records, identified with a palpable gland. All patients were referred for fine needle aspiration (FNA), sonography and serum TSH. Age, history of radiation, family history of thyroid cancer, TSH value, Thyroglobuline, sonographic findings, number and size of nodules, Fna findings and final diagnosis on those referred for surgery were analyzed by SPSS.

RESULTS: A total of twenty seven patients (38.5%) were under 40 years of age. None had history of radiation: all cases (97%) except two with normal TSH. Single nodules were present in 32 patients (41.6%) vs. 38 (49.4%) who had multiples. Nodules less then 10mm in diameter were identified in 25 (35.7%) patients. Ten (14.2%) had malignant tumors with the following distribution: 9 (90%) Papillary Carcinoma, - one variety Adenocarcinoma, - one Follicular, and one case (10%) Hurtle Carcinoma. Only five (7%) had family history of Thyroid Cancer.

CONCLUSIONS: Around 1-5% of the thyroid tumors are considered malignant, nevertheless the prevalence of 14.2% reported in this population is considered extremely high. Thyroid cancer is common in those under 30 and over 60. In our sample 80% of those with cancer were within 31-56 years old.

Robotic and Laparoscopic-assisted Vaginal Hysterectomy for Endometrial Cancer with Staging

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OBJECTIVE: To compare advantages and disadvantages of robotic hysterectomy with laparoscopic-assisted surgery for endometrial cancer.

METHODS: Retrospective review of records. Patients included presented with endometrial cancer and underwent laparoscopic-assisted surgery from 2003- 2005, and robotic surgery from January 2008-August 2008. All surgeries were performed by the same surgeon (TR) and consisted of hysterectomy, bilateral adnexectomy and pelvic-periaortic lymphadenectomies. Primary outcome was Operative complications. Other outcomes compared were intraoperative time, blood loss, need for transfusion, number of lymph nodes and hospital stay.

RESULTS: A total of 122 cases were identified. Thirty-three patients underwent robotic surgery while 89 underwent laparoscospic-assisted surgery. The robotic group had a greater operative time (223 minutes) compared to the laparoscopic group (172 minutes), [$P<0.0001$]. Blood loss was significantly lower in the robotic group (98.5 cc) than in the laparoscopic group (185 cc); $P=0.009$. No differences were found in need for transfusion, rate of conversion, intra/post operative complications, hospital stay, and the total number of lymph nodes.

CONCLUSION: Robotic surgery is feasible, safety and may be a surgical alternative to laparoscopy for endometrial cancer due to similarities in the rate of conversion to laparotomy, complications, and hospital stay. Robotic-assisted surgery is associated with less blood loss but longer intraoperative time compared to laparoscopic-assisted surgery for endometrial cancer. More data are needed to determine if the rates of urinary tract injuries and occurrence of lymphocyst can be reduced with the use of robotic surgery.

PRIMARY CARE

Do Our Patients Know About the Human Papilloma Virus (HPV) Vaccine?

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OBJECTIVE: To assess patients' knowledge about the Human Papilloma Virus vaccine.

METHOD: Patients completed an 8 item English, Spanish, or Portuguese questionnaire as true/false, question 7 yes/no, question 8 listed information sources.

1. Cancer cervix is caused by a virus called HPV (Human Papilloma Virus)
2. There is a new vaccine which I can get, to give me protection against HPV infection
3. This new vaccine is recommended for girls before they become sexually active, e.g. from 9 yearsof age; but women up to 26 years of age can get it
4. This new vaccine against HPV will also prevent me from getting Gonorrhea and Chlamydia
5. The new HPV vaccine will prevent me from getting infected with HIV
6. If I get the new HPV vaccine, I will not need to get a 'Pap' test
7. I would like my daughter to have this vaccine: Yes/ No/ I don't have a daughter
8. I got information about the HPV vaccine from: Television/Magazine/My friends/My doctor/Other.

RESULTS: 504 questionnaires, 285 English, 219 Spanish / Portuguese were completed. English speakers were more knowledgeable than Non-English speakers (table), related also to different education level and age. The majority 79.2% said they would vaccinate their daughter. Information sources were TV 37.1% and Doctor 20.2%. 16.3% had never heard of the HPV vaccine.

Q 1		**Q 2**		**Q 3**		**Q 4**		**Q 5**		**Q 6**	
En	N-En	En	N-En	En	N-En	En	N-En	En	N-En	En	N-En
Cor 256	Cor 185	Cor 243	Cor 170	Cor 182	Cor 115	Cor 245	Cor 143	Cor 262	Cor 162	Cor 261	Cor 191
Inc 29	Inc 34	Inc 42	Inc 49	Inc 103	Inc 104	Inc 40	Inc 76	Inc 23	Inc 57	Inc 24	Inc 28
P= 0.0791		**P=0.0306**		**P= 0.0106**		**P=< 0.001**		**P=< 0.001**		**P= 0.1196**	

CONCLUSION: Patients, particularly Non-English speakers, are largely unaware of the HPV vaccine and what it protects against. Education and age both play a role. Patient education efforts are needed.

Patient Knowledge, Attitudes, and Beliefs about Potentially Teratogenic Medications during Pregnancy

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OBJECTIVE: To determine knowledge, attitudes, beliefs and behaviors regarding potentially teratogenic medications among child-bearing age women.

METHODS: Structured, tape-recorded, face-to-face interviews were performed by a single interviewer from 3/08-5/08. Participants were purposefully selected by pre-interview eligibility criteria, provider type, and practice site within a Massachusetts tertiary care hospital system. Criteria were: female 18-44 years, currently pregnant or without documented inability to conceive. Patients were invited to participate if arrival time was 30 minutes or more prior to provider appointment. Interview transcripts were reviewed for common themes.

RESULTS: Of 132 potential participants, 33 enrolled (mean 29.0 years, SD 5.7): 18 pregnant (54.5%, mean GA 31.5 ± 6.2 weeks) and 15 non-pregnant (45.5%). Median gravidity was 2 (range 0-11), and parity was 1 (range 0-4). 87.9% would use a provider for information about medication use in pregnancy (83.3% pregnant, 93.3% non-pregnant) and 63.6% would use the internet (55.6% pregnant, 73.3% non-pregnant). 53.3% of non-pregnant women believe medication use during pregnancy should include a risk/benefit assessment whereas 55.6% of pregnant women believe any risk to the fetus is unacceptable. 42.4% of participants (44.4% pregnant, 40.0% non-pregnant) believe the responsibility for preventing use of potential teratogens is shared.

CONCLUSIONS: For this group of participants, providers were identified as a trusted source of information regarding possible teratogenic medications and pregnant women seemed more concerned about unacceptable risk to the developing fetus than non-pregnant women. Many women believe the responsibility of taking potential teratogens is shared between provider and patient.

Sex-Related Differences in the Relative Risk of Migraine over the Life Span

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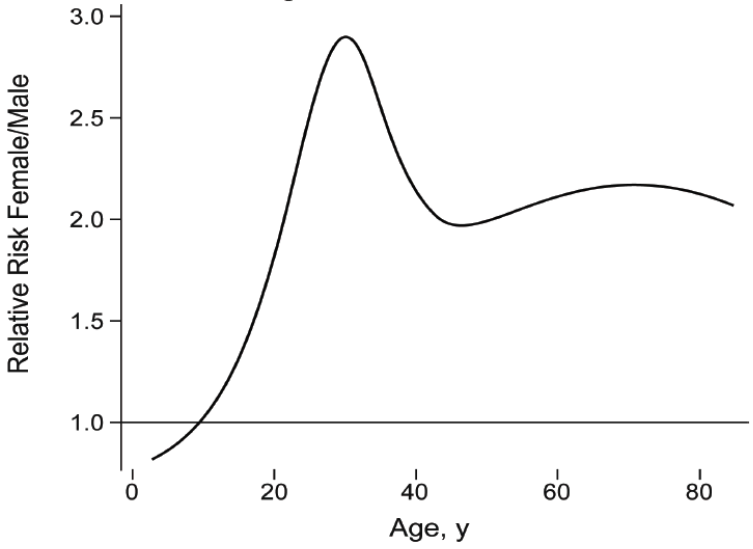
OBJECTIVE: To estimate the relative risk (RR) of migraine by age and sex in the US population.

METHODS: Data from 40,892 noninstitutionalized US residents (aged 3–85+ y; residents >85 y were classified as 85 y) were analyzed from the 2003 National Health Interview Survey (NHIS; Centers for Disease Control and Prevention). Gaussian mixture models characterized the relationship between migraine and age. Migraine prevalence was weighted to achieve the national estimate using sampling weights from NHIS, and RR was determined using the following equation:

$$\text{Relative risk} = \frac{P(\text{female migraineur at age } X \,/\, \text{female population at age } X)}{P(\text{male migraineur at age } X \,/\, \text{male population at age } X)}$$

RESULTS: Mean ages (SE) of the migraineurs (men: 36.2 [0.5] y; women: 38.2 [0.6] y) and nonmigraineurs (men: 36.4 [0.2] y; women: 38.3 [0.22] y) were similar. Migraine risk (weighted) was higher in females (17.5%; 95% CI, 16.9–18.2) than in males (8.6%; 95% CI, 8.1–9.2); risk differences were largest between ages 20–40 years. RR of migraine was higher in females vs males starting at age 10 years, after which it peaked at 30.2 years (approximately 2.9-fold higher vs men). From 30 to 42 years, RR fell to approximately 2-fold higher than in men, where it stabilized and remained twice as high in women than in men for the rest of life **(Figure).**



CONCLUSIONS: RR of migraine is dynamic in both sexes and changes across the life span. However, from age 10 years onward, females are disproportionately affected. The highest RR for migraine is during the reproductive years in women, indirectly supporting research that suggests a link between estrogen withdrawal at menses and menstrual migraine.

UROGYNECOLOGY

Solifenacin Significantly Improves Symptom Bother in Patients With Overactive Bladder

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OBJECTIVE: To assess the efficacy of solifenacin on symptom bother, Health-Related Quality of Life (HRQL), and overactive bladder (OAB) symptoms in patients with OAB using the Overactive Bladder Questionnaire (OAB-q) and bladder diaries.

METHODS: Patients with OAB for ≥3 months were randomized to flexibly dosed (5 or 10 mg) solifenacin or placebo for 12 weeks. At baseline and at 4-week intervals, patients completed the OAB-q (Symptom Bother and HRQL) and 3-day bladder diaries. The primary efficacy variable was mean change from baseline to Week 12 in Symptom Bother score. Secondary variables included changes in HRQL and OAB symptoms.

RESULTS: At Weeks 4, 8, and 12, solifenacin significantly reduced mean Symptom Bother score vs placebo as well as all HRQL domains and all OAB symptoms except nocturia vs placebo. Expected treatment-related adverse events in solifenacin vs placebo patients were dry mouth (13% vs 2%), constipation (8% vs 2%) and blurred vision (1% vs 1%).

Table. Summary of Results for OAB-q and Bladder Diary Variables

	Mean at Baseline		Mean Change From Baseline to W12		
OAB-q scale Domain	**Placebo (n=374)**	**Solifenacin (n=377)**	**Placebo (n=374)**	**Solifenacin (n=377)**	***P*-Value†**
OAB-q Symptom Bother*	57.9	58.2	–20.4	–29.9	<0.0001
Total HRQL (all 4 domains)	57.8	56.4	16.7	25.3	<0.0001
Coping	53.7	52.2	18.6	28.5	<0.0001
Concern	52.0	51.9	19.3	29.2	<0.0001
Sleep	51.3	47.3	17.4	26.6	<0.0001
Social Interaction	78.9	78.7	9.3	13.6	<0.0001
Bladder diary variable					
Urgency*	5.7	5.7	–1.84	–3.05	<0.0001
Frequency*	11.9	11.7	–1.36	–2.23	<0.0001
Incontinence*	2.8	2.9	–1.24	–1.85	0.0024
Nocturia*	1.6	1.7	–0.48	–0.63	0.3408

*A negative value indicates improvement.
† Based on ANCOVA model including terms for treatment, pooled center, and baseline value.

CONCLUSION: As early as Week 4 and through Week 12, flexibly dosed solifenacin significantly improved symptom bother and HRQL, as well as urgency, frequency, and incontinence compared with placebo. Solifenacin was well tolerated.

Quality of Life Assessment in Women with OAB After Treatment With Oxybutynin Chloride Topical Gel

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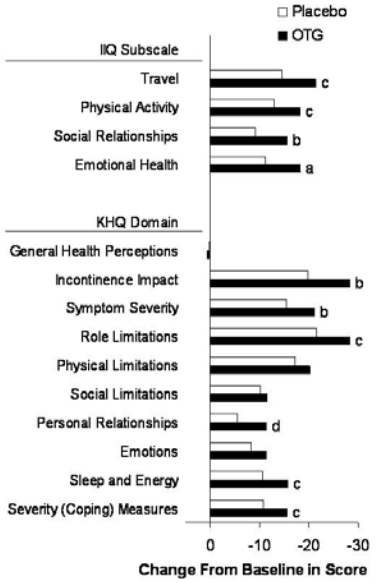
OBJECTIVE: To assess health-related quality of life (HRQoL) in women with overactive bladder (OAB) treated with an ethanol-based oxybutynin chloride topical gel (OTG).

METHODS: Adults ≥18 years of age with urge-predominant urinary incontinence were recruited for this 12-week, randomized, double-blind, parallel-group, multicenter study. Patients received OTG 1 g/day (~4 mg/day) or matching placebo. HRQoL was measured by having patients complete the Incontinence Impact Questionnaire (IIQ) and the King's Health Questionnaire (KHQ) at baseline and subsequent clinic visits. The 4 IIQ subscale scores (possible range, 0–100) were combined to produce an IIQ total score (possible range, 0–400). Scores in the 10 KHQ domains could range from 0 to 100. The statistical significance of mean scores was compared through analysis of covariance. Last observations were carried forward.

RESULTS: Mean age of patients (N=789) was 59±12 years. Women (n=704) made up 89% of the study population; half (n=352) received OTG. In women treated with OTG, IIQ total score decreased significantly more (−73.3; *P*=.0001) by study end than in women given placebo (−47.8), as did scores on all 4 IIQ subscales (Figure; *P*<.01). KHQ scores decreased significantly (*P*≤.02) more with OTG than with placebo in 6 of 10 domains (Figure), including Incontinence Impact, Symptom Severity, Role Limitations, Personal Relationships, Sleep and Energy, and Severity (Coping) Measures. OTG and placebo were well tolerated.

CONCLUSION: Treatment with OTG resulted in significant HRQoL improvements in women with OAB.



[a]*P*≤.0001, [b]*P* ≤.001, [c]*P* ≤.01, [d]*P* ≤.05, analysis of covariance; IIQ, Incontinence Impact Questionnaire; KHQ, King's Health Questionnaire; OTG, oxybutynin chloride topical gel.

6 Month Follow-up on Quality of Life and Objective Success in Patients Treated for SUI with MiniArc

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OBJECTIVES: To report on short-term efficacy and quality of life (QOL) following the MiniArc™ single-incision, mid-urethral sling for the treatment of stress urinary incontinence.

METHODS: This is a prospective, multi-center, single-arm study. Sling placement required a single vaginal incision (1.5 cm) at the mid-urethra, with placement along the transobturator trajectory and fixation into the obturator internus muscles bilaterally. No other concomitant procedures were performed. Subjective and objective outcomes were collected.

RESULTS: Seventy-one subjects were evaluated at 6 months. Mean age was 52 years, mean BMI was 27.5 kg/m2, and mean parity was 2. Twenty-three percent (16 /71) were implanted under general anesthesia and 77% (55/71) under local (with or without sedation). There was 1 reported intra-operative complication (vaginal wall perforation) that resolved intra-op with no sequelae. Mean scores for UDI-6 and IIQ-7 at 6 months were 12.7 ± 14.3 and 5.10 ± 15.7 respectively, a significant improvement from baseline (48.2 ± 18.3 for UDI-6 and 37.4 ± 22.4 for IIQ-7). The cough stress test (CST) was negative in 94% (59/63) of subjects who had a positive CST before surgery. There were five reported device-related adverse events. Three cases were dysparenunia and 2 were UTIs. Sixty-percent (43/71) of subjects reported urge symptoms at baseline, with 20 of the 43 subjects reporting no urge symptoms at 6 months. Eight percent of the total sample (6/71) exhibited de novo urge postoperatively.

CONCLUSIONS: The 6 month data showed significant improvement in QOL with positive objective efficacy. Long-term data are being collected for 2 year follow-up.

A Comparison of African American and Caucasian women on Pelvic Floor Distress

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OBJECTIVE: To examine correlation differences between Pelvic Floor Distress Inventory (PFDI) and Beck Depression Inventory (BDI-II) scores between African American (AA) and Caucasian (C) women.

METHODS: A survey including PFDI and Beck Depression Inventory (BDI-II) was administered to twin sisters. Spearman correlation coefficient was calculated between BDI II and PFDI scores for bowel dysfunction (CRADI), urinary distress (UDI), and pelvic organ prolapse (POPDI) for AA and Caucasian twins; generalized estimating equation analyses to adjust for twinning and mixed-effects model for repeated measures. Effect sizes (ES=mean difference / standard deviation) were calculated for interpretation of score differences between groups.

RESULTS: 1564 women completed the survey 94 AA and 1364 C. C women and AA women differed on BMI (25.8 vs. 30.2, p<0.001); stress incontinence (44.6% vs. 33.3%p=. 034); urge incontinence (29.1% vs. 34.8%, p=. 025) respectively. Comparisons between AA and C women with pelvic floor disorders (PFD) revealed a difference in correlation for PFDI CRADI incontinence subscale and BDI [.83 vs. .21 (ES=. 97, p=. 003)], respectively. Correlations between CRADI-incontinence with BDI somatic [.81 vs. .23 (ES=. 88, p=. 006)] and POPDI subscale with BDI cognitive sores [.68 vs. 0.17 (ES=. 66 p=. 017)] were also significantly different between AA and C women. PFDI-UDI and BDI-cognitive between AA and C women was marginally different [.57 vs. .12 (ES=. 66, p=. 054)].

CONCLUSIONS: Correlation between PFDI and BDI II scores is significantly higher in AA than C women with pelvic floor disorders. This study underscores the importance of screening AA for PFD.

ULTRASOUND

Comparison between Ultrasound and Digital Exam in Detecting the Fetal Head Position at Delivery

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OBJECTIVE: This is a prospective study to detect the correlation between digital examination and transabdominal or transperineal ultrasound in assessment of fetal head position during delivery.

METHODS: Women admitted in labor with vertex presentations were evaluated by digital examination and ultrasound at or more than +2/+5 station to determine fetal head position which was compared with head position at delivery. Data were collected on maternal race, body mass index, parity (multiparous or nulliparous), anesthesia. The primary outcome measure was the proportion of fetal head positions at delivery that agreed with delivery position. Results were analyzed using Chi Square and a regression model which included all variables. A total of 146 patients were included in the analysis.

RESULTS: Ultrasound agreed with delivery position in 85.6% of women while digital exam agreed in 57.5%, a difference that was statistically significant with a $p<0.02$. In the regression model for position at delivery, only digital examination and ultrasound were statistically significant.

CONCLUSION: Ultrasound was significantly more accurate in determining fetal head position at delivery. Our study suggests that when ultrasound is readily available, determination of fetal head position can be more accurately predicted, this is helpful in the management of protracted second stage of labor and operative vaginal delivery.

Maternal Obesity and Suboptimal Evaluation of Fetal Anatomy by Fetal Organ at less than 20 weeks

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OBJECTIVE: Obesity has reached epidemic proportions worldwide. Adverse obstetrical outcomes have been documented in the literature among obese pregnant women. Difficult or limited sonographic evaluation of fetal anatomy has been associated with maternal obesity. The purpose of our study was to evaluate which gestational age is optimal for evaluation of fetal anatomy by organ system in the obese gravida.

METHODS: A retrospective study of obese women who underwent sonographic evaluation of fetal anatomy and delivered in our institution was performed. Maternal demographics were abstracted. Data was stratified into gestational age in which ultrasound was performed; < 20 weeks and 20 weeks or greater. Rates of optimal visualization of fetal heart, intracranial structures, face, mouth/ears/nose, abdomen, stomach, bladder, kidneys, spine and limbs were determined and compared in both groups.

RESULTS: A total of 611 obese women charts were available for analysis. When comparing both groups by fetal organ system, heart was suboptimally evaluated in the earlier gestational age group (10% vs 1.2%, $p<0.001$). Similarly higher rates of suboptimal visualization were found when evaluating spine, kidneys and intracranial structures. The visualization of remaining anatomy was similar between the two gestational age groups.

CONCLUSIONS: Certain fetal organs such as heart, spine, kidneys and intracranial structures should be reevaluated after 20 weeks of gestation among obese women

Outcomes in Pregnancies Complicated by Hydramnios – Correlation with Cardiac Defects and Infections

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OBJECTIVE: Hydramnios of unknown etiology has been extensively studied with many possible causes. Patients at our institution with hydramnios have been recommended to have a workup which includes structural survey, fetal echocardiogram, and testing for congenital infections. The objective of this study is to review the data to determine optimal management protocol.

STUDY DESIGN: Subjects were obtained from a query of the ultrasound database from patients seen between 2005 and April 2008. Maternal charts were reviewed to examine results of ultrasound. Newborn charts were reviewed to note any abnormalities on discharge diagnosis. Toxoplasma, CMV, Parvovirus results were noted to be positive if IgM was positive. Hydramnios was defined as total amniotic fluid greater than or equal to 25 in a singleton pregnancy, and greater than 8 cm pocket in a twin pregnancy.

RESULTS: 107 patients were included in the study. Mean gestational age at time of visit was 30.2 weeks. Mean AFV was 27.2. 51 patients had viral titers drawn with no positive results. 22 of 107 patients (20%) had structural abnormalities detected on anatomic survey. 15 patients had newborns born with cardiovascular abnormality. This was significant when compared with the traditional rate of cardiovascular defects 8 per 1,000. p value <0.05.

CONCLUSIONS: Hydramnios is associated with an increased risk of congenital heart defects. Fetal echocardiography should be considered part of workup of hydramnios. No congenital infections were noted in the study; however the small sample size indicates further studies are warranted with a larger group of patients.

