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# Abstracts from

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## P1. Community-Clinical Linkages in the WISEWOMAN Program

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**Background:** Heart disease is the number one cause of death among women in America, representing 1 in every 4 deaths in 2009. Thus regular cardiovascular health screening is critical in preventing risk factors from reaching disease level. The Centers for Disease Control and Prevention's (CDC) Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) Program addresses the heart health of low income, under-or-uninsured women between 40 and 64 years by providing cardiovascular disease (CVD) risk factor screenings and referrals to community resources that promote healthy behaviors.

**Objective(s):** To highlight the importance of community-clinical linkages (CCL) and how the WISEWOMAN Program uses CCLs.

**Material/Methods:** The WISEWOMAN Program collects data on CVD screening values through clinical tests and the use of CCLs across all 22 funded programs to track and monitor participant progress. The Program uses a variety of community resources that promote and support lifestyle changes to reduce the risk of CVD.

**Results:** Currently, all 22 programs are offering health coaching and a lifestyle program(s). These address physical activity, nutrition, smoking cessation, and self-management of health behaviors. Grantees partner with healthcare systems that provide clinical services and access to lifestyle change programs and follow-up resources. All of these contribute to improving participants' health and maintaining long-term health outcomes.

**Conclusions:** By systematically choosing clinical systems and community organizations with which to partner, grantees place women enrolled on a more successful path towards improving and managing their health. If increased contact, use of healthy behavior support options, and completion of follow-up assessment prove effective, the WISEWOMAN Program can contribute to the evidence-base for the reduction of CVD risk factors among a health-disparate population. In future publications, we plan to report on the implementation of this program and the impact strong CCLs have on the WISEWOMAN program and women served.

## P2. Determining Menstrual Phase in Clinical Research: A Review with Recommendations

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**Background:** Clinical research on menstrual phase has expanded by more than 10-fold in the past 30 years. Menstrual phase has been found to be significantly associated with a variety of clinical outcomes from pain perception to calorie intake to drug taking behaviors.

**Objective(s):** Given the volume and importance of research focusing on menstrual phase, there is a need to review the strategies being used to identify menstrual phase and provide recommendations that will enhance methodological uniformity in the field.

**Material/Methods:** We conducted a literature review via PubMed for ''menstrual cycle'' and ''menstrual phase.'' Our goal was to review methods used to identify menstrual phase in clinical studies with women who had physiologically regular menstrual cycles. Therefore, we excluded articles that focused on exogenous hormones, postpartum, menstrual-related problems (e.g. endometriosis), and infertility. We also excluded articles that included either younger ($<18$) or older ($>45$) study samples.

**Results:** A total of 370 articles were initially identified. After exclusionary criteria were applied 33 articles remained, among which six different methods were used to identify menstrual phase. Most articles employed more than one method (22/33 articles). The most common method used to identify menstrual phase was self-report of onset of menses (32/33 articles). The least common methods were basal body temperature (1/33 articles), and transvaginal ultrasound (1/33 articles). We noted variation in the application of each method to determine menstrual phase, as well as the cost, burden, precision and accuracy of each method.

**Conclusions:** There is a lack of consistency in methodology used to determine menstrual phase. We provide recommendations for improving accuracy of phase identification by combining several methods. Additional recommendations are provided to limit selection bias and confounding. The adoption of these recommendations will yield a decrease in misclassification bias within individual studies, as well as facilitate cross-study comparisons.

## P3. The Effects of Home Visiting on Postpartum Depression: a Clinical Trial

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**Background:** postpartum depression is one of the most effective problems of women's health after delivery. It is neces-

sary to find an essential solution for prevention of its serious effects on mothers' and infants' health.

**Objective(s):** The aim of this study was to investigate the effects of home visiting on postpartum depression.

**Material/Methods:** This study was carried out in two stages. The first stage was to investigate and design a model. According to the model, a clinical trial was done on 276 mothers who had delivered in Shaheed Beheshti University hospitals. Mothers filled up EPDS (Edinburgh Postnatal Depression Scale), if their scores were higher than 10 or had suicidal thoughts, they were excluded before any intervention. Ninety two mothers were as interventional group and a hundred and eighty four mothers were as control group. According to the pattern the intervention group was visited at home, while control group did not receive the home visit service. After 60 days the rate of postpartum depression was investigated based on (EPDS), and two groups were compared with each other on the sixtieth day. The data was analyzed by SPSS − 18 Software and T test, Chi-square and logistic regression test were used for determination of differences.

**Results:** The mean age of participants was $27 \pm 5$ years. Among the non depressed mothers at the beginning of this study which we had screened them, postpartum depression rate at sixtieth day, was 7.6% in intervention group and 19% in control group and there was a significant difference between the two groups (P Values $< 0.05$). In logistic regression, there was a significant difference between two groups (P Value $= 0.087$, OR $= 2.1$), planned and unplanned pregnancy (P Value $= 0.028$, OR $= 2.5$) and the kind of infant nutrition (P Value $= 0.025$, OR $= 2.2$) in postpartum depression rate.

**Conclusions:** Providing postpartum health care at home may play an effective role in the management of postpartum depression and could improve the health of mothers and their children.

## P4. Perception of Appropriate Weight Gain During Pregnancy

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**Background:** The Institute of Medicine (IOM) revised its guidelines for gestational weight gain in 2009. When utilizing these new guidelines, excess weight gain has been associated with numerous adverse maternal and fetal outcomes. Counseling can be more effectual if we are better able to understand patients perceptions of appropriate weight gain and are able to use that information to improve the overwhelmingly high rates of overweight and obese pregnant patients and in doing so, improve the associated morbidity.

**Objective(s):**1. To determine what patients perceive as an appropriate weight gain during pregnancy. 2. To determine if their perception is congruous with the recommendations provided by the Institute of Medicine.

**Material/Methods:** The survey was conducted in a regional referral and academic medical center. During their initial prenatal visit, patients were asked to complete an anonymous survey. Data was collected for one year. Variables collected included height and weight so as to calculate the body mass index (BMI); gestational age (weeks); estimated expected weight gain; the most/least a friend/family member has gained during pregnancy. There were no exclusion criteria.

**Results:** A total of 632 patients completed the survey. The average BMI of the majority of patients (55.6%) exceeded the normal range ($>$24.9kg/m2) and 28.6% were obese. The average expected amount to gain was 29.09 lbs. When adjusted for BMI, 62.4% of patients chose weights that were not congruous with the established IOM guidelines.

**Conclusions:** This survey demonstrates that the majority of women are not aware of how much weight they should gain in relation to their BMI. Most women plan to gain more than is recommended by the new IOM guidelines which has potentially profound maternal and fetal consequences. This highlights an important area for education of obstetrical providers and women during prenatal and antenatal visits.

## P5. Sexuality in Menopause

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**Background:** Menopause is a life-stage that results in negative body changes, especially in relation to sexual function in women, reinforcing the erroneous notion that female sexuality was relevant only during the reproductive period. Women feel valued when they have the desire and are able to arouse pleasure and express affection. Clinically realizing that peri-menopause and menopause can have a negative influence on a woman's interest in sex and sexual desire. All types of local or systemic hormone therapy (HT) are effective in the treatment of symptoms of vulvar and vaginal atrophy. The concern with this issue of menopause and sexuality presented some questions: how do women experience their menopausal stage of their lives? Do hormone replacements interfere with women's sexuality during menopause?

**Objective(s):** Evaluate sexual function in menopausal women using hormone replacement therapy and those who do not.

**Material/Methods:** This was a cross-sectional observational study. The sample was comprised of 60 women who are in the climacteric period followed in the outpatient clinic of the climateric division of University Vale do Sapucai (UNIVAS), of whom 30 did not use HT (Group 1) and 30 who did use of HT (Group 2). Inclusion criteria are: patients already clinically diagnosed by their gynecologist in menopause, or who underwent bilateral oophorectomy who agreed to participate. Exclusion criteria are patients with mental illness or psychiatric disorders and who are older than 65. The Brazilian version of the Female Sexual Function Index (FSFI) was used to assess sexual activity in the last four weeks. We used the Mann-Whitney test for comparison between each domain of the questionnaire: desire, arousal, lubrication, orgasm, satisfaction and discomfort / pain.

**Results:** Sixty women were interviewed during menopause aged between 46 and 63 years, 30 being divided into two groups. Group I (control) was comprised of patients who do not use hormone therapy, whereas group II (study), was comprised of patients who use hormone therapy. There was no statistical significance between the groups. For the variable age and number of pregnancies, we used the Mann-Whitney. For age z calculated was 1.34 and ap value of 0.1790. As for the number of pregnancies oz calculated was 0.33 and p 0.714. We used the

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Fisher exact test for the analysis of comorbidities, drugs, life habits, and sexual activity. The p value for each variable was: hypertension 0.9999; 0.731 diabetes mellitus; arrhythmia 0.9999; coronary insufficiency 0,492; thyroid diseases 0.9999; 0.9999 kidney disease; digoxin 0.492; furosemide 0.9999; vasodilators 0.9999; 0.254 beta blocker; Amiodarone 0.9999; alcoholism 0,237; smoking 0.295; physical activity 0.9999; sexual activity 0.9999. As for BMI, we used the Chi-squared, and op 0.2730 for analysis of the questionnaire that was applied, separated by fields Mann-Whitney. Statistical significance only in the desire domain, and it was larger in group II. For each domain the values of the calculated z and p are as follows: desire: 3.51 and 0.000; 1.243 and 0.214 excitement; lubrication 0.583 and 0.560; orgasm 0.186 and 0.852; satisfaction 0.760 and 0.447.

**Conclusions:** In this study, the use of HRT had a positive impact on sexual desire in menopausal women, so its use could be an alternative for women with sexual dysfunction.

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## P6. Are Race/Ethnicity and Comorbid Conditions Associated with Pregnancy Intention Status?

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**Background:** The self-reported unintended pregnancy rate in the United States (49%) has not improved for more than a decade, representing a major public health problem. Unintended pregnancy has been found to be associated with poor pregnancy outcomes in numerous studies.

**Objective(s):** The purpose of this study was to identify risk factors for unintended pregnancy in an integrated health care delivery system with equal access to all that could be used to determine groups of women who would benefit from risk reduction strategies.

**Material/Methods:** In this retrospective cohort study, women health plan members aged 15–44 on 6/30/2010 were followed through 12/31/12 for evidence of pregnancy (N = 45,351). Self-reported pregnancy intention status at entry to prenatal care (intended, unintended [mistimed or unwanted]) and potential risk factors, including age, race/ethnicity, marital status, education/income, parity, long acting reversible contraceptive (LARC) use prior to pregnancy, and comorbidities (diabetes, hypertension, cardiovascular disease, obesity), were obtained from electronic medical records. Pregnancy intention was compared for all risk factors using Chi-squared tests. Logistic regression models were developed to identify factors associated with intended pregnancy.

**Results:** Bivariate analyses showed that significantly more Black women had unintended pregnancies (71.9% vs. 32.6% White, 45.7% Hispanic, 32.8% Asian, $p < 0.0001$) and comorbidities (12.1% vs. 6.8% White, 10.4% Hispanic, 4.3% Asian, $p < 0.0001$). In logistic regression analysis, women who were Black (OR = 0.41 vs. White), age 20–24 (OR = 0.30 vs. 30-39), single (OR = 0.16 vs. not single), had low education/income (OR = 0.54 vs. high), parity > 2 (OR = 0.25 vs. 0), and non-LARC users (OR = 0.44 vs. LARC) were significantly less likely to have an intended pregnancy ($p < 0.0001$, all comparisons). Comorbidities were not significantly related to pregnancy intention.

**Conclusions:** Even with equal access to health care, there were racial and other demographic disparities in pregnancy intention. Age-appropriate, culturally sensitive strategies aimed at reducing unintended pregnancy in women with identified risk factors should be considered.

## P7. Sports Injuries: Differences Between Female and Male Athletes

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**Background:** As a result of the Title IX legislation in 1972, female participation in collegiate sports is reaching a par with male participation. Understanding the differences between rates and types of sports related injuries in female athletes compared to that of their male counterparts will allow for further specifications in prevention and care of targeted injuries in women.

**Objective(s):** Examine the injuries that female athletes commonly experience as compared to male athletes

**Material/Methods:** A Pubmed review of relevant studies was conducted.

**Results:** Data suggest that sport injury patterns differ, with women experiencing higher rates of ACL injuries in all sports whereas ankle injuries and hamstring injuries are more common in males. This suggests that a vulnerability to ACL injury may depend on the physiology or biomechanics of the female body, as opposed to the attributes of a particular sport. Sudden deceleration, and jumping are common in most team sports and their effect on women's knee structures may be contributing factors to female ACL injuries. The issues of recovery and prevention also need to be assessed for women athletes, especially for bone related injuries because female bone mass continues to accumulate through age 25 and sometimes even longer. Restricted diets, menstrual issues, and weight training with comparatively brittle bones can have detrimental effects on the bone-building process, leading to greater risk of injury. Consequently, menstrual and dietary histories are important factors to ascertain in the care of female athletes

**Conclusions:** After evaluating various multi-year studies of athlete injuries, evidence indicates that clinicians involved in the medical care of female athletes should ensure that they provide the athletes with preventive health counseling as well as focused, clinical questioning and treatment during all medical encounters. These practices should be used in order to effectively assess and provide the most beneficial course of action to avert further sport-related injuries.

## P8. Can We LEARN to be Effective in Reducing Obesity-Related Cardiovascular Risk in Women? Conventional vs. Internet-Based Program Administration: A Pilot Study for Comparative Effectiveness; Interim Analysis

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**Background:** The LEARN (Lifestyle-Exercise-Attitudes-Relationships-Nutrition) program is an established weight management program that may have positive impact on cardiovascular disease (CVD) risk, but can be limited in application due to physical requirement of weekly face-to-face sessions.

**Objective(s):** To study the efficacy of a novel electronic format of the LEARN program compared to a traditional face-to-face format in achieving both weight loss and reduction of CVD risk factors in women.

**Material/Methods:** Subjects include women (n = 90) with ≥ 2 CVD risk factors prospectively randomized to either weekly face-to-face LEARN classes or weekly online podcasts of LEARN classes with an online message board. Baseline, 3- and 12-month studies include body composition, cardiopulmonary exercise, endothelial function, and laboratory testing. Analysis by ANOVA and matched pairs analysis.

**Results:** The first 29 women (mean age 53 ± 9.5 years, mean BMI 34.5 ± 5.9, 69% dyslipidemic, 38% hypertensive, 38% glucose intolerant) to complete baseline and 3 month testing are included in this interim analysis. Mean weight loss was 5.3 kg ($p < 0.0001$), with similar weight loss between each group ($p = 0.52$). All subjects experienced significant reductions in body fat (mean − 1.6%) and body volume (mean −4.35 cm3). Although there was a trend for improved exercise capacity, respiratory exchange rate, and reactive hyperemia index, no significant differences were observed.

**Conclusions:** In women with CVD risk exposed to 3 months of LEARN program, online lessons appear to be as effective as traditional face-to-face classes in initial achievement of body weight, fat and volume loss. We await the final results of this year-long study regarding longer term maintenance and physiologic effects of weight loss upon CVD risk in women. We anticipate that these findings will have significant implications for enhanced expansion of methods of delivery for heart-healthy lifestyle modification through social media platforms.

## P9. Can a Fertility Care Management Program Improve Maternal and Newborn Outcomes?

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**Background:** Fertility treatments such as in vitro fertilization (IVF) and superovulation (SO) may be associated with higher rates of maternal and newborn complications in resulting pregnancies. Care management programs which help women seek high quality care providers and deliver individual case management to women seeking fertility treatment have recently emerged to help manage fertility treatment costs and reduce the incidence of adverse maternal and newborn outcomes from resulting pregnancies.

**Objective(s):** This study measured the impact of a fertility care management program in reducing maternal and newborn complications.

**Material/Methods:** This study retrospectively compared pregnancy and newborn outcomes associated with IVF or SO fertility treatments for commercially insured mothers. Outcomes were measured for two cohorts of women: those receiving treatment in a nine month period before the care management program began and those treated in a nine month period after the program was in place. We obtained medical claims data associated with the pregnancy, delivery, and initial newborn hospitalization for all cases, and developed a propensity score model to risk adjust for differences between the mothers observed in the pre- and post-implementation periods. Using the risk adjusted groups, we then compared rates of multiple births and neonatal intensive care unit (NICU) admissions, as well as newborn hospitalization costs, delivery costs, and newborn hospitalization lengths of stay.

**Results:** Results indicated that mothers in the post-implementation period had statistically significantly lower rates of NICU admissions, as well as significantly lower NICU hospitalization costs and lengths of stay. There were no differences in non-NICU newborn costs or lengths of stay, and significantly higher rates of multiples in the post-implementation period.

**Conclusions:** This study suggests that a fertility care management program can significantly reduce some of the adverse outcomes associated with fertility treatment, but did not appear to have an impact on reducing multiple births in this population.

## P10. Expression of p16 and Ki67 in Cervical Biopsies as a Predictive Marker of Regression or Persistence in Cervical Intraepithelial Neoplasia Grade 1

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**Background:** About 15% of Cervical Intraepithelial Neoplasia grade one (CIN 1) will progress to CIN 2 or 3. So far, the morphological criteria cannot discern wich CIN 1 injuries will suffer regression from conditions that may persist. Ki67 is a cellular proliferation antigen expressed in all phases of the cell cycle except in G zero and represents a potential marker for dysplastic cervical lesions with strong indication of progression, thus resulting in a prognostic marker value. The expression of p16 modulates the negative feedback control by pRb, and the loss or inactivation of pRb by HPV E7 oncoprotein, results in an increase in p16 levels in cells. This suggests that the levels of p16 may represent a specific and sensitive marker for active expression in cells with HPV infections. This study aims to compare the immunohistochemical expression of Ki67 and p16 in cervical biopsies from women diagnosed with CIN 1 and who presented regression or persistence of the lesion. Samples of cervical biopsies of 29 patients with histological diagnosis of CIN 1 were evaluated. The patients were divided into two groups: the first group (n = 12) who had spontaneous remission of the lesion within 24 months; the second group (n = 17) with persistent CIN 1 after 24 months of follow up. Immunohistochemical analysis was performed for all samples. There was no statistical difference between the groups regarding to age, smoking, use of hormonal contraception, age at first sexual intercourse, menarche and number of sexual partners. The expression values of Ki67 and p16 were higher in the group of patients with persistent CIN 1 with statistical difference. These findings suggest that the analysis of Ki67 and p16 in patients with CIN 1 lesion may indicate a group of patients with higher risk of persistence.

**Objective(s):**- Evaluate the expression of p16 and Ki-67 in patients with CIN1. - Evaluate the difference in the expression of these markers between patients who had spontaneous remission or persistence of CIN1.

**Material/Methods:** Cervical biopsy specimens were taken from patients with CIN1 and allocated into two groups: Group 1 - women who experienced spontaneous remission of the lesion within 24 months of follow-up (n = 12). Group 2 - women who experienced persistence of CIN1 within 24 months of follow-up (n = 17). It was performed immunohistochemistry study for p16 and Ki-67. The ratio of the immuno stained cells p16 immunoreactivity was semi-quantified, considering the intensity of the reaction (I) and the extent of stained area in the histological section (E), on a scale of 0-3. The intensity of the brown color of the chromogenic substance was graded as negative, weak, moderate, and intense levels corresponding to 0, 1, 2 and 3, respectively. The expression was considered negative, focal (less than 10%), regional (10 – 50%) or diffuse (> 50%), cor-

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responding to the indexes 0,1,2 and 3. The expression of Ki-67 was evaluated counting the stained cells in ten high-power fields. Quantification of Ki67 and p16 immuno stained cells was performed by four different observers and the mean was evaluated. For statistical evaluation of nonparametric data Student's t test was used. To compare groups we used Mann Whitney Test. Data were considered significant when $p < 0.05$. The cutoff value of Ki-67 and p16 was considered a standard deviation below the average, being set at 5 to 16 for p16 and Ki-67.

**Results:** There was no statistical difference between the groups regarding age, smoking, use of hormonal contraception, age at first sexual intercourse and menarche and number of sexual partners. The association of high levels of Ki-67 and low levels of p16 were present in 50% of cases progression and 0% of cases of remission ($p < 0.01$). The association of low levels of Ki-67 and higher levels of p16 were present in 50% of cases and remission of 5.88% in case of persistences ($p < 0.05$).

**Conclusions:** - The expression of Ki-67 seems to be higher in samples of uterine cervix of women with persistent CIN1. - The association of high levels of Ki-67 and low levels of p16 appears to be linked to cases of progression of CIN1.

## P11. Fertility Preservation: Factors Contributing to Decision Regret Among Young Adult Female Cancer Survivors

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**Background:** An estimated 1 in 47 young adult women will be diagnosed with invasive cancer. Many young adult female cancer survivors (YAFCS; 18–39 years-old) want to have children in the future. Pre-treatment fertility preservation (FP) may safeguard against the risk of infertility from gonadotoxic therapies.

**Objective(s):** To describe YAFCS' satisfaction with fertility-related information provided pre-treatment and evaluate relationships with post-treatment decision regret about FP.

**Material/Methods:** Retrospective, cross-sectional survey of YAFCS to evaluate a Cancer and Fertility Program established at a comprehensive cancer center. The survey was developed by the research team and included the Decision Regret Scale (DRS). Analyses included descriptive statistics, t-tests, and chi-square.

**Results:** Women ($N = 159$) were an average 35 years-old ($SD = 5.1$) and 2 years ($SD = 1.4$) post-treatment. Before treatment, 85% were unsure or wanted children in the future, 86% discussed fertility with their oncologist and 31% underwent FP. A subgroup was dissatisfied with the information they received about fertility risks (26%), FP options (25%), making a decision (27%), and finding a reproductive specialist to pursue FP (25%). This dissatisfaction related to a decreased likelihood of undergoing FP ($p's < .05$) and greater post-treatment decision regret about FP ($p's < .05$). Older women and those with children were less likely to be satisfied with information or to be referred to a fertility specialist or reproductive endocrinologist ($p's < .05$).

**Conclusions:** Future fertility is one of the most distressing aspects of survivorship for young patients. YAFCS need to be given adequate information about risks and FP options and help making decisions and pursuing FP. Decision regret may indicate heightened fertility-related distress in survivorship. Although the level of dissatisfaction was significantly less than that reported before implementation of the Cancer and Fertility Program, future work should explore how to best address fertility-related issues and support YAFCS's decision-making about FP and provide support around decision making about family-building options after treatment.

## P12. Sex and Gender Women's Health Collaborative: A Novel Resource Towards Improving Medical Education and Practice

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**Background:** Suboptimal health outcomes for women stem in part from exclusion of incorporation of concepts of sex and gender differences into research, teaching, and medical practice.

**Objective(s):** SGWHC (www.sgwhc.org) was founded to assist faculty and students to develop competency in Sex and Gender Based Medicine (SGBM) by establishing a digital repository of resources, in an open access online format

**Material/Methods:** SGWHC is led by a multidisciplinary board of academic faculty and nonprofit representatives. SGWHC serves as a resource for SGBM content for researchers and health care professionals, distributes pivotal research information, and facilitates collaboration among individuals and organizations about SGBM. The site is maintained and updated weekly by staff and executive leadership.

**Results:** The SGWHC open-access e-repository of research and educational resources is located at www.sgwhc.org. Examples of resources available include a database of clinically relevant SGBM evidence identifying over 200 health topics. This was used in a collaborative effort with the NBME to highlight the growing body of knowledge around SGBM. SGWHC provides expertise to academic institutions such as providing a peer review process for a nationally available SGBM curriculum (www.texastechsgbm.org). Members have created teaching tools and case studies which are readily adaptable to medical school curricula. The site hosts a new national database of practitioners who have completed applicable CME in SGBM activities. SGWHC is a leader in developing the program for the first national SGBM Medical Education Summit in October, 2015. (www.sgbmeducationsummit.com)

**Conclusions:** SGWHC offers a comprehensive database accessible to health professionals and educators and serves as a pathway for global dissemination and collaboration in SGBM.

## P13. Women's Perceptions of Sexual Assault Screening by Healthcare Providers in Primary Care

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**Background:** Sexual assault is a prevalent global concern, and survivors often suffer silently with devastating physical and psychiatric sequelae. Secondary prevention through routine

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sexual violence screening is a potential avenue to alleviate victim burden and decrease healthcare costs; however, women's perceptions and experiences with screening remain unclear.

**Objective(s):** The purpose of this study was to determine the proportion of women who have had possible sexual assault addressed by healthcare professionals in primary care and to examine the association between intention to disclose sexual assault and women's perceptions of screening efforts by healthcare providers.

**Material/Methods:** The descriptive, correlational, and qualitative components of this study were accomplished using an anonymous cross-sectional, internet-based survey of women (N = 143) across the U. S. who received healthcare services in primary care clinics.

**Results:** Only 28.7% of women reported being screened for sexual assault by healthcare professionals whereas the vast majority (n = 103, 72.5%) reported feeling comfortable with being asked about sexual assault. In Spearman rho analyses, positive attitude and increased comfort level with screening were associated with increased intention to disclose past sexual assault. One hundred thirteen (82.5%) women reported intentions to disclose sexual assault to a healthcare provider if directly asked while only 35 (24.6%) would voluntarily disclose without being questioned. The most common cited barrier to disclosure was ''provider attitude'' with the most frequently cited facilitator being ''prevention of medical and physical consequences.'' Reportedly 69 (48.9%) participants were victims of sexual assault, and contingency coefficient analyses revealed women with a history of sexual assault were no more likely than women not victimized to have been screened for sexual assault.

**Conclusions:** Findings from this study suggest that a vast majority of healthcare providers are not performing routine sexual assault screening despite women favoring direct questioning. Future interventions should target alleviating women's concerns of sexual assault disclosure.

## P14. Hysterectomy, Chronic Pain, and Functional Outcomes in Patients Enrolled in an Interdisciplinary Pain Rehabilitation Program

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**Background:** The United States has the highest rate of hysterectomy in the industrialized world. The lifetime risk of hysterectomy for women in the United States is 45%. Studies show 10–90% of hysterectomies performed in the United States are not medically necessary and 90% are performed electively. Hysterectomy has been shown to have an association with multiple negative health outcomes including chronic pain, bone fracture risk, Parkinson's disease, dementia, depression, and others. Baseline demographic information along with functional measures of women in a chronic pain rehabilitation program who have undergone hysterectomy were compared to women without a history of hysterectomy.

**Objective(s):** The purpose of this study was to examine the relationship between hysterectomy and functional outcome measures in women who have chronic pain.

**Material/Methods:** Patients who participated in the Mayo Clinic Pain Rehabilitation Center from 2002–2012 were eligible for this study. Of the women patients, 361 reported a history of hysterectomy. A comparison group consisted of 361 patients with a primary diagnosis of headache or fibromyalgia without history of hysterectomy. Patients completed functional measures at admission including the Short Form (36) Health Study (SF-36), a measure of quality of life, the Center for Epidemiologic Studies Depression Scale (CES-D) to assess depressive symptoms, and the Pain Catastrophizing Scale (PCS).

**Results:** Patients with a history of hysterectomy reported significantly longer duration of pain, compared to those without, a mean of 144.3 vs.125.3 months respectively ($t = 1.972$, $p = .027$). They also reported decreased SF-36 mental health measures ($t = .692$, $p = .047$). Patients did not significantly differ on other subtests of the SF-36 including physical functioning, physical role limitations, bodily pain, health perception, vitality, social functioning, and emotional role limitation.

**Conclusions:** Hysterectomy may contribute to a longer duration of pain and increased depressive, anxiety, and fatigue symptoms in women with chronic pain. Further study is warranted to investigate causal relationships.

## P15. The Impact of Prenatal Point-of-Care Tobacco Screening on the Relationship Between Patients and Providers

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**Background:** Tobacco use during pregnancy is a common and preventable cause of infant morbidity and mortality. Up to 30% of pregnant women with Medicaid who smoke do not disclose their smoking status to their prenatal care providers and thus do not benefit from standard tobacco cessation counseling, proven to be very effective during pregnancy.

**Objective(s):** We sought to evaluate the perspectives of patients and health care providers on the use of a biochemical urine dip test for tobacco byproducts during prenatal care. We explored the impact testing would have on the clinical relationship and its potential to encourage tobacco cessation.

**Material/Methods:** We conducted 19 individual interviews and 4 focus groups (focus group n = 21) with pregnant or recently postpartum women with Medicaid who smoked prior to or during pregnancy. Women provided a urine sample for cotinine testing and received feedback on their results. Another 20 interviews were conducted with physicians, nurses, and medical assistants who provide prenatal care in Obstetrics/Gynecology and Family Medicine clinics. Interview transcripts were transcribed verbatim, coded through consensus, and evaluated for key themes by study team members.

**Results:** Patients were more likely to view the test as positive in promoting discussions on tobacco cessation. Two-thirds of patients thought the test could negatively impact relationships, compared to 86% of providers. Participants identified three factors that could impact these relationships: the pre-existing relationships; how the provider presents the test and their reaction to the results; and patient fears surrounding consequences and judgment of a positive test.

**Conclusions:** Patients had a surprisingly favorable view of urine testing for tobacco as a method to reduce use and promote cessation during pregnancy. Providers on the other hand, reported testing would negatively impact trust with their patients and were less likely to see positive benefits.

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## P16. Depression, Anxiety and Suicidality During the Postpartum Period

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**Background:** Depression and anxiety are responsible for significant morbidity among postpartum mothers with prevalence rates ranging from 8 to 15% for depression, (Gold, 2002) and 4–18% for anxiety (Wenzel et al., 2005). Suicide, a dire outcome of depression and anxiety, has been less studied during pregnancy and the postpartum period, and to our knowledge there has been little attention paid to the association between postpartum anxiety and suicide. Suicide may account for as much as 20% of death among postpartum women, (Lindahl, Pearson, and Colpe, 2005) and has been found to be the leading cause of maternal death during the postpartum year (Oates, 2003; Henshaw, 2007).

**Objective(s):** To examine the association between suicidal ideation with postpartum depressive and anxiety symptoms, demographic, psychosocial, and clinical factors among a cohort of postpartum women.

**Material/Methods:** Data from this study come from the results of two randomized controlled trials that aimed to reduce postpartum depressive symptoms among minority and majority women. This study included 1080 mothers who gave birth in a large tertiary New York City hospital (2009–2010). Suicidality was assessed using the suicide measure from the Edinburgh Postnatal Depression Scale (EPDS) and from the Patient Health Questionnaire (PHQ), measured during the postpartum hospital stay, 3-weeks, 3-months, and 6-months postpartum.

**Results:** Three percent of participants presented with suicidality during the first six-months postpartum. Of these, six percent had suicidal intent. Screening positive for depression and/or anxiety, assessed 1–2 days postpartum, was significantly correlated with suicidality in bivariate analyses. In adjusted multivariate models, women who screened positive for comorbid depression/anxiety (OR = 3.48, 95% CI = 1.12-10.84), depression only (OR = 4.01, 95% CI = 1.26-12.74), and anxiety only (OR = 4.24, 95% CI = 1.47-12.23) were more likely than women with no symptoms to report suicidal ideation. Antepartum complications and depressive history were associated with suicidality while heightened self-efficacy reduced the odds of suicidality.

**Conclusions:** Findings suggest that suicidal ideation among a relatively healthy group of new mothers occurs with some frequency. Early postpartum depression and anxiety screenings may identify women at risk for suicidality.

## P17. Stigma and Postpartum Treatment Acceptability Among Black and White Women in the First Six-Months Postpartum

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**Background:** Postpartum depression impacts hundreds of thousands of women annually in the US but treatment rates are very low, particularly for minority women. Both stigma and race have been found to be associated with depression (Givens et al., 2007), but little work has been done which examines how stigma affects postpartum depression treatment.

**Objective(s):** The objectives of this study was to measure stigma for four postpartum depression treatments and estimate its association with treatment acceptability among black and white postpartum mothers.

**Material/Methods:** Data were obtained from the results of 2 postpartum depression prevention randomized controlled trials implemented at a large inner-city urban hospital. Both trials tested a behavioral educational intervention aimed at reducing postpartum depression: 1 trial enrolled self-identified black and Latina mothers, the other trial enrolled white and other minority women. Eligible subjects were women >18 years of age, English or Spanish Speaking, had working telephones, and had infants whose birthweights were >2500 grams and 5-minute Apgar scores >6. All participants were surveyed prior to randomization (24–48 hours postpartum), at 3-weeks, 3-months, and at 6-months postpartum and answered a series of questions on socio-demographics, depressions, clinical characteristics, and psycho-social factors. We utilized data from the 6-month survey (N = 481) and examined acceptability of four postpartum depression treatments (prescription medication, mental health counseling, herbal remedy, and spiritual counseling) among black and white women. The associations between race, stigma, and treatment acceptability were examined using bivariate and multivariable analyses.

**Results:** Mean age of mothers was 31 (range 18–44); 29% were black. 12% scored positive for depression. Blacks were significantly less likely than whites to accept prescription medication and mental health counseling for postpartum depression and more likely to accept spiritual counseling in unadjusted models (OR = 0.42, CI = 0.27-0.66), (OR = 0.49, CI = 0.26-0.94), (OR = 2.19, CI = 1.44-3.33) respectively. After adjusting for race, socio-demographics, clinical factors, and treatment-specific stigma, race was no longer significant. For blacks and whites, stigma for all treatment modalities increased with the expansion of social circle, being lowest for feeling ashamed and increasing for disclosure to friends and family, community, and then to work place. In multivariable models, stigma relating to friends and family was associated with lower acceptability of prescription medication (OR = 0.58, CI = 0.341-0.983), mental health counseling (0.22, CI = 0.08-0.56), and spiritual counseling (OR = 0.51, CI = 0.312-0.84) while race was not significant.

**Conclusions:** Postpartum depression treatment stigma, rather than race, significantly affects the acceptability of prescription medication, mental health counseling and spiritual counseling for postpartum depression.

## P18. Effect of Body Mass Index on Serum Progesterone Levels in Pregnant Women

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**Background:** Progesterone is a key hormone in the regulation of multiple systems including the reproductive system. As women are now older and more overweight at the time of pregnancy, reproductive hormonal assessment including progesterone levels is one of the key components of this work up, though the interaction between body mass index (BMI) and progesterone is poorly understood.

**Objective(s):** The goal of this study was to assess whether progesterone levels are impacted by BMI.

**Material/Methods:** A sample of pregnant women enriched for women with overweight/obesity was identified from two studies evaluating sleep disordered breathing. Residual serum stored during first trimester (1T) and second trimester (2T) Down syndrome screening was retrieved from −80 degree storage and tested for progesterone levels using an automated immunoassay (Immulite 2000 Siemens, Los Angeles CA). Demographic data including weight, height, age and gestational age were reviewed. Statistical analyses were performed using SAS 9.2 and included descriptive analyses, with mean or median values reported based on data distribution, Pearson correlation coefficient test and multivariable linear regression analyses.

**Results:** Ninety three pregnant patients were identified; of those 38 were obese and 27 were overweight. 1T progesterone levels were collected between days 71 and 98 of gestation and s2T progesterone levels collected between days 105 and 159. Not surprisingly, there was a positive correlation of 2T progesterone levels with gestational age ($r = 0.37$, $p = 0.0006$). Even after adjusting for gestational age, there remained a significant negative correlation of serum progesterone and BMI in the first ($r = -0.5$, $p < 0.001$) and second trimester ($r = -0.6$, $p < .001$)

**Conclusions:** Progesterone levels negatively correlate with BMI. This may be due to a simple dilution from the larger blood volume of heavier women, as is routinely observed for Down syndrome screening markers. These findings suggest that the clinical interpretation of progesterone levels in pregnancy may benefit from consideration of maternal BMI.

## P19. Cardiovascular Disease Prevention Among African-American Women by FAITH!: An Application of the American Heart Association's Life's Simple 7TM

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**Background:** Cardiovascular disease (CVD) remains the leading cause of death among African-American women. Lack of knowledge and awareness of CVD impacts health disparities. Strategies using national guidelines as frameworks to target racial/ethnic minorities may increase awareness of CVD risk factors.

**Objective(s):** We present the design and baseline findings of a yearlong, church-based, CVD health education program to evaluate the impact on knowledge of modifiable CVD risk factors.

**Material/Methods:** Members from three predominately African-American churches in Rochester, MN collaborated in community-based participatory approach to guide development of a 16-week program, Fostering African-American Improvement in Total Health (FAITH!) utilizing the American Heart Association's Life's Simple 7TM framework. Semi-monthly interactive education sessions were delivered by health professionals.

**Results:** Mean age among 26 participants was 54.9 years (SD, 11.9). Education attainment of some college or above was 72%; 48% reported an annual household income of less than $35,000. Health-professional diagnoses included: overweight/obese (61.5%), hypertension (30.8%), high cholesterol (19.2%), diabetes (7.7%). The top five CVD concerns for self/family were obesity (38.5%), high cholesterol (30.8%), diabetes (26.9%), hypertension (23.1%) and coronary artery disease (19.2%). Average correct responses on CVD prevention and health disparities knowledge questions were 47% and 58%, respectively. Fruit and vegetable consumption was 2.6 servings/day (SD, 1.3). Moderate-intensity physical activity occurred 1.9 days/week (SD, 2.1). Mean BMI (34 kg/m2 [SD, 9.4]) was in the obese range, blood pressure (143/87 mmHg [SD, 21.9/8.6]) in the hypertensive range and mean waist circumference was 101 cm (SD, 22.6). Overall, 69% were obese and 28% were hypertensive. Median total cholesterol was 190 mg/dL (interquartile range [IQR], 156-216) and hemoglobin A1c, 5.8% (IQR, 5.4-6.3).

**Conclusions:** Community interventions promoting ideal CVD health behaviors have the potential to positively impact health behaviors and alleviate CVD disparities among African-American women. This program may fulfill this need within this high-risk group.

## P20. Modifiable Predictors of Vitamin D Deficiency Differ by Age in Women Living in Macau, China

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**Background:** Chinese populations, especially women are known to be at risk for vitamin D deficiency. Qualitative data suggests that this may be due to sun avoidance.

**Objective(s):** In 2013 we investigated modifiable predictors of vitamin D deficiency in a female representative population from Macau, China.

**Material/Methods:** From a random household survey of 638 women, aged 18 −93, physical activity(PA), sun exposure and sleeping and sitting patterns and intake of foods high in vitamin D were surveyed by interview administered questionnaires. Blood samples were collected over one summer month on a subsample ($n = 227$) and 25OHD levels were analyzed by radioimmunoassay.

**Results:** In these women, 59% were deficient (25OHD < 50 nmol/L);Vitamin D deficiency was greatest in younger women (76% for younger versus older 49%). Independent modifiable associations with vitamin D deficiency were low sunlight exposure [risk if < 30 mins sun/day versus more = 7.0(3.2-15)],

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more sitting [risk if sitting > 4 hours/day versus less = 1.6(1.1-2.4)], no intake of fish [risk if consuming no fish/day versus some = 1.6(1.0-2.4)] and having either little sleep [risk if sleeping < 5 hrs/day versus 5-9 hours = 1.7(1.1-2.5)] or a lot of sleep [risk if > 9 hrs/day versus 5–9 hours = 6.3(1.9-21)]. In contrast, in older women the only two independent modifiable associations with vitamin D deficiency were lack of PA = 3.2(2.0-5.0) and more sitting = 1.7(1.1-2.8).

**Conclusions:** In this Macau population classic modifiable predictors of vitamin D deficiency were confirmed in younger women, along with the interesting finding that more sitting and altered sleep patterns were associated with vitamin D deficiency. However, in older women more sitting and less PA were the only factors that were predictive of vitamin D deficiency. It seems that there are big differences in lifestyle between the older generation and the younger, in particular with respect to sun exposure and PA.

## P21. Breast-Q ™ in the Prospective Evaluation of the Breast Reduction Results: Preliminary Results of a Prospective Trial

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**Background:** Breast hypertrophy is a highly prevalent condition worldwide, and the treatment for this condition, the reduction mammaplasty, is one of the most frequently performed procedures by plastic surgeons. Routinely, plastic surgery outcomes are assessed by analysis of photographs and complications. However, in breast surgery, traditional assessments cannot capture all aspects of the condition and its treatment, and the use of patient-reported outcome (PRO) measures is nowadays imperative.

**Objective(s):** To assess the results of reduction mammaplasty by means of a PRO instrument, the BREAST-Q™.

**Material/Methods:** This is a prospective, non-randomized trial. A total of 100 breast hypertrophy patients, scheduled for reduction mammaplasty, will be prospectively enrolled. We present preliminary results from 52 patients. After written informed consent was obtained, the Brazilian version of the BREAST-Q™, breast reduction module-preoperative, was self-administered to patients. The BREAST-Q™, breast reduction module-postoperative, was self-administered after 30 days and on the 6th postoperative month. The BREAST-Q™ is a multiscale, multimodule, PRO instrument which measures quality of life aspects and patient satisfaction among women undergoing breast surgery. Each module is composed by independent subscales. In the present study, four subscales were used: satisfaction with breasts, psychosocial well-being, sexual well-being and physical well-being. All the patients underwent reduction mammaplasty by conventional technique, performed by the same surgical team.

**Results:** To date, 52 patients completed the sixth month assessment. Patients' mean age was 35 years-old (range 18–56 years); mean body mass index 25kg/m2 (range 18–28kg/m2). Mean total weight of resected breast tissue was 826g (range 60–1120g). There was a significant improvement for all the four Breast-Q subcales used (Friedman two-way analysis of variance: $\rho < 0.0001$; pre-operative < one month and six months).

**Conclusions:** These preliminary results demonstrate that the reduction mammaplasty improves quality of life and leads to high patients' satisfaction.

## P22. Antibiotic Prophylaxis in Gynecologic Laparoscopy: Randomized Controlled Trial (Preliminary Results)

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**Background:** Laparoscopy is a surgical procedure indicated for most gynecological pathologies. It presents numerous advantages over laparotomy, among them lower rates of surgical site infection and less comorbidity feverish. Despite this, the use of antibiotic prophylaxis is widely accepted and performed by most gynecologists.

**Objective(s):** To assess the need for antibiotic prophylaxis in gynecological laparoscopies not involving the opening of hollow viscera.

**Material/Methods:** Design: This was a clinical, prospective, double-blind, randomized study, conducted in a private hospital (Hospital and Maternity Santa Paula). Setting: Patients were recruited from the outpatient gynecology clinics after providing written informed consent. This trial was registered in ClinicalTrials.gov as NCT 01991834. Interventions: 90 women with gynecological pathologies, undergoing laparoscopic surgical approach, were consecutively selected. The patients were randomly allocated to either the placebo group - ''P'' (n = 45), to receive 10 mL of intravenous sterile saline, or to the antibiotic group - ''ATB'' (n = 45), to receive 1 g of intravenous cefazolin, 30 minutes before the surgery. To evaluate the incidence of surgical site infection, criteria of the Centers for Disease Control and Prevention were used. Patients were evaluated weekly for 30 days.

**Results:** The groups P and ATB had no significant difference in age (35,4 × 34,5 years; p = 0,28), IMC (24,6 × 24,4 kg/m$^2$; p = 0,43) and operation time (61 × 71 min; p = 0,21). Only one patient in P group revealed surgical site infection (p = 0,49). And five patients, two in P group and three in ATB group presented inflammatory signs (p = 0,51).

**Conclusions:** The rate of infection was low (1,1%), supporting a minimal need for antibiotics in general. In the present study, there were no differences between the groups for infectious outcome.

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## P23. Evaluation of Predictors of Having Hysteroscopic Sterilization vs. Laparoscopic Bilateral Tubal Ligation in a Medicaid Population

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**Background:** Hysteroscopic sterilization (HS) vs. laparoscopic bilateral tubal ligation (LBTL) may be used more frequently among women with certain characteristics.

**Objective(s):** To evaluate the predictors of having HS vs. LBTL in years 2006–2011 among a Medicaid population

**Material/Methods:** Women aged 15–49 years with claims for HS and LBTL procedures were identified from the Truven Health MarketScan Multi-State Medicaid claims database during 1/1/2006 to 12/31/2011. The proportions and characteristics of women who underwent HS or LBTL procedures were determined for the overall study population and stratified by year of procedure. Multivariable logistic regressions were used to identify predictors of use of HS vs. LBTL.

**Results:** The study population included 2,001 women who had HS and 12,523 who had LBTL. The likelihood of having HS vs. LBTL increased 3.3-fold ($p < 0.0001$) in years 2009–2011 from years 2006–2008. The mean Charlson Comorbidity Index score of women who had HS was significantly greater than that for women who had LBTL (0.32 vs. 0.25, $p < 0.001$). The proportions of women with comorbidities who had HS and who had LBTL increased from 2006 (HS: 27.5%; LBTL: 25.7%) to 2011 (HS: 40.5%; LBTL: 36.0%). Obesity (Odds Ratio (OR): 1.73, $p < 0.0001$) and hypertension (OR: 1.18, $p = 0.03$) were predictive of having HS vs. LBTL. Additionally, older age (OR: 1.03, $p < 0.0001$), race (black vs. white OR: 1.48, $p < 0.0001$; Hispanic vs. white OR: 1.58, $p < 0.001$; Other race vs. white OR: 2.50, $p < 0.0001$), having a prior pregnancy/delivery (OR: 1.23, $p < 0.001$), and having prior oral contraceptive use (OR: 1.42, $p < 0.0001$) were predictive of having HS vs. LBTL.

**Conclusions:** Among Medicaid-insured women, the likelihood of having HS vs. LBTL increased 3.3-fold in years 2009–2011 from years 2006–2008. Predictors of having HS vs. LBTL were older age, having a race other than white, obesity, hypertension, prior pregnancy/delivery, and prior oral contraceptive use.

## P24. Urologic Health in Women across the Lifespan – The Society for Women's Health Research (SWHR®) Roundtable Findings

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**Background:** SWHR routinely convenes interdisciplinary scientific roundtables to address key issues in women's health. Established investigators are invited for 1.5 days for an in-depth discussion to explore knowledge gaps and novel research opportunities in diseases that predominately or disproportionately affect women. On October 29–30, 2014, SWHR hosted a roundtable on ''Understanding urologic health in women across the lifespan.'' The goal was to facilitate the understanding of the current state of urologic health across a woman's lifespan by identifying key knowledge gaps and addressing research opportunities with a focus on preventing urologic diseases in women.

**Objective(s):** The meeting objectives were: 1) Review of urologic conditions prevalent during the key stages of a woman's lifespan; 2) Identify critical research gaps in the area of epidemiology, basic and clinical research; 3) Identify ways to prevent urologic diseases during the key stages of a woman's lifespan; 4) Address psychosocial, physical and Quality of Life (QOL) related challenges faced by women with urologic diseases.

**Material/Methods:** Researchers from diverse institutions were invited to discuss four topic areas pertaining to urologic diseases: 1) Epidemiology; 2) Clinical presentation; 3) Biologic basis; and 4) Current and novel therapeutic strategies. The nature of the meeting was interdisciplinary, and multi-disciplines were represented.

**Results:** Urologic diseases in women are understudied. There is a great need to educate the medical community and general public regarding women's urologic health. Lack of appropriate prevention and therapeutic strategies makes it harder to treat women. Urologic diseases and its relationship to co-morbid conditions is needed, particularly the combined impact on QOL in women. Lack of appropriate animal models that mimic urologic diseases specific to women is a major gap.

**Conclusions:** The identification of multiple knowledge gaps and subsequent discussions at the roundtable meeting led to the development of research recommendations, which will be highlighted in the poster.

## P25. Do Culturally Tailored Interventions Improve Condom use in Hispanic - American Women? A Systematic Review

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**Background:** Hispanic women in the US continue to experience a disproportionate burden of human immunodeficiency virus (HIV) and sexually transmitted infections (STIs). These disparities are closely connected to the biological, social, and cultural contexts of their lived experiences. Studies have examined the efficacy of culturally tailored interventions to improve sexual health in this population. However, the findings of those studies have not yet been synthesized to inform clinical practice.

**Objective(s):** The aim of this systematic review (SR) was to evaluate current evidence regarding the efficacy of randomized control trials (RCTs) comparing culturally tailored interventions versus standard care to increase condom use and decrease STI incidence in Hispanic-American women.

**Material/Methods:** Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, a systematic search of Ovid MEDLINE, EMBASE, CINAHL, and Cochrane databases was performed. RCTs assessing the effect of community-based culturally tailored interventions on condom use for Hispanic-American adolescent or adult women were included in the review. Included studies were assessed for bias using the Cochrane Collaboration's tool for quality appraisal.

**Results:** Of 565 articles identified, five RCTs met all inclusion criteria. These studies represent data from 1,747 Hispanic subjects. Four of five studies reported a significant increase in condom use at three and six months following culturally tailored interventions; only one found a lasting increase at 12 months.

Neither of the two studies investigating the effect on STI incidence showed significant improvements at any follow-up point.

**Conclusions:** Culturally tailored interventions lead to short-term improvements in condom use among Hispanic-American females, but do not appear to provide lasting effects or reduce STI incidence. Future research should focus on maintenance of long-term improvements in condom use and consider reporting other outcomes, including STI incidence, as primary measures.

## P26. Circulating Retinol-Binding Protein 4 Levels Connected to Cardiometabolic Risk Components and Girl Adolescent Metabolic Syndrome and Insulin Resistance

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**Background:** Retinol-binding protein 4 (RBP4) has been proposed to be a vital mediator connecting obesity and insulin resistance (IR).

**Objective(s):**This study investigated the role of RBP4 in the adolescent ''adipo-cardiovascular axis'' by investigating the association of its circulating concentrations with cardiometabolic risk components and outcomes.

**Material/Methods:** We assessed the cardiometabolic risk factors and metabolic outcomes of 140 representative girl adolescents who were randomly selected from a large-scale cross-sectional study. Data were analyzed using principal component analysis and multivariate regression models adjusted for covariates. Three principal components were extracted from 12 cardiometabolic risk factors and the first principal component (PC1) accounted for 38.7% of the total variance.

**Results:** RBP4 levels were positively correlated to body-weight-related parameters, triglyceride, systolic blood pressure and uric acid and to metabolic syndrome (MetS) and IR. Significant multivariate-adjusted differences at RBP4 levels (2.377 ng/dl) for a one-unit increase in PC1 scores were found among adolescents with hyperuricemia, but not among those without. Circulating RBP4 levels were notably capable at discriminating the presence of MetS and IR. A one-standard deviation increment of RBP4 was associated with a 2.5- and 1.9-fold risk of contracting MetS and IR, respectively, and explained 5.5% and 13.7% of the excess risk of PC1 on these two metabolic disorders.

**Conclusions:** Circulating RBP4 levels are associated with combined-cardiometabolic risk components and girl adolescent MetS and IR. Hyperuricemia demonstrates clinical implications on the positive correlation between continuous cardiometabolic risk-scores and RBP4 levels.

## P27. Sex Subgroup Analyses in Pivotal Clinical Trials of New Drug and Biologic Products Approved by FDA Center for Drug Evaluation and Research in 2014

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**Background:** Beginning in the 1980s and '90s, concerns were raised about underrepresentation of women in clinical trials (Schiebinger, J Clin Invest, 2003). In 1992, US Govenmental policy (GAO Report to Congress, 1992; FDA Guidance, Gender Differences, 1993) was changed with the intention of addressing these inequities, and recent FDASIA legislation (FDASIA, 2012) directed FDA to report on the extent to which demographic subgroups were included in clinical trials.

**Objective(s):** To assess the participation of women in pivotal trials for new drugs approved by FDA CDER in January-August 2014.

**Material/Methods:** A retrospective review of sex subgroup analyses in pivotal trials for New Molecular Entity (NME) and Original Biologic (BLA) marketing applications approved by CDER from January-August 2014 was conducted.

**Results:** CDER approved 19 NMEs and 7 BLAs. Overall, women accounted for 35–40% of subjects in pooled pivotal efficacy trials and safety analysis populations. When pooled by therapeutic area, female participation ranged from 21% (Dermatology) to 71% (Neurology).

**Conclusions:** Female participation in clinical trials varies greatly depending on the therapeutic area. Pooling across disease indications can be misleading, since disease prevalence by sex may vary substantially by indication. Demographic data are provided by sponsors and sex subgroup analyses are performed by FDA reviewers for almost all applications; however, actionable information (e.g., dosing recommendations) was required in labeling for only 7% of applications.

## P28. Gender Differences in Use of Communication Technology by Veterans

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**Background:** Communication technologies are effective, economical tools for health education and chronic disease management, which could make the care more patient-centric.

**Objective(s):** This study's purpose was to evaluate communication technologies usage by Veterans. We assessed the first 50 women and 50 age-matched men attending Miami VAHS primary-care clinics over 2 months.

**Material/Methods:** Half of the Veterans were between age 45–59, a third were $<45$. More women had college degrees compared to men (56% vs. 20%, $p<0.001$). There were no differences in any other socio-demographic characteristics.

**Results:** About 80% of both genders used text-messaging daily or multiple times weekly, while only 6% of women never did, compared to 22% of men ($p=0.021$). All using text-messaging would like appointment text reminders. Fewer women (40% vs 50%, $p=0.315$) used the internet once a week or more. More women had their own email account (90% vs. 76%, $p=0.062$). Women and men felt that emailing physicians would

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be useful (40% vs. 34%, p = 0.534); however, more women (64% vs. 52%, p = 0.224) felt that emailing would avoid trips and that email would allow for quick contact (74% vs. 62%, p = 0.198). Women had less privacy concerns (46% vs 58%, p = 0.230). Both women and men (74% vs. 70%, p = 0.656) were familiar with MyHealtheVet, but fewer women were enrolled (54% vs. 62%, p = 0.418), and used secure-messaging (4% vs. 16%, p = 0.046). The predominant MyHealtheVet use was medication renewal or checking appointments. Both genders had concerns that email communication would be ineffective if not responded to immediately or that it would eliminate the significance of face-to-face physician-patient interactions.

**Conclusions:** Communication technologies are accessible for personal use among all Veterans. No apparent gender differences exist in the willingness and ability to employ technology for medical use. Education and allaying fears regarding privacy and security may be strategies to better enhance their use in both genders.

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## P29. The Changing Face of Women Living with HIV in Lviv, Ukraine

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**Background:** According to UNAIDS, Ukraine has one of the fastest growing HIV epidemics in Europe. Given the shift in predominating route of transmission from intravenous drug use (IDU) to heterosexual sex, the proportion of infected women has increased considerably. Women face many barriers to HIV prevention and treatment, including stigma, criminalisation of drug use, economic and geographical barriers, and bureaucratic constraints. Past research has focused on high-risk women, mainly from Eastern Ukraine, and on barriers to diagnosis rather than treatment. Additionally, no past research has looked at longitudinal changes in risk factors and demographics.

**Objective(s):** To examine the demographic and HIV risk factors, clinical presentation, and time to treatment in seropositive women of all risk profiles in the Lviv province of Ukraine, from 2009 to 2013.

**Material/Methods:** A retrospective chart review was conducted of all 622 HIV-infected women aged 18 and older, registered at the Lviv AIDS Centre, a governmental HIV/AIDS care centre serving the Lviv oblast, Ukraine, from December 2008 to December 2013. Data was collected from the epidemiology registry at the AIDS Centre. IRB approval was received from the Brown University Research Protections Office. Variables recorded included: age, residence, date of first blood draw, date of registration, transmission type, reason for testing, presence of AIDS, and symptoms or opportunistic infections at initial presentation.

**Results:** We compared characteristics of patients infected through IDU to women infected through sexual transmission (n = 617). Injection drug use (IDU) transmission was associated with older women ages 26–50, (p < 0.001), urban residence (p = 0.015), initial presentation with AIDS (p < 0.001), and presenting symptomatically (p < 0.001) compared to women infected through sexual transmission. Women who were initially tested for HIV because of intravenous drug use delayed seeking care on average almost 100 days longer than women who were initially tested because of pregnancy, high-risk sexual contact, or other reasons (p = 0.008). However, from 2009 to 2013, there seems to be an overall decrease in the delay to seek care for women infected both sexually and through drug use. Women presenting with AIDS (p < 0.001) and women presenting with other concurrent symptoms (p < 0.001) were more likely to have been tested because of drug use.

**Conclusions:** Women infected with HIV through drug use presented later to care and at more advanced stages than those infected heterosexually. This demonstrates the need for interventions to target HIV-infected women IDUs to further decrease their interval to registration, treatment and care.

## P30. Gender Differences in the Trajectory of Recovery in Health Status Among Young Patients with Acute Myocardial Infarction: Results from the VIRGO Study

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**Background:** Despite the excess risk of mortality in young women (≤55 years) following acute myocardial infarction (AMI), little is known about young women's health status (symptoms, functioning, quality of life) during the first year of recovery after an AMI.

**Objective(s):** We examined gender differences in health status over time from baseline to 12-months post AMI.

**Material/Methods:** A total of 3,501 AMI patients (67% women) aged 18–55 years were enrolled from 103 United States/24 Spanish hospitals. Data were obtained by medical record abstraction/patient interviews at baseline hospitalization, 1- and 12-months post AMI. Health status was measured by generic [Short Form-12 (SF-12), EuroQoL [EQ-5D)] and disease specific [Seattle angina questionnaire (SAQ)] measures. We compared health status scores at all time points, and utilized longitudinal linear mixed models to examine the independent

effect of gender on health scores, adjusting for time/selected covariates.

**Results:** Women had significantly lower generic/disease specific health status scores than men on each assessment at all time points (all P-values < 0.0001). Following adjustment for time/all covariates, women had SF-12 physical/mental summary scores that were −0.96 (95% CI: −1.59, −0.32) and −2.36 points lower (95% CI: −2.99, −1.72) than men, as well as a poorer EQ-5D utility index and visual analog score that was −2.50 (95% CI: −3.57, −1.43) and −1.14 points lower (95% CI: −2.31, 0.02) than men. Women also had worse disease-specific physical limitations (SAQ physical limitation score = −2.44 points lower (95% CI: −3.53, −1.34), more angina (SAQ angina frequency score = −1.03 points lower (95% CI: −1.98, −0.07), and poorer disease-specific quality of life (SAQ QOL score = −3.51 points lower (95% CI: −4.80, −2.22) than men.

**Conclusions:** Although both genders recover similarly following AMI, women have poorer scores than men on all health status measures; a difference that persisted throughout the entire year after discharge.

## P31. The Use of Immediate Postpartum Intrauterine Contraceptive Device (PPIUCD) in Rwanda

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**Background:** Rwanda has high maternal mortality rate, high total fertility rate with high unmet need for contraception. In 2010, in partnership with FHI360 and JHPIEGO, a pilot project of offering intra-uterine contraceptive device (IUCD) within 48 hours after delivery was introduced at Muhima hospital, the biggest maternity in the country.

**Objective(s):**To assess the outcomes of the PPIUCD project at Muhima hospital, Kigali, Rwanda, May 2010 to December 2013

**Material/Methods:** Initially, 12 nurses from Muhima hospital, and 3 from each of two selected healthcare centres within the catchment area of Muhima hospital were trained to offer postpartum family planning counselling. After that, 10 nurses and 3 doctors from Muhima hospital received a practical training to offer PPIUCD. Trained doctors were allowed to train others to perform IUCD insertion during caesarean when requested. Data were collected from registers and files of women who received PPIUCD during that period.

**Results:** 572 women received PPIUCD of which 14.5% are post-placental insertions (within 10 minutes after delivery), 35.7% were inserted within 48 hours and 49.8% intra-caesareans. Of 278(50.2%) IUCD insertions done after normal delivery, 86.1% were performed by nurses/midwives. Over a half (51.4%) of women who received PPIUD received counselling during ante-natal care, while 30.6% were counselled in waiting rooms. Regarding follow-up, 308(53.8%) women came back for the first follow-up (6 weeks after insertion) and 32.2% completed two expected follow-up visits. Overall, there have been 9(1.6%) cases of expulsions of which 7 happened early before 6 weeks of insertion; 3(0.52%) cases of infections; and one (0.17%) case of failure (pregnancy).

**Conclusions:** The project has proven to be feasible and can be beneficial for the country to reduce the unmet need for contraception by widening the range of effective contraceptive methods available to use immediately after delivery.

## P32. Identifying Barriers and Improving Access to IUDs at a Suburban Residency Practice

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**Background:** Half of pregnancies in this country are unintended. Intrauterine devices (IUDs) are effective long acting reversible contraceptives chosen by 5.5% of US women. The levonorgestrel and copper IUDs are currently offered at our practice, a suburban family medicine residency. We wanted to identify barriers to the placement of IUDs, and focus our Quality Improvement (QI) process upon minimizing delays to improve access.

**Objective(s):** The main objectives of this QI project were 1. to identify the process of obtaining an IUD at our practice; 2. to identify barriers to timely IUD insertion; and 3. to propose solutions to improve these processes.

**Material/Methods:** We reviewed charts of patients scheduled for IUD insertion, identified the process for ordering and scheduling IUDs, and discovered multiple potential sources of delay. We then educated key personnel on these processes and proposed solutions. After our intervention, we collected data to assess change.

**Results:** We identified 6 separate steps in the IUD ordering and scheduling process; delays can occur during any of these. During the initial review, 32 IUD insertion appointments were scheduled, but only 17 IUDs were placed. From patient decision to insertion, there was a mean of 84.3 days and a median of 80. Following our intervention, 31 appointments were scheduled for IUD insertion and 25 were placed. From patient decision to insertion, the mean decreased to 45.6 days with a median of 36.

**Conclusions:** Several obstacles were identified for patients receiving IUDs at our practice, including lack of IUDs and delays in contacting patients for appointments. We educated providers, advocated for an adequate supply, and delegated key personnel to be in charge of each step of the process. These interventions resulted in more patients getting their IUDs at their scheduled appointment and decreased the interval from time of patient decision to insertion.

## P33. Demographics by Sex and Race of Study Participants in Clinical Trials for Oncology Drugs Approved by the FDA in 2013

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**Background:** According to the American Cancer Society, there are approximately 1.6 million people living with cancer in

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the United States, 51.3% of which are men and 48.7% of which are women. African-Americans have the highest incidence rate of cancer (508.3 per 100,000), followed by Caucasians (483.6 per 100,000), and then American Indian/Alaskan Natives (391.8 per 100,000). The US Food and Drug Administration (FDA) have implemented several regulations and guidances for adequate representation of women and ethnic/racial minorities in clinical drug trials.

**Objective(s):** The purpose of this study is to assess the participation of women and racial/ethnic minorities in clinical trials in support of New Drug Applications (NDAs) and Biologics License Applications (BLA) for oncology products approved by the FDA in 2013.

**Material/Methods:** The sex and race of subjects in all cancer drug clinical trials submitted to FDA in New Drug Applications (NDAs) and Biologics License Applications (BLAs) approved in 2013 were examined for this study. Demographics were assessed from final clinical study reports submitted by the product's sponsor to FDA.

**Results:** Eight (including 1 application each for prostate (Xofigo) and breast cancer (Kadcyla)) oncology products were approved during the period studied (6 NDAs and 2 BLAs). A total of 83 clinical trials classified as phase 1, 2, or 3 studies were submitted in the NDAs/BLAs. Pooled demographic analysis indicated that the mean participation of women in these trials was 48% and the majority of the trial subjects were Caucasians (74%). When analyzed by phase of the trials, mean female participation was 40%, 43% and 53% for phases 1, 2, and 3 respectively. Overall, racial/ethnic minority participation was 2.3% (Black), 17.5% (Asian), 1.3% (other) and 4.0% (unspecified).

**Conclusions:** Overall, the participation of women in clinical trials is similar to proportion of women in the US cancer patient population. In Phase 3 trials, during which much of the safety and efficacy are assessed, female participation is higher. However, there is lower representation of women in Phase 1 trials, during which the preliminary safety of new drugs and biologics are evaluated. The participation of African Americans in all phases is considerably lower than would be expected based on the US cancer patient population prevalence by race.

## P34. Quality of life in Women with Breast Cancer: A Structural Equation Model (SEM) Approach

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**Background:** QOL is one the determinants of general well-being of individuals and societies. It is usually structured as a multidimensional concept and it is a highly important for clinical purposes. Patients with cancers are most likely to be associated with impaired QOL

**Objective(s):** The aim of study is to explore the association between pain (severity, interference with life), coping style and QOL. Our secondary aim is to explore whether the coping mechanism is an effect modifier for this associationMethods:.

**Material/Methods:** Methods: This cross-sectional study was conducted in Iranian breast Cancer center. 143 subjects, were assessed by standard interviews. SEM was applied for modeling. The data were analyzed using SPSS, AMOS 22. Brief COPE, EORTC QLQ-C30 and Brief pain inventory were applied for interview.

**Results:** Strongest association between severity of pain and QOL is the specific path coefficient = 15.5. The next was WAWS,(Walk, Activity, work and sleep) (spc = -9.3). WAWS also had a direct and positive effect on emotional focus style, that mediates the QOL. Emotional focus approach had independent, invers effect on QOL. Fitness indicators were:X2 = 18(df = 21), p = 064, TLI = 1025, NFI = 092, CFI = 1000 and RMSEA = 0.00

**Conclusions:** Patients with severe pain and negative coping style are more prone to low quality of life, slow relieving process and undesirable consequences. Thus, a standard treatment protocol, pain management plan and supportive therapy needs to be present in a clinical setting

## P35. Breaking Through the Glass Ceiling Without Injury: Health Status in Executive Women Ascending the Corporate Ladder

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**Background:** There are increasing numbers of women ascending the corporate ladder in the United States workplace. However, only a small fraction of the very top leadership positions and board of director seats are held by females. Certain stress factors may limit the success of women, possibly due to negative effects on health.

**Objective(s):** This study examined whether some variables (e.g., income and education) affected weight, stress, and life satisfaction in 369 executive women. The focus was to explore the relationships between income and education to stress and health. The major question in this study was whether women were sacrificing their health in the quest to ascend the top ranks.

**Material/Methods:** A cross-sectional, self-administered, web-based survey of 369 career women was performed in the U.S. Methods of inquiry included analysis of self-reported data and examination of the literature. Women between 21 and 60 years of age in U.S.-based corporations, academic institutions, and small businesses were targeted.

**Results:** The study found that 50% of the women reported overall health as very good which was correlated to higher levels of education. And when controlling for age, the relationship between satisfaction and income was significant. However, women may be sacrificing specific aspects of their health as there were findings worthy of discussion such as 48% not seeing a doctor due to workload, 50% believing a child hampers advancement, and 30% reporting a weight change due to stress.

**Conclusions:** There are clear health benefits from having higher levels of education and income. However, considering the global effort to improve the numbers and conditions of females in prominent positions of power, additional studies of executive women should be performed. Testing multiple health outcomes in this understudied population will help to develop effective policies and societal strategies to address current gaps and problems facing professional women.

## P36. Body Investment and Body Satisfaction in Women Undergoing Reduction Mammaplasty

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**Background:** Breast hypertrophy is a common condition among women worldwide, which can lead to physical and psychological dysfunctions. Body image is the way in which the body itself is presented to the person and is related to the investment in the body and satisfaction with body shape. Breast reduction is indicated to relieve physical symptoms, improve functional capacity, improve self-esteem, body satisfaction and bring emotional well being.

**Objective(s):** To compare the body satisfaction and the body investment among breast hypertrophy patients undergoing reduction mammaplasty and women with normal sized breasts.

**Material/Methods:** A total of 96 women were prospectively enrolled. The mammaplasty group (MG) consisted of 63 breast hypertrophy women, aged 18 to 55 years-old with t reduction already scheduled. Other 33 women with normal sized breasts and who had not undergone any breast surgery were enrolled in control group (CG). The assessments of body satisfaction and body investment were performed by means of the Body Dysmorfic Disorder Examination (BDDE) and the Body Investment Scale (BIS), respectively. The questionnaires were self-administered preoperatively and six months postoperatively (MG) or six months after the initial assessment (CG). The results were statistically analyzed.

**Results:** Both MG and CG had a significant improvement on BIS scores after six months ($p = 0.001$ in both groups). MG had also a significant improvement in BDDE scores postoperatively ($p = 0.001$), while CG did not $p = 0.575$).

**Conclusions:** Reduction mammaplasty had positive effects on body investment and improved body satisfaction among breast hypertrophy women.

## P37. Mental Health of Childbearing Women Living Through Long-Term Disaster Recovery

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**Background:** Long term disaster recovery is chaotic and stressful and has a significant impact on the well-being of people who live in the community. Pregnant women living in New Orleans through the long-term recovery from Hurricane Katrina (2010–2013) faced chronic stresses, reduced access to health care, and neighborhood instability.

**Objective(s):** Examine the interaction of stressful disaster recovery experience and social support in determining depression, stress levels and physical health indicators; Examine the stress reduction and coping strategies women used prenatally.

**Material/Methods:** Cross-sectional data was collected from interviews with prenatal women ($n = 402$, 24–40 weeks gestation). Measures analyzed included previous disaster exposure, depression (Edinburgh Depression Scale), post-traumatic stress disorder (Post-traumatic Checklist), pregnancy-related distress (Lobel scale), and their perception of disaster recovery. Linear regression was used to model mental health outcomes, with adjustment for race, marital status, education, employment, age, and smoking.

**Results:** Women were predominately African American (56%), single (65%) and with income < $15,000/year (52%). Disaster exposure was moderately high: 24% walked through flood waters; 55% had some or enormous damage to their homes; and 16.9% saw someone die. Mental health measures indicated 30% scored at significant risk for depression (EDS > 12), while 9% were likely experiencing PTSD. Women who reported high exposure to Katrina scored significantly higher on the PTSD and pregnancy-related distress scales, and feeling that one's life was still disrupted (35%) was strongly associated with depression, PTSD, and pregnancy-related distress ($p < 0.01$), even after adjustment for experience of the hurricane. Social support, optimism about the future, and use of massage were associated with better mental health.

**Conclusions:** Both past exposure to hurricane disaster and current recovery status contribute to mental health problems years later. Pregnant women with a history of disaster exposure need ongoing mental health assessment and prenatal care that addresses this risk.

## P38. Increased Risk of Antibody Mediated Rejection and Subsequent Allograft Vasculopathy in Women Post Cardiac Transplantation

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**Background:** Pregnancies may result in antibodies against human leukocyte antigens (HLA) which may increase the risk of antibody mediated rejection (AMR) and development of cardiac allograft vasculopathy (CAV), a leading cause of long-term mortality following heart transplantation (HTx).

**Objective(s):** To evaluate the sex differences in the incidence of AMR events and subsequent risk of CAV among HTx recipients.

**Material/Methods:** The study comprised 160 patients [51 (32%) females] who underwent HTx between January 2008 and May 2014. The cumulative effect of AMR was calculated by rejection score, which was the sum of myocardial biopsy AMR grading divided by number of biopsies taken during 3 years post-HTx. CAV was assessed annually by coronary angiogram and intravascular ultrasound.

**Results:** Female recipients were younger at the time of HTx, with lower frequency of ischemic cardiomyopathy and less likely to get mechanical circulatory support devices as a bridge to HTx compared to men ($p < 0.05$). Females had higher levels of anti-HLA I antibodies pre-HTx compared to males (11 vs. 6 %PRA class I, respectively, $p = 0.007$) which was associated with a history of pregnancies, total number of children and with a higher AMR score at 6 months post-HTx ($p < 0.05$). Women demonstrated a significant increase in the total incidence of AMR events (27 vs. 7%, $p = 0.001$) and in AMR scores at 6, 12, 24 and 36 months post HTx compared to men ($p < 0.05$). There were no

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differences in cellular rejection between the groups. A history of AMR events was associated with a significantly increased risk of severe CAV onset (HR 7.0; 95% CI, 1.5 – 31.5; p = 0.012).

**Conclusions:** Women are at higher risk for AMR post HTx which subsequently increases their risk for CAV. Females recipients may benefit from more frequent myocardial biopsies, coronary imaging studies, and targeted immunosuppressive therapy to attenuate the development of CAV.

## P39. Effects of Web-Based Interventions on Weight Loss, Healthy Eating and Activity Targets in Rural Women

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**Background:** Finding effective weight-loss interventions to reach rural women is a public health challenge.

**Objective(s):**This study examined the proportion of rural women who achieved established targets for weight-loss (≥5% or ≥10%) and Healthy People 2010 healthy eating and activity recommendations following 6 months participation in one of 3 web-based intervention groups: web-based only (WO), web-based plus peer-led discussion (WD), and web-based with professional email-counseling (WE).

**Material/Methods:** Women (n = 301), ages 40–69, (baseline BMI of 28-45), were randomly assigned to groups. All 3 groups received the same web-based intervention incorporating lifestyle approaches for weight loss, with WD and WE receiving additional intervention elements. Baseline and 6-month assessments included weight, self-reported healthy eating via web-version of the Block Healthy Habit and History Questionnaire and self-reported activity via the BRFSS. The statistical analysis was conducted using general estimating equations and logistic regression.

**Results:** Attrition was 11.6% at 6 months, with 266 completers. Overall 118 of 266 (44%) women lost ≥5% of baseline weight, and 66 of 118 women losing ≥10% of baseline weight. No group differences were noted for meeting ≥5% or ≥10% weight-loss. Women within each of 3 groups improved significantly in achieving healthy eating standards for % of calories from fat and saturated fat. However, a significantly higher proportion of the WE group compared to the WD group met the two eating standards. Significant within-group improvements were noted in the WO group for meeting ≥150 minutes/week of moderate or greater intensity activity and in the WE group, who met the recommended ≥3 daily fruit servings.

**Conclusions:** Web-based interventions show promise for assisting rural women achieving weight-loss targets recommended for health benefits and selected healthy eating and activity behavioral criteria.

## P40. Weight-Loss is Associated with Reductions in Pain and Sleep Disturbance in Midlife and Older Women

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**Background:** A loss of 5 – 10% of body weight has been associated with health benefits; however, there is limited research related to the influence of incremental weight loss as related to quality of life in women.

**Objective(s):** This study examined change in quality of life (anxiety, depression, fatigue, pain, physical function, sleep and social satisfaction with roles) across 5 incremental categories of weight loss in midlife and older women, ages 40–69, who participated in 6 month web-based weight loss interventions.

**Material/Methods:** Data were analyzed from 266 women, ages 40–69 [mean (SD) = 54.1 (6.9)] with a baseline BMI of 28-45 who completed baseline and post-intervention assessments following a 6 month web-based weight loss intervention. Assessments included demographics, weight, height, and quality of life using the Patient Reported Outcome Measurement Information System (PROMIS-29). This secondary analysis from a randomized community-based trial (Clinical Trials.gov: NCT01307644) compared baseline to 6 month change scores of women's PROMIS-29 subscales across 5 different weight-change categories: gain (>2%, n = 23); stable (±2%; n = 65); minimal weight loss (>2% to 4.9%;n = 60); modest loss (5-9.9%, n = 52); and substantial weight loss (≥10%;n = 66).

**Results:** ANOVA's showed group differences for reductions in pain interference and sleep disturbances ($p < 0.001$). Bonferroni post-hoc analysis revealed differences between women who gained weight and those who had substantial weight loss, with those having ≥10% weight loss reporting significant reductions ($p < 0.05$) in pain and sleep disturbance.

**Conclusions:** Midlife and older women who achieved a targeted weight loss (≥10%) following participation in web-based weight loss interventions may benefit from reductions in self-reported pain and sleep disturbance.

## P41. Women Veterans' Early Experiences with a Web-Based Diabetes Prevention Program

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**Background:** Diabetes is associated with significant morbidity and mortality. Nationally, diabetes affects 11% of women 45–64 years of age, but the prevalence has been estimated at 10% for women Veterans between 45–54 years of age and 18% for those 55–64 years of age. The convenience of an online diabetes prevention program might be of particular interest to women Veterans who receive care at the Department of Veterans Affairs medical centers.

**Objective(s):** To qualitatively assess women Veterans' early experiences with a web-based diabetes prevention program and collect contextualizing quantitative data.

**Material/Methods:** We conducted and analyzed semi-structured interviews and collected objective data on weight change, participation, and engagement for the first 17 women Veterans with pre-diabetes to enroll in an online diabetes prevention program at one site in a multi-site study.

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**Results:** Interviews revealed women were motivated to participate because of a perceived need to change their lifestyle to avoid diabetes. The online format of the program was perceived as convenient, integrated well into daily life, and made women feel accountable to achieve daily goals. Some participants did not like the logging aspect and some felt the program was too impersonal. At 16 weeks participants lost an average of 5.24% of their baseline weight. Eighty-two percent of participants completed at least 9 of the 16 core modules; participants logged on an average of 76 times, posted an average of 46 group messages, and sent an average of 20.5 private messages to the health coach.

**Conclusions:** Women Veterans' early experiences with a web-based diabetes prevention program were generally positive. Convenience, integration into daily life, and accountability emerged as facilitators for participation and engagement; the need to log data and the perception of online communication as impersonal were cited as barriers. Engagement was high and participants' weight loss at 16 weeks met the Centers for Disease Control Diabetes Prevention Recognition Program Standards.

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## P42. Congruence of Parental Genomic Variation by Country and Self-Report Race and Ethnicity in Ongoing Genomic Studies

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**Background:** Concerns with minority representation in research is a challenge to adequately address the population and provide the appropriate ''reference'' gene set for analysis. The further development of whole genome sequencing, as well as robust collection of clinical and demographic data, may assist to identify possible relationships between race and ethnicity and health care outcomes.

**Objective(s):** To compare genetic, ancestral and self-report race/ethnicity data to electronic medical record (EMR), to determine the reliability and validity of available race/ethnicity data that is used to create maternal child health care policies

**Material/Methods:** Two perinatal genomic studies at Inova Translational Medicine Institute have enrolled over 2,500 families. We have collected participants' biological specimens along with clinical data and social/demographic factors. Data was collected over 3 years at Inova Fairfax Hospital, located in Northern Virginia, a highly diverse community. Racial and ethnic analysis was conducted and analyzed by principal component analysis (PCA) to determine the participants' ancestral background along with investigating the congruence of the self-report race, ethnicity, and country of birth to hospital EMR.

**Results:** EMR data on race and ethnicity were difficult to validate and are not a reliable source of documentation. Overall We found average of 50% congruence between self-report race/ethnicity and EMR race/ethnicity. Ancestral reference genetics did not correlate well to self-report race or ethnicity. Ancestral country of birth provided improved reference genetics that may identify population variations.

**Conclusions:** Race is a social construct that does not accurately identify ancestral genetic characterization. Race and ethnicity is an important component of women health care outcomes research; yet is often poorly constructed and documented. Future research may explore the use of ancestral reference genes to establish treatment protocols and develop maternal child personalized medicine.

## P43. Using Arts-Based Research Methods and Mentorship Between Older and Younger Women with Mental Illness to Make Meaning of the Recovery Journey

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**Background:** A gender based analysis of recovery from mental illness is gaining prominence in the literature (Morrow & Weisser, 2012; Kidd, et al., 2013). Also identified is the significance of peer-peer relationships in fostering self-esteem, self-efficacy, social support, and spiritual well-being (Fukui, Davidson, Holter, & Rapp, 2010), as well as meaning making about recovery (Kidd et al., 2011). The current project focuses on a less studied aspect - the value of peer mentorship between younger and older women.

**Objective(s):**1) to explore peer-mentorship between older and younger women in the context of recovery; 2) to advance creative methodologies for eliciting voices of women living with mental health issues.

**Material/Methods:** Located in a community-based activity centre for empowerment, the study used creative, artistic processes (e.g., writing exercises; movement/dance/gesture; visual arts; and journaling with talking and reflection weaved throughout) to engage younger and older women living with mental illness. Audio recording, photos and video captured data.

**Results:** The arts-based mentorship process yielded positive results for both older and younger women. From personal experience, participants' recommendations to each other included maintaining a positive and realistic attitude, accepting the illness as a part of identity but not wholly encompassing of identity and remembering that ''you're stronger than your illness''. Older participants shared knowledge of mental illness, how to access resources and offered ongoing mentorship. Younger women shared their experience with modern technology (positives and negatives), offered to assist with instrumental/physical support and welcomed an ongoing mentoring connection. Relationships began and a seed of hope for moving out of isolation was planted. The project also provided validity for arts-based practice as a tangible support for women in recovery with its integrative and healing properties.

**Conclusions:** Older and younger women recovering from mental illness value innovative strategies through which they can guide their own recovery processes and relationships with each other.

## P44. Insomnia and Quality of Life Among Ovarian Cancer Survivors

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**Background:** Women with ovarian cancer are often diagnosed at an advanced stage, and as a result, many women experience decreased quality of life and overall well-being from invasive treatment and symptoms of the disease. Quality of life and sleep problems experienced by ovarian cancer survivors are therefore important issues in this population.

**Objective(s):** The aim of the present study was to examine the relationship between quality of life and insomnia symptoms in ovarian cancer survivors.

**Material/Methods:** Participants (n = 100) aged 24 to 89 years were recruited through the Pennsylvania Cancer Registry, and completed a questionnaire that included questions regarding demographics, disease status and treatment, the Insomnia Severity Index (Bastien et al., 2001), and the Functional Assessment of Cancer Therapy Scale for ovarian cancer patients (Basen-Engquist et al., 2001), a scale that assesses physical well-being, social/family well-being, emotional well-being, functional well-being as well as an ovarian cancer-specific subscale.

**Results:** In the sample, 49% women had no clinical insomnia, 32% had subthreshold insomnia, and 19% clinical insomnia. A multinomial logistic regression was conducted to determine the influence of the quality of life domains on insomnia symptoms. The overall regression was significant, $\chi 2$ (10) = 23.70, p = .008, Nagelkerke R2 = .244. In the model, only functional well-being differentiated those ovarian cancer survivors without insomnia from those with clinical insomnia, b = − .213, Wald $\chi 2$ (1) = 6.31, p = .012, OR = .81, 95% CI: .69-.95.

**Conclusions:** Over half of the ovarian cancer survivors in the study experienced subthreshold or clinical symptoms of insomnia. In terms of quality of life, poor functional well-being was associated with clinical insomnia symptoms. From a clinical perspective, the functional well-being of ovarian cancer survivors is an important consideration in understanding and potentially treating sleep problems in this population.

## P45. Medicine Is Becoming Female. How Do We Keep Female Physicians in the Profession?

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**Background:** Medicine is increasingly becoming a female profession. About half of all medical school graduates are female. This is accompanied by an anticipated shortage of physicians.

**Objective(s):** The necessity of making jobs more attractive for female physicians is evident.

**Material/Methods:** At the University Clinics physicians were surveyed in 2012 using an anonymous standardized questionnaire. The survey asked about job and family and their compatibility, as well as what the respondents would like from their employers.

**Results:** A total of 530 questionnaires were distributed to female physicians, of which 145(27.4%) were returned. Mean age was 38.2 years. 46.9% reported having children, with another 34.5% wanting to have children. Of the respondents 62.1% reported spending more than two hours per day on household chores and childcare. Of the female physicians 75.2% reported working a 40-hour week plus night/weekend duties; 49% would like to work fewer hours. What the respondents most wanted (88.9%) from their employers was more affirmative action for female physicians, followed by (86.9%) shorter working hours. A very large percentage of female physicians report job-induced negative effects on health (84%) and negative psychological effects (83.4%).

**Conclusions:** Affirmative action including quotas should largely eliminate problems for women in obtaining trainee jobs. Nevertheless, there is a massive lack of job offers, particularly all-day childcare and all-day compulsory schools. This may be a factor in the large number of hours many female physicians spend on household chores and childcare and in the large number of women reporting physical and psychological health problems from their jobs and the night/weekend duties. With the feminization of medicine and the anticipated shortage of physicians the signals point better than requests for childcare and in house-kindergartens being met.

## P46. Sexuality and Violence: an Investigation on Female Patients

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**Background:** Female patients are reluctant to talk about violence or sexual problems with their family physicians. Studies have shown that women want to discuss these topics and prefer them to be actively initiated by the physician.

**Objective(s):** A tool for questions on violence, sexuality, well-being and the environment of women was developed and implemented as supplement to the history taking form in a women's health centre. A study on acceptance of and satisfaction with the tool in patients and physicians is conducted.

**Material/Methods:** We used the tool for information on the social situation, experiences with violence and sexuality of participating women. The tool is constructed as a structured interview. A questionnaire on satisfaction and acceptance of the tool was developed to assess the perspective of patients and physicians.

**Results:** Intermediate data of 144 female patients (response rate = 92,3%) show that 66% have experience with psychological, physical and/or sexual violence. 44% of the patients stated to have sexual problems. 82,6% of the patients have never been asked about experiences with violence, 55% have never been asked about sexual problems by a physician. Only 1,4% do not want to talk about sexuality and 1,5% about violence in the future.

**Conclusions:** The intermediate data illustrate that women want to talk about sexuality and violence with their physicians. Moreover, they want the physician to actively initiate these topics and talk openly about it. Data point towards the necessity to integrate the topics sexuality and violence in medical history taking.

## P47. How to Bring Sex and Violence into Medical Education

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**Background:** The inclusion of topics such as sexuality and violence in medical history taking has been discussed in Women's Health and is now focused upon in Gender Medicine (GM).

**Objective(s):** The central issue is set on how to incorporate questions on sexuality and violence. Therefore a tool was developed to include questions for usage in education and practice.

**Material/Methods:** The development of the tool included three steps: 1) The drafting phase for this tool was based on literature analysis in history taking, accompanied by four in-depth interviews with female physicians highly engaged in GM. Additionally to a standard history taking questionnaire the tool includes: 1) subjective theories of illness; 2) social situation (e.g. non-paid work); 3) sexuality (e.g. sexual orientation, sexuality issues); 4) violence; 5) psychological aspects (e.g. coping). 2) The educational practicability was tested by 20 medical students and discussed in two focus-groups. 3) The tool was field tested in

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the Women's Health Centre to assess practicability in the clinical setting and to investigate acceptance of patients to be asked questions on sexuality and violence. Three female physicians and 207 female patients participated in the field testing. Qualitative data obtained in step 1 and 2 were analyzed using the grounded theory approach.

**Results:** As indicated by patients, sexuality and violence have been hardly discussed with physicians before, even though more than half of the patients had sexual problems and/or experience with violence. Patients demand physicians to actively initiate these topics.

**Conclusions:** The tool developed in this study facilitates integration of questions on sexuality and violence in history taking. This tool is created as supplement to standard medical history taking questionnaires and as easy to use instrument for physicians to include sexuality and violence.

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## P48. Gender Differences in Posttraumatic Stress Disorder and Help-Seeking in the U.S. Army

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**Background:** Inconsistent findings between studies of gender differences in mental health outcomes in military samples have left open the question of whether combat exposure or other types of trauma confer equal or greater risk of posttraumatic stress disorder (PTSD).

**Objective(s):** The objectives of this study were to (1) examine gender differences in PTSD prevalence across 2 study years and using different PCL cutoff criteria, (2) examine trends in military-related and psychosocial risk and protective factors by gender, and (3) examine differences in help-seeking behaviors by men and women meeting screening criteria for PTSD. Given literature suggesting a higher prevalence of physical/sexual abuse among women, the greater role of interpersonal relationships in their perceived well-being, and the greater potential for threat appraisal among women as suggested in the cognitive model of gender differences in trauma processing, it was hypothesized that rates of PTSD may differ between men and women experiencing different types of trauma. In addition, it was expected that trauma associated with victimization (e.g., rape) would be more likely to result in PTSD symptoms than trauma associated with deliberate action conducted as part of one's occupational duties (e.g., direct combat operations) for both men and women. It was also expected that prior traumas, such as assault or combat, will confer an increased risk of PTSD. Based on previous literature, the relationship between trauma (e.g., combat) and PTSD may be mediated by injury or family strain, and social support will function as a moderator.

**Material/Methods:** This study assessed the prevalence and risk factors of screening positive for PTSD for men and women based on two large, representative, population-based Army samples obtained as part of the 2005 and 2008 U.S. Department of Defense Surveys of Health Related Behaviors among Active Duty Military Personnel.Women and officers were oversampled to ensure adequate representation. The final sample consisted of 16,146 personnel in 2005 and 28,546 military personnel from all branches of service in 2008 who completed self-administered questionnaires anonymously.

**Results:** The study showed that overall rates of PTSD, as measured by several cutoffs of the PTSD Checklist, are similar between active duty men and women, although rates for women with combat exposure increased between the two study time points. Combat was associated with an equivalent risk of PTSD by gender. Active duty men who reported sexual abuse were more likely than women to meet criteria for PTSD and had higher rates of PTSD than those who reported high combat exposure. There were no significant gender differences in multivariate models controlling for demographic/psychosocial risk factors. Active duty men and women who met criteria for PTSD were equally likely to receive mental health counseling or treatment.

**Conclusions:** The study suggests that it is not gender per se that predicts PTSD but rather differential experiences that may be more or less likely depending on gender.

## P49. Cervical Cancer Screening Participation Among Immigrants in Finland

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**Background:** Cervical cancer is one of the most common cancers in women worldwide. Early detection of this disease can be obtained using regular Pap (Smear) tests. With the screening program for cervical cancer becoming an essential part of the Finnish healthcare system since the 1960s, a decline of about 70–80% in the incidence and mortality rates has been observed. Previous studies revealed low attendance rates among immigrants compared with Finnish-born women. Meanwhile, reasons for unsatisfactory participation have not been investigated.

**Objective(s):** To explore factors associated with the immigrant women's participation in the Pap test screening in Finland.

**Material/Methods:** This study utilizes data from the Migrant Health and Well-being Study conducted by the Finnish National Institute for Health and Welfare in 2010–2012. Participants were 3071 immigrant women from Russia/Soviet Union, Somalia, Iraq or Iran, aged 18–64, with at least one year stay in Finland. Responses to Pap test participation within the last five years were available from 620 women aged 25–60. Data were analyzed by using the StataSe 13 software.

**Results:** Significant differences in screening participation were observed between the countries of origin. Russian women were most active (75%), followed by the Kurdish (61%), and the Somali women being least active (30%). In the logistic regression for screening participation, using Russian women as the reference group (OR = 1.00), Kurdish women had OR = 0.51 (95%CI 0.35, 0.76; $p = 0.001$) whereas Somali women OR = 0.17 (95%CI 0.11, 0.28, $p < 0.001$). Education (high school, OR = 2.62, 95%CI 1.85, 3.71, $p < 0.001$), was significantly associated with participation. However, there were significant interactions between country of origin and other variables (e.g. illiteracy, marital status).

**Conclusions:** Those with higher education have higher likelihood for Pap test participation. Further analyzes are needed for each country of origin separately to explore other factors associated with participation. Thus, different factors may be associated with Pap test participation in different immigrant groups.

## P50. The Parenting Team: Revising the Template for Prenatal Care

Tara Iyer[1], Gloria Bachmann[1], Matthew Lynch[1], Ryan Hansen[1]

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**Background:** Data confirm that support structures and partner involvement are related to positive pregnancy outcomes. While the expectant mother frequently relies on others to assist in making decisions regarding prenatal care, health professionals usually focus solely on the mother and exclude her other significant figures. This abstract will suggest that at least one prenatal visit, which would be insurer reimbursed, include a ''Parenting Team'' visit to enhance maternal support and improve overall outcomes.

**Objective(s):** Expectant mothers may not want to be informed of potential complications of pregnancy, due to the stress that may result. Prenatal stress alters maternal endocrine and immune systems and is associated with an increased risk of low birth weight and preterm delivery. Stressors also influence an expectant mother's likelihood of smoking or drinking. Involving a parenting team, defined by the mother as anyone she deems important in her pregnancy, may decrease maternal stress and enhance maternal advocacy as this parenting team would be officially involved in the pregnancy process and address issues that may not be priorities for the expectant mother. There are currently no specific prenatal care visits dedicated to educating partners.

**Material/Methods:** A pubmed search of relevant articles was conducted.

**Results:** Maternal deaths and morbidity can result from the expectant woman's lack of recognition of an emergency. As such, partners have the potential to directly affect the outcome. Data suggest that increasing partner involvement in prenatal care can lead to positive pregnancy outcomes; paternal involvement is independently associated with prenatal care, drug and alcohol use, smoking, and risk of low birth weight.

**Conclusions:** Actively involving a parenting team in the prenatal care visit structure has the potential to improve the health of the mother and fetus, lead to positive pregnancy outcomes, and decrease the occurrence of obstetric emergencies, without impinging on maternal patient autonomy.

## P51. Sex and Gender-Based Medicine Online Multimedia Case-Based Learning

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**Background:** The goal of SGBM online case-based learning is to advance understanding of sex/gender differences, increase awareness of gender-specific health issues, and improve knowledge of sex/gender evidence based medicine.

**Objective(s):**1. Increase awareness of gender-specific health issues 2. Advance understanding of sex/gender differences 3. Improve knowledge of sex/gender evidence based medicine 4. Demonstrate the benefits of an interprofessional approach to health care 5. Engage participants in real-world medical problem solving and clinical decision-making skills

**Material/Methods:** The learning modules are presented in three parts and include a progressively higher order application of Bloom's Taxonomy. This online instruction can be used throughout the curriculum as a stand-alone or supplementary instructional resource. Online multimedia cases provide students with authentic learning opportunities that integrate the learning of sex and gender-based medicine with more traditional clinical knowledge and skills. Interprofessional education is also included within the modules.

**Results:** Our online, multimedia, case-based instruction is designed to facilitate students' integration of these knowledge types during critical decision-points in the practice of sex and gender-based medicine. In addition, national dissemination is foundational to this work. The learning modules are peer reviewed, and a beta test will be conducted prior to classroom use. Additionally, pre and post knowledge and application assessments have been integrated within each module and data is collected to support the efficacy of the design.

**Conclusions:** This instructional framework is designed to engage students in developing real-world medical problem solving and clinical decision-making skills that can be transferred to the clinical practice of sex and gender-based medicine. To accomplish this, students must integrate three types of knowledge: situational, content, and strategic.

## P52. Losing Weight and Feeling Great: Changes in Depression and Eating Behavior of a Multidisciplinary Lifestyle Program for Obese PCOS women

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**Background:** Polycystic ovary syndrome (PCOS) affects 5–10% of women in their reproductive years. Being overweight worsens reproductive, metabolic and psychological features of PCOS. Losing as little as 5 to 10% of the initial body weight improves all clinical features and often leads to spontaneous ovulation and pregnancy in women with PCOS.

**Objective(s):** The aim of this prospective randomized study is to investigate the effect of a multidisciplinary lifestyle program on body mass index (BMI) as well as on psychological and reproductive outcomes in women with PCOS.

**Material/Methods:** A total of 234 patients will be randomized in an experimental group (n = 156) and a control group (n = 78). The experimental group receives a multidisciplinary cognitive-behavioural lifestyle intervention and additional maintenance intervention via SMS. Outcome variables will be measured at the start of the study, at three, six, nine and twelve months. Data will be analysed using mixed modelling.

**Results:** We hypothesize that the primary and secondary outcomes will improve by cognitive behaviour therapy, changing dietary and physical habits. Preliminary data of 75 participants will be presented, including BMI, eating behaviour, self-esteem and depression. Eating behaviour is measured by the Dutch Eating Behaviour Questionnaire (NVE). The Beck Depression Inventory (BDI) is used to measure depression and depressive symptoms according to the criteria of the DSM-IV. Self-esteem is measured with the Rosenberg Self Esteem Scale (RSE).

**Conclusions:** We hypothesize that a multidisciplinary cognitive-behavioural lifestyle program leads to greater sustainable

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weight loss in women with PCOS and overweight/obesity than usual care. This study is aimed at showing whether a lifestyle program is an effective complement to current invasive fertility treatments in overweight PCOS women. If so, lifestyle modification should be included in standard care protocols for this particular patient group.

## P53. Relationships Between Reproductive Knowledge and Adverse Reproductive Health Outcomes in Women Ages 18–25

Jessica Johnson[1]

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**Background:** Almost 25% of young adult women in the US are diagnosed with an STI each year. Unintended, unplanned or unwanted pregnancies also continue to increase in the United States despite of our advances in contraception. Although teenage pregnancies have decreased, unintended pregnancies in the age group 18–24 were two to three times the national rate. STIs and unintended pregnancies are difficult problems to address because they are caused by individual human behavior that is often influenced by environmental and societal problems that are difficult to manage or address. Level of sexual health knowledge has been shown to be a possible indicator of adverse outcomes in young adults; however, little is known about the factors that influence knowledge or outcomes in this age group

**Objective(s):** The objective of this study is to examine relationships between young adult women's general reproductive/sexual health knowledge, adverse sexual/reproductive health outcomes, and other influencing factors such as information source, or sociodemographics.

**Material/Methods:** This study utilizes a descriptive correlational survey design. A convenience sample of at least 100 women ages 18–25 will be recruited to complete an anonymous self-report reproductive/sexual health knowledge assessment and questionnaire while waiting for their regularly scheduled appointment at one of two free clinic sites in Richmond VA. Levels of reproductive/sexual health knowledge and influences on adverse health outcomes will be evaluated.

**Results:** It is expected that there will be relationships between reproductive health knowledge level and adverse health outcomes, as well as with sources of reproductive health information.

**Conclusions:** With the results of this study, NPs may further understand where to best intervene to help educate and empower at risk young women about their sexual and reproductive health to ultimately reverse the increasing trend in STIs and unintended pregnancies in this vulnerable population.

## P54. Southern African American Women's Perceptions of Coronary Artery Disease After a Myocardial Infarction: A Phenomenological Inquiry

Loretta Jones[1]

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**Background:** The American Heart Association (AHA) reported that cardiovascular diseases kill nearly 50,000 African-American (AA) women annually. Of AA women ages 20 and older, 49% have heart diseases. Only 52% of AA women are aware of the signs and symptoms of a heart attack and only 36% of AA women know that heart disease is their greatest health risk.

**Objective(s):** The purpose of this phenomenological study was to explore the lived experience of African American women, 50 years and older, who had experienced a myocardial infarction within the past five years. This study was consistent with the goal to decrease health disparities of AA women post MI and the Healthy People 2020 goal to improve cardiovascular health through prevention, detection, and treatment of risk.

**Material/Methods:** The phenomenological method of research was used utilized to conduct the study. The primary data collection sources were semi-structured interviews conducted using open-ended questions. The primary research questions addressed the women's knowledge of risk factors, and their perceptions of management, and lifestyle changes relevant to coronary artery disease post-MI. Participants were seven AA recruited from local cardiology offices with histories of myocardial infarction. The phenomenological data analysis involved the processes of coding, categorizing, and developing themes.

**Results:** The findings revealed six major themes: life before myocardial infarction, contributing risk factors, early warning signs, life after myocardial infarction, cardiac rehabilitation, and family support.

**Conclusions:** The majority of women reported unrecognized risk factors prior to MI but are now able to recognize and heed early warning signs, and made lifestyle changes post MI to prevent a recurrence. However, none of the women attended cardiac rehabilitation, and only one having been referred for rehabilitation.

## P55. The Relationship Between Maternal Weight Pre-Pregnancy, Weight Gain During Pregnancy and Risk for Early Childhood Obesity in Latina Immigrant Women

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**Background:** Research documents that overweight mothers are more likely to have overweight children, and that the incidence of obesity is greater in Latinos than non-Hispanic Whites. Studies also show that Latina mothers' poor nutrition habits can increase risk for obesity for their children, but research has not examined this for early childhood.

**Objective(s):** Examine the relationship between maternal pre-pregnancy weight, prenatal weight gain, and behavioral risk factors and weight outcomes of infants and children through age 3 in Latina immigrant women.

**Material/Methods:** Participants are 191 low-income Latina mothers over age 18, enrolled in the Women, Infants, and Children (WIC) program. Nutrition data, maternal and child weight and height were extracted from health records. A composite variable for several behavioral risk factors for childhood obesity (e.g., drinking sugar sweetened beverages) was created.

**Results:** Mothers who were overweight pre-pregnancy ($BMI \geq 26.1$) are more likely to have infants with high weight-for-length ($X2 = 7.60$, $N = 160$, $p < .01$). Mothers with high weight gain during pregnancy have significantly more behavioral risk factors associated with childhood obesity ($M = 2.06$, $SD = 1.08$) than mothers with average weight gain ($M = 1.12$, $SD = 1.11$, $t(158) = -2.16$, $p < .05$).

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**Conclusions:** Consistent with previous research, this study found that maternal pre-pregnancy weight is related to a child's risk of becoming overweight in a sample of Latina immigrant women. High maternal weight gain during pregnancy—a condition shown to be a risk factor for childhood obesity—is also associated with more maladaptive nutrition behaviors, putting the child at risk for early childhood obesity. Results suggest that prevention interventions for obesity begin during pre-conception, and that WIC nutritionists continue to monitor perinatal weight gain for mothers and babies. Such intervention efforts should be bilingual and can prevent long-term sequelae of obesity in women and children.

## P56. Postural Balance Profile in Primigravidae Women

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**Background: B**alance is the ability to maintain the body's center of gravity (COG) over its base of support (BOS). Good balance exists when multiple systems (e.g. visual, vestibular, sensory and motor systems) interact automatically, providing accurate and exact information to the nervous system. Pregnancy is nine months of changes in different systems that can affect the balance and may even causes falls and serious injuries to the females at that time.

**Objective(s):** This study was conducted to determine the impact of pregnancy on postural balance in normal primigravidae women at their three different trimesters of pregnancy

**Material/Methods:** Sixty-eight normal primigravidae women at their first trimester (12 weeks' gestation) were selected from Out Patient Clinic of Obstetric Department, at Kasr El-Aini University Hospital as a Study Group and twenty nulligravidae women as a control group. Their age ranged from 20 to 30 yrs, their body mass index was ≤ 30 kg/m2. Serum progesterone level and dynamic balance test using Biodex Balance System were performed for each woman in control group one time and for each pregnant woman in study group three times (at 12, 24 & 36 weeks 'gestation)

**Results:** Serum progesterone level and stability indices (SIs) showed a statistically highly significant increase ($p < 0.001$) between control and study groups. While, within study group, serum progesterone level showed a statistically significant difference, but SIs showed a statistically non-significant difference (p ? 0.05) between the three trimesters of pregnancy

**Conclusions:** It could be concluded that postural balance decreases during pregnancy. So, balance exercises and strengthening exercises for postural muscles are recommended during pregnancy to reduce incidence of falling and joint injuries.

## P57. "It helps you be in the moment": Findings from Focus Groups About the Use of Prenatal Yoga for Stress and Depression Management During Pregnancy

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**Background:** Prenatal yoga classes are widely available in the community and yoga is a commonly practiced complementary and alternative medicine (CAM) modality in the United States. Many women chose to participate in CAM modalities, such as yoga, to self-manage stress, anxiety, and depression.

**Objective(s):** The purpose of this study is to generate descriptions about stress and depression during pregnancy and to gain perspectives about the feasibility and acceptability of prenatal yoga as an approach to manage stress, anxiety, and depression, as informed by currently pregnant and parenting women who have participated in prenatal yoga classes.

**Material/Methods:** This community-based qualitative study utilized non-therapeutic focus groups to allow for exploration of attitudes, concerns, beliefs and values regarding stress and depression in pregnancy and about prenatal yoga as a management approach. Inclusion criteria were: (a) currently or previously pregnant; (b) age 14 and above; and, (c) previously participated in prenatal yoga in some form (classes or DVD). Qualitative data was analyzed through content analysis based on descriptive qualitative methodology with phenomenological overtones. Descriptive statistical analysis was used for the demographic data.

**Results:** The sample consisted of currently pregnant or parenting women ($n = 17$) who reside in a large urban area on the east coast of the United States and who participated in non-therapeutic focus groups. The themes that arose in the focus group discussions are as follows: (1) stress is pervasive for pregnant women; (2) depression during pregnancy is stigmatizing and isolating; (3) prenatal yoga is beneficial in multiple ways; and (4) prenatal yoga is more beneficial for stress/anxiety/depression management as other group classes, such as centering pregnancy or childbirth education.

**Conclusions:** The findings from this study suggest that pregnant women desire group-based classes which do not stigmatize difficult emotions during pregnancy. The findings suggest that women may perceive prenatal yoga to be helpful for management of stress, anxiety, and depression. It is imperative that healthcare providers and researchers focus on these needs, particularly when designing prevention and intervention strategies with this population.

## P58. Recruitment for Perinatal Genomic Research Through Print and Social Media

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**Background:** Recruiting for a large perinatal genomic research study requires multiple approaches. Historically research recruitment has occurred in face to face meetings or by recruitment advertisements in print media. Recently the availability of social media has allowed researchers to explore social networks, web pages, video and microblogs as referral resources for potential subjects. Types of media resources used should be assessed based on the target age group of recruitment.

**Objective(s):** Describe concerns of families in return of genomic results. Identify formats preferred by families for return of genomic results.

**Material/Methods:** Multiple methods are required to recruit 5000 family trios into a study exploring genomic correlations to child health. Face to face recruitment in physician practices has yielded approximately 70 families per month. To increase

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accrual rates, alternative recruitment tools have been explored. In consultation with our marketing department, a plan was developed to target the childbearing age group.

**Results:** Success of the campaign required reaching this population where they are; namely on multiple media platforms. We created a campaign for the study using print and digital outreach through a comprehensive advertising strategy using multiple touch point elements. A print campaign in newspapers and local family-focused magazines was initiated. In coordination with the sponsoring agency's webpage, social network page, and video accounts, search engine pay per click ads bring prospective participants to the study recruitment site.

**Conclusions:** Our analysis suggests paid Facebook recruiting is more successful than print because of the advanced targeting and context for information collection on mobile devices and desktop computers. Comparative analysis of the costs associated with all methods indicates that social media recruitment may be less significantly expensive than face-to face. Success of research subject recruitment for perinatal studies requires reaching this population where they are; namely on multiple media platforms.

## P59. Factors Influencing Women's Participation in Clinical Research

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**Background:** Despite an abundance of literature indicating low participation from women in clinical research, there are few studies that have prospectively examined factors that influence their participation or to find preferred resources to overcome barriers to their participation.

**Objective(s):** To identify factors that influence women's participation in clinical research.

**Material/Methods:** We conducted a validated survey among women who presented to two women's health clinics. In addition to being voluntary and anonymous, the survey was available in English and Spanish. Subjects were asked questions regarding any of their past experiences in research, as well as what factors would influence their participation in clinical research. Analysis included descriptive statistics, chi-square and Fisher's Exact test to assess nominally scaled variables, Mann-Whitney-U test for Likert scale data and logistic regression analysis for income and education variables.

**Results:** Our preliminary data from 470 subjects (221 representing minorities and 238 earning < $30K in 2013) indicate a similar rate for willingness to participate in research for middle and low income women, 75% and 73%, respectively. This was marginally lower than participation willingness among higher income subjects (p-value 0.056). A higher percentage of subjects with a professional degree identified as willing to participate in research compared to the other education groups, however, these findings were not significant. The most motivating factor for willingness to participate for all categories was how well the study was explained. A slightly higher percentage of subjects from minorities would prefer materials provided in their own language.

**Conclusions:** A better explanation of the study and availability of material in different languages might promote equity in clinical research. The potential influence of education and income strata on willingness to participate provides insight for understanding potential biases introduced though differences in characteristics of populations most willing to participate.

## P60. Incidence of Genital Mycotic Infections Decreases over Time in Older Patients with Type 2 Diabetes Mellitus Treated With Canagliflozin

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**Background:** Sodium glucose co-transporter 2 inhibitors, such as canagliflozin (CANA), improve glycemic control by inhibiting renal glucose reabsorption and increasing urinary glucose excretion, a mechanism of action associated with increased incidence of genital mycotic infections (GMIs).

**Objective(s):** To evaluate the incidence of GMIs over time in older patients with type 2 diabetes mellitus (T2DM) treated with CANA.

**Material/Methods:** In a double-blind, Phase 3 study, patients aged ≥ 55 to ≤ 80 years and inadequately controlled with their current treatment regimen (N = 714; mean age 63.6 years) were randomized to receive CANA 100 mg or 300 mg, or placebo (PBO). Incidence of GMIs was monitored over 2 years, and evaluated overall and at 3-month intervals.

**Results:** The overall incidence of GMIs was higher with CANA 100 mg and 300 mg versus PBO in females (23.9% and 18.7% vs 4.3%) and males (5.6% and 10.9% vs 1.4%). The majority of events occurred within 6 months of treatment initiation and declined over time. Between 0–3 months, incidence of GMIs with CANA 100 mg and 300 mg was 12.8% and 9.3%, respectively, in females; and 3.2% and 3.9% in males. Between 12–15 months, incidence of GMIs decreased to 3.0% and 2.4%, respectively, in females; and 0.9% and 0% in males. GMIs were generally mild to moderate in intensity and responded to standard treatment. The most commonly reported female and male GMIs were vulvovaginal mycotic infection and balanoposthitis, respectively. Of the CANA-treated patients, 1.2% of men and 1.3% of women discontinued treatment for a GMI versus 0% with PBO.

**Conclusions:** In older patients with T2DM treated with CANA, the incidence of GMIs tended to occur early in treatment and then decreased over time.

## P61. Assessing Risk Toward Premature Ovarian Senescence Prospectively: A New Paradigm in Gynecology

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**Background:** Approximately 10% of women suffer from premature ovarian senescence (POS), currently usually only diagnosed at advanced stages when either menstrual irregularity occurs or infertility is diagnosed.

**Objective(s):** To develop a new diagnostic paradigm for young females which identifies POS risk at young ages and allows for early intervention.

**Material/Methods:** We reviewed the published literature in order to identify common risk factors associated with POS.

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**Results:** Known conditions associated with POS are: low follicle numbers at birth (example, Turner syndrome): excessive follicle recruitment (selected FMR1 mutations, AIRE gene); other genetic causes (BRCA1 mutations); iatrogenic factors (chemo- radiation therapies, surgery); space occupying lesions (endometriosis, tumors); autoimmunity (thyroid disease but also others); family history (early menopause, autoimmunity); repeated pregnancy loss. Likely, the most frequent risk factor, present in ca. 25% of all women, is a low FMR1 allele (CGGn < 26), which we were able to demonstrates in young oocyte donors in as short as a 4-year follow, to differentiate between ''normal'' and ''accelerated'' ovarian aging. Any of these risk factors would define a young woman as ''at risk,'' resulting in annual investigation of functional ovarian reserve (FOR) via age-specific (in the literature available) FOR parameters, like anti-Müllerian hormone (AMH). Young women already suffering from abnormally low FOR would be immediately diagnosed; those not deviating from normal AMH curves over a few years would be cleared of risk, while those deviating from normal aging curves would be confirmed in their high risk status at still young ages.

**Conclusions:** Such a diagnostic paradigm would allow still young women to reassess their family planning and/or pursue fertility preservation methods, when such methods are clinically most effective and cost-effective.

## P62. Accelerated Ovarian Aging in Young Women with Low (CGGn < 26) FMR1 Repeats

Vitaly Kushnir[1], Yao Yu[1], Erik Himaya[2], David Barad[1], Andrea Weghofer[3], Yan-Guang Wu[1], Emanuela Lazzaroni-Tealdi[1], Norbert Gleicher[1]

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*[3]Vienna University School of Medicine, Vienna, Niederösterreich, Austria*

**Background:** In infertile females mutations of the FMR1 gene have been associated with distinct ovarian aging patterns.

**Objective(s):** To investigate whether low (CGGn < 26) mutations of the fragile X mental retardation 1 (FMR1) gene can potentially contribute to early diagnosis of premature ovarian aging (POA) in young women.

**Material/Methods:** In a group of young oocyte donor candidates, we performed a longitudinal analysis of functional ovarian reserve (FOR) over four years based on anti-Müllerian hormone (AMH) levels, in reference to the donors' FMR1 genotypes. 233 young (mean age 24.8 ± 3.3 years) egg donors, for whom at least one AMH value was available, comprised the primary study population. Among those, 66 had multiple AMH values over the longitudinal observation period of four years. To be found eligible as egg donors, females had to be under age 30, qualify based on personal medical, family and genetic histories and demonstrate normal age-specific AMH levels at time of presentation.

**Results:** In a group of young oocyte donor candidates, we performed a longitudinal analysis of functional ovarian reserve (FOR) over four years based on anti-Müllerian hormone (AMH) levels, in reference to the donors' FMR1 genotypes. 233 young (mean age 24.8 ± 3.3 years) egg donors, for whom at least one AMH value was available, comprised the primary study population. Among those, 66 had multiple AMH values over the longitudinal observation period of four years. To be found eligible as egg donors, females had to be under age 30, qualify based on personal medical, family and genetic histories and demonstrate normal age-specific AMH levels at time of presentation.

**Conclusions:** If verified in larger-scale studies, screening for low FMR1 alleles may offer an opportunity to identify at young female ages risk toward POA, a condition currently in a majority of cases only diagnosed at advanced stages, with infertility as presenting symptom.

## P63. Persistent HPV Infection or Re-infection Following Treatment for Cervical Intraepithelial Neoplasia (CIN): A Systematic Review

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**Background:** Persistent infection with HPV after treatment for CIN is associated with a higher risk of treatment failure and progression to invasive cervical cancer.

**Objective(s):** To systematically review the published literature to determine the persistence of overall and type-specific HPV DNA infection in women following treatment of CIN.

**Material/Methods:** A systematic review was conducted using search terms for HPV, CIN, treatment, and persistence. Through May 2013, a total of 4,349 abstracts were identified from PubMed/Medline, ISI Web of Science, Cochrane Library, CINAHL, and EMBASE databases. Included studies were limited to those that reported data on the persistence of HPV infection post-treatment, as detected in physician-collected cervical specimens. Eligible articles provided data on (i) baseline HPV infection status within 6 months prior to or at time of treatment (pre-treatment); and (ii) HPV test results for women's first visit after treatment occurring within 36 months (post-treatment). We abstracted and summarized the post-treatment persistence of HPV overall and stratified by study and other population characteristics.

**Results:** A total of 51 included studies presented data on over 7,882 women in cohort and randomized controlled trial studies. The age of women in these studies ranged from 16 to 91 years. The majority of studies were conducted in Europe (51%), Asia (27%), and South or Central America (14%). Most studies assessed HPV persistence after LEEP treatment (37%), followed by LETZ (20%), cold-knife-exconisation (18%), or laser conization (10%). More than 60% of studies reported type-specific HPV persistence. Proportion of women with a persistent HPV infection after treatment for CIN ranged from 0% to 100%, depending on the population studied and timing of HPV testing after treatment.

**Conclusions:** HPV persistence varied widely by study and sample characteristics. Estimates of observed HPV persistence patterns by HPV-type, age and geographical region will be presented. These results will aid in the evaluation of the potential impact of HPV vaccination on type-specific HPV incidence after treatment for CIN.

## P64. Racing Toward Health? Exploration of the Public Health Potential of Community-Based 5k Races

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**Background:** While most American women fail to meet national physical activity (PA) recommendations and are at increased risk of multiple chronic health conditions, female participation in community-based 5k races continues to grow. As we explore the utility of mass-fitness events as a public health intervention strategy, it is unclear how effective these events are at increasing PA among novice exercisers and among with increased risks for health complications.

**Objective(s):**This study aims to quantify the proportion of women in a from a community-based 5k who are highly active in training and to explore differences in measured and self-reported PA and related variables between novice, defined as less than six months of PA prior to race, and experienced exercisers.

**Material/Methods:** Validated self-report surveys (N = 437) and pedometer-recorded step counts (N = 50) were collected in the month prior to the race. PA level (high ≥ 3000 MET/wk; moderate < 3000 ≥ 600 MET/wk; low < 600 MET/wk) was compared between novice and experienced exercisers using chi-square and odds ratio. Additional demographic and ecologically-guided constructs were also assessed.

**Results:** Most women (62.4%, N = 274) were moderately active in training while high PA was reported by 28.4% (N = 124). Twenty percent (N = 89) of women were novice exercisers; novices were significantly less likely to be highly active (12.4% vs 32.5%, $p < 0.001$). More novice women reported training as part of a structured group (25.8% vs 51.4%, $p = 0.001$) and training in response to physician recommendation (50.6% vs 26.7%, $p < 0.001$) than did veteran exercisers.

**Conclusions:** Novice and veteran participants differ in health and PA profiles surrounding community-based fitness events. Preliminary evidence suggests these events may be an effective mechanism for increasing PA, particularly as recommended by a physician. Continued study is needed to assess changes in PA post-event and to determine if 5k training has a sustained impact on health habits of women.

## P65. Associations of Maternal Mental Health and Maternal Confidence

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**Background:** One of the most pressing post-partum concerns regarding new mothers is the establishment of maternal confidence. The growth and development of the mother-infant relationship is dependent upon the confidence of the mother. Prior studies have established that prenatal interventions are successful in influencing maternal confidence levels.

**Objective(s):** The objectives of this analysis were twofold. First, the analysis sought to establish the relationship between maternal mental health concerns prior to bringing baby home from the hospital and maternal confidence after six months. Second, this analysis sought to identify populations for which a prenatal risk model for intervention may be of value.

**Material/Methods:** Over 1,600 families have been enrolled in a genomic longitudinal childhood health outcome study. Family trios (mother, father, and baby) are followed from the prenatal period through childhood. An initial questionnaire was given to the mother before or at delivery. A survey six months post delivery addressed questions on early infant health measures, maternal factors, and social health determinants. In this analysis of the data, maternal mental health concerns were established by the questionnaire or medical records, with the mother having self-reported stress/anxiety, depression, or mental illness. These results were compared to a control group of mothers who did not report any mental health concerns. An analysis of variance was conducted to determine the relationship between mental health status and maternal confidence.

**Results:** There was a significant difference between the population with mental health concerns and the control group [$F(1, 288) = 4.99$, $p = 0.03$].

**Conclusions:** Patients who report having mental health concerns such as stress/anxiety, depression, or other mental illness during pregnancy have a significant association with lower maternal confidence level. As other populations have had successful prenatal interventions, developing a targeted risk model for intervention in this population may be beneficial to the healthy development of the mother-infant relationship.

## P66. Quality of Life in Taiwanese Women with Early Stage Cervical Cancer: An Exploration of Treatment Modality Differences

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**Background:** Quality of life (QoL) is an imperative indicator in evaluating different treatment modalities for women with cancer. The different treatment modalities are accompanied by different complications, and the information from the study can help health-care providers deliver competent and timely care for patients undergoing either treatment modality.

**Objective(s):** This presentation is to examine the differences in QoL between women receiving only surgery and those receiving only chemoradiation for stage I-II cervical cancer.

**Material/Methods:** This was a cross-sectional comparative study using two cancer-specific instruments, the EORTC QLQ-C30 and QLQ-CX24. Two hundred and fifteen women with stage I-II cervical cancer (109 women undergoing surgery only and 106 women undergoing chemoradiation only) were recruited from the Chang Gung Memorial Hospital's department of obstetrics and gynecology. The data were analyzed using descriptive and inferential statistics, including analysis of covariance (ANCOVA).

**Results:** The surgery and chemoradiation groups did not differ significantly in age, educational level, working status, and marital status but did differ in time since treatment. After adjusting for the covariate of time since treatment, ANCOVA of QoL between the surgery and chemoradiation groups revealed significant differences in constipation, diarrhea, body image, sexual activity, and sexual enjoyment. Women undergoing surgery had worse constipation and body image, and those undergoing chemoradiation reported worse diarrhea, sexual activity, and sexual enjoyment.

**Conclusions:** Regarding women who had surgery, health professionals could pay attention to constipation and body image changes. When caring for women undergoing chemoradiation, the focus could be on diarrhea, sexual activity, and sexual enjoyment.

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## P67. Comparison of Breast Cancer Characteristics, Treatment and Survival Outcomes of Older vs Younger Women in an Asian Population

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[2]*Khoo Teck Puat Hospital, Singapore, Singapore, Singapore*

**Background:** With increasing life expectancies and a rapidly ageing global population, an increasing proportion of breast cancers are being diagnosed in the older population, and this rising trend is expected to continue.

**Objective(s):** This study compares the tumor characteristics, treatments, and outcomes of these patients with a younger age group in an Asian population.

**Material/Methods:** Consecutive breast cancer patients from our prospectively collected database were grouped according to age for analyses: geriatric ($\geq 75$ years), elderly (65 to 74 years) and young (40 to 64 years).

**Results:** There were 103 (11.53%), 147 (16.5%) and 643 (72.0%) geriatric, elderly and young patients respectively. Geriatric and elderly patients had more tumors with favorable characteristics (more mucinous and more well-differentiated tumors), compared to the young patients. Fewer geriatric (7.8%) and elderly (6.1%) patients underwent breast conservation surgery, compared to the younger patients (20.3%). They also received less adjuvant or palliative chemotherapy ($P < 0.001$), and less adjuvant radiotherapy ($P < 0.001$), compared to their younger counterparts, with no significant difference in endocrine therapy usage across the age groups. Both breast cancer specific and overall survival outcomes worsened with increased age ($P < 0.001$).

**Conclusions:** There were significant differences in tumor characteristics, treatments and survival outcomes of geriatric and elderly patients, when compared to the young patients. Treatment of older breast cancer patients should take a personalised approach, instead of strict adherence to standard treatment guidelines.

## P68. Long Acting Reversible Contraception (LARC) Among Rural Rejang Women in the Kapit District, Sarawak, Malaysia

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**Background:** LARCs prevent unwanted pregnancies effectively and is more cost effective than the oral contraceptive. However, the prevalence of LARC use in Sarawak was low at 8.9% in 2004.

**Objective(s):** To identify LARC choices among women in the Kapit division, Sarawak and determine the socio-demographic profile, parity and prior contraceptive choices of women on the IUD. Lastly, a simple cost analysis of available methods was done.

**Material/Methods:** A retrospective case review was carried out in 3 government clinics in the district, namely Klinik Kesihatan Song, Klinik Kesihatan Belaga and Klinik Kesihatan Sungai Asap between January to June 2013. All women on LARC were included. Women on the IUD were individually identified and their data collected. Cost analysis was done based on government bulk prices quoted by the respective pharmaceuticals.

**Results:** A total of 643 women were on LARC. 591 (91.9%) were on an injectable and 52 (8.1%) on the IUD. Three quarters of the women on the IUD were 33 years and above and had 3 or 4 children. Prior to the IUD, most women were on an oral or injectable contraceptive. The monthly drug cost for the OCP ranged between \$0.25 – \$1.08 and the injectable, \$0.57. Although the price per unit for the copper IUD was most expensive, long run (3 years) it worked out to be the cheapest at only \$0.19 per month.

**Conclusions:** Injectable contraception was the main choice of LARC among rural Rejang women. Most women on the IUD were older with 3 or more children, suggesting this method was more favourable among those choosing to limit family size instead of spacing their pregnancies. LARC was cost effective and all women seeking contraception should be given this option. In keeping with MDG 5 goals, LARC improves maternal health by preventing unwanted and unplanned pregnancies.

## P69. An Exploration of the Relationship Between Quality of Care and Birth Outcomes in the Dominican Republic

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**Background:** The Dominican Republic has a high maternal mortality ratio given the high access to antenatal care and institutionalized deliveries and the social characteristics of the population. Previous studies have indicated that quality of care may be an explanation for the paradoxical relationship of high access to care and high maternal mortality.

**Objective(s):** The purpose of this study was to determine which aspects of quality of care might explain birth outcomes in the country.

**Material/Methods:** The study used Dominican government data on socioeconomic and quality of care variables at the provincial level, and used linear regression to analyze the relationship of these variables with the birth outcomes maternal mortality and live birth.

**Results:** The birth outcome of maternal mortality was significantly related to the percent of the population living in an urban setting (P-value 0.020), as well as the percent of women attended by an OB/GYN at birth (P-value 0.010). The birth outcome of percent of live births was significantly related to the number of hospital beds per 100,000 people (P-value 0.021).

**Conclusions:** There is evidence that quality of care influences birth outcomes in the Dominican Republic, and further support of previous studies that maternal mortality is high despite high access to maternal care.

## P70. Childhood Emotional Neglect, but Not Physical Neglect, is Associated with Alterations in the Stress Response System in Midlife Women

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**Background:** Childhood trauma is associated with alterations in the hypothalamic-pituitary-adrenal (HPA) axis. In women,

specifically, these alterations increase the risk for depression and anxiety disorders later in life.

**Objective(s):** We examined HPA axis responsivity during the Trier Social Stress Test (TSST), a well-validated laboratory psychosocial stressor involving public speaking, in midlife women with and without a history of severe childhood neglect. We hypothesized that a history of childhood trauma would be associated with a dampened cortisol response to the TSST.

**Material/Methods:** Forty perimenopausal and early postmenopausal women (Mean age = 50.32) community volunteers completed the TSST and a control procedure. Psychiatric interviews were conducted to screen out women with current mood or anxiety disorders. Salivary cortisol levels and self-reported anxiety (State-Trait Anxiety Scale) were measured across the experimental and control tasks. To assess physical and emotional abuse and neglect, women completed the Childhood Trauma Questionnaire. Group differences in stress responsivity were examined with a series of generalized estimating equations (GEE).

**Results:** A high proportion of volunteers - 70% - reported severe emotional and/or physical neglect. As expected, cortisol levels and self-reported anxiety and stress increased during the TSST compared to the control condition (p's < 0.01). Severe childhood emotional neglect, but not physical neglect, was associated with alterations in HPA axis function. Specifically, women with severe childhood emotional neglect had higher baseline cortisol levels than women without severe emotional neglect ($p < 0.05$). Both groups demonstrated similar cortisol and subjective stress responses to the TSST.

**Conclusions:** Similar to individuals with major depressive disorder, midlife women with severe childhood emotional neglect show elevated baseline cortisol levels despite being free of a current mood disorder. This adverse shift in the HPA axis is specific to early emotional neglect in women.

## P71. Prescribing Patterns During Pregnancy Among Office-Based Physician Visits

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**Background:** Prescribing during pregnancy is a careful balance of risk versus benefit. More studies evaluating prescribing patterns during pregnancy from national survey data are needed. Furthermore, few studies have examined whether trimester and other factors are associated with the prescribing of non-vitamin and non-mineral medications.

**Objective(s):** The objective of this study was to describe patterns of prescribing during pregnancy and to evaluate whether trimester, socio-demographic characteristics and clinical factors were associated with receiving a non-vitamin/non-mineral prescription.

**Material/Methods:** A cross-sectional analysis of office-based, pregnancy reported visits from the 2005 and 2006 National Ambulatory Care Survey(NAMCS) was done. Descriptive statistics for all study variables were estimated. Factors associated with a non-vitamin/non- mineral prescription were assessed using independent t-tests and chi square tests. All analyses were performed using SPSS at an alpha value of 0.05.

**Results:** A total of 589 and 1012 pregnant women had an office-based physician visit in 2005 and 2006 respectively. The mean age of the women was $27.7 \pm 6.7$ years. Majority of them were White (81.4%), had private insurance (59.9%), had their visit in the third trimester (56.6%) and visited obstetricians and gynecologists (OBGYNs). Of the pregnant women who were prescribed at least one medication, 32.7% and 28.9% were prescribed a non-vitamin/non-mineral prescription in 2005 and 2006 respectively. Bivariable analysis among pregnancy reported visits with at least one medication, showed that trimester was not associated with a non-vitamin/non-mineral prescription. Among the same visits (OBGYNs) were less likely to prescribe a non-vitamin/non-mineral prescription compared to other physicians (25.3% vs. 52.5%; $p < 0.001$). Tobacco use, age, and total medications were also associated with a non-vitamin/non-mineral prescription among pregnancy reported visits with at least one medication ($p < 0.05$).

**Conclusions:** The prescribing of non-vitamin/non-mineral medications is common in office based ambulatory care settings. Physician specialty, tobacco use and total medications are associated with prescribing of a non-vitamin/non-mineral during pregnancy.

## P72. Sleep Quality of Diabetic Women in Pre- and Postmenopause

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**Background:** The prevalence of sleep disorders is higher among diabetic women and more common in postmenopause.

**Objective(s):** Evaluate the differences between the sleep quality of diabetic women in pre- and postmenopause.

**Material/Methods:** It was a cross-sectional study with 163 diabetic women (36 in premenopause, and 127 in postmenopause), from a single public health service in Brazil. The patients were interviewed with a questionnaire which contained information on sociodemographic profile and physical health conditions. Sleep quality was measured with the Pittsburgh Sleep Quality Index (PSQI). This questionnaire contains seven components: subjective sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbance, use of sleep medications, and daytime dysfunction. Statistical analysis was carried out using the Statistical Package for the Social Sciences (SPSS) 18.0 (SPSS Inc., Chicago, IL, USA). The statistical analysis was made through chi-square test, Wilcoxon rank sum test and Spearman's correlation test. The significance level was set at 5% ($p < 0.05$).

**Results:** About 44,4% and 72,4% of diabetic women in pre- and postmenopause, respectively, were classified as poor sleepers ($p = 0{,}001$). In postmenopausal women there was a correlation between use of psychotropic drugs and the lowest sleep duration ($rs = 0.19$ $p = 0.05$). In premenopausal was observed a correlation between the urban resident and more sleep disturbance ($rs = 0.43$ $p = 0.05$).

**Conclusions:** The sleep quality was worse in postmenopause. Despite using more psychotropic drugs, these patients had lowest sleep duration. Proper interventions should be performed to improve sleep quality.

## P73. Cognitive Status in Elderly Women and Diabetes Mellitus: A Cross-Sectional Study

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**Background:** Diabetes mellitus is considered an independent risk factor for cognitive impairment. Some studies suggest that chronic hyperglycemia and vascular alterations can cause damage to central nervous system and lead to diabetes-related cognitive impairment.

**Objective(s):** Compare the cognitive status among elderly women with and without diabetes.

**Material/Methods:** A cross-sectional study was conducted on 148 elderly women (74 with diabetes and 74 women without diabetes), from a single public health service in Brazil. The patients were interviewed with a questionnaire which contained information on sociodemographic profile and physical health conditions. Cognitive status was measured with the Mini-Mental State Examination (MMSE). Women were classified as having cognitive impairment according to years of study. Statistical analysis was carried out using the Statistical Package for the Social Sciences (SPSS) 18.0 (SPSS Inc., Chicago, IL, USA). The statistical analysis was made through chi-square test and t test. The significance level was set at 5% ($p < 0.05$).

**Results:** Aged 69,68 ± 7,18 in non-diabetic women (ND) and 69,36 ± 6,85 in diabetic women (D) ($p > 0,05$). The diabetes duration was greater than ten years in both groups. Sixty three ND women (85,1%) and seventy two D women (97,3%) had less than 4 years of study ($p = 0,007$). Fifteen ND women (20,3%) and seven D women (9,4%) used psychotropic drugs ($p = 0,03$). The MMSE detected cognitive impairment in four ND women (5,4%) and eight (8%) D women ($p = 0,1$).

**Conclusions:** In this study, elderly diabetic women had the same cognitive status than elderly non-diabetic women.

## P74. Nicotine Dependence in Brazilian Diabetic Women in Postmenopause

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**Background:** In Brazil, the prevalence of smoking in women is 9,2%. The association between smoking and diabetes is a cause of health disability and premature mortality. If these two conditions are associated with postmenopause, the risk factor is even greater.

**Objective(s):** Evaluate the nicotine dependence in Brazilian diabetic women in postmenopause.

**Material/Methods:** It was a cross-sectional study with a sample of 158 diabetic women in postmenopause, aged 61,8 ± 10,9, from a single public health service in Brazil. The study was approved by the Research Ethics Committee of the Vale do Sapucaí University (UNIVAS). The women were interviewed with a questionnaire which contained information on sociodemographic profile and physical health conditions. Nicotine dependence was measured with the Fagerstrom Test (FT). Results were expressed as mean ± standard deviation, absolute and relative frequencies.

**Results:** Approximately 90% of women were Caucasians; 67% had less than 4 years of education; 74% were physically inactive; 82% had glycated hemoglobin (A1C) > 7%; 78% had hypertension; 36% had glomerular filtration < 60 ml/min/1,73m2; 43% had overall obesity; 67% had abdominal adiposity; 77% had dyslipidemia; 35% had depression and 61% had anxiety. The prevalence of smoking was 32,9%. The nicotine dependence was: low in 48%, moderate in 36,5% and high in 15,5% of diabetic women.

**Conclusions:** This study shows that the prevalence of smoking in diabetic women in postmenopause is higher than in women in general. There are other risk factors for chronic diabetes complications in these patients. Smoking is a risk factor that can be modified.

## P75. Postpartum Visit Attendance and Contraception Use

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**Background:** Contraception use is an essential component of reproductive health and control. One of the most important avenues to discuss reproductive health is the postpartum visit. However, nearly 50% of women do not attend postpartum visits. This rate is even higher among minorities and low income women. It is vital that women who have recently given birth attend their postpartum visit in order to receive access to the resources and support they need to maintain a healthy lifestyle. This study examines the association between postpartum visit attendance and contraception use after delivery.

**Objective(s):** To examine factors influencing contraception use among Medicaid Managed Care Organization insured women.

**Material/Methods:** Claims data from a managed care organization among pregnant women who received care between 2008 and 2012 was analyzed (N = 25,692). Data on demographic and reproductive characteristics, smoking during pregnancy, type of health care institution, pregnancy complications were examined. Postpartum visit was coded using VICD-9 codes referencing any postpartum visit. Interview assessment data were also used to determine contraceptive use after delivery. Multiple logistic regression analysis was conducted to assess correlation between postpartum visit and contraception use.

**Results:** Over half of the study population did not attend their postpartum visit (50.5%). Contraception use was significantly correlated with postpartum visit attendance. Compared to women who did not attend their postpartum visit, women who did attend were 1.42 [1.25-1.62] times more likely to use contraception.

**Conclusions:** Women who attended their postpartum visit were more likely to use contraception after delivery. This study suggests that postpartum visits may offer women much needed support in their healthcare decisions. Health care professionals should make effort to design strategies to encourage women to attend these vital visits.

## P76. How Do Mothers of Japan and Austria Differentiate in Quality of Life and Depression? Results from a Cross-Cultural Health Outcomes Survey

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**Background:** It is widely acknowledged that maternal health impacts children's health. Parents, especially mothers, are the primary gatekeepers of their children's health worldwide.

**Objective(s):** The aim of this cross-cultural survey was to investigate differences in quality of life (QOL) and depression of mothers in a Central European and an East-Asian country. Additionally, the impact of different living situations and external and internal resources were examined.

**Material/Methods:** 397 women in Japan and Austria with children between three and five years in Kindergarten answered the same cross-culturally validated questionnaires. The QOL-questionnaire from the WHO (WHOQOL-Bref), two items for depression from the Patient Health Questionnaire (PHQ-2), the Sense of coherence scale, the Multidimensional Social Support Scale, a perceived stress scale and a gender orientation questionnaire were used.

**Results:** Japanese mothers had significantly lower scores on the physical, psychological, social and environmental QOL-dimensions compared to Austrian mothers ($p < .001$). 7.6% of Japanese and 7.0% of Austrian mothers were equal to or above a score of 3 on the PHQ-2, indicating a major depression. Japanese and Austrian mothers did not differ in the experienced stress levels. However women in Austria had significantly better sense of coherence scores. As for social support, mothers from both countries perceive the same amount of support from the family. In addition, women in Austria perceive significantly more support from important others, friends and partners compared with Japanese mothers. In both countries predictors for QOL were sense of coherence, the experienced stress level, satisfaction with the income, social support and gender roles.

**Conclusions:** It seems that Japanese mothers perceive their live less predictable, manageable and meaningful and perceive less support which could have caused exceptionally low QOL. We suggest QOL research in mothers globally to identify needs of improvements. These findings can be used to develop strategies to improve quality of life and well-being of mothers.

## P77. Utilization of Emergency Departments for Care of Excessive Menstruation: Analyses Using the Nationwide Emergency Department Sample (NEDS)

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**Background:** Women with menstrual disorders often access healthcare through the emergency department (ED) even though many of their complaints can be addressed in the ambulatory setting.

**Objective(s):** We investigated the health care utilization of women seeking evaluation for excessive menstruation across emergency departments in the United States.

**Material/Methods:** This cross-sectional study used the NEDS collected by the Healthcare Cost and Utilization Project from 2009–2011. Data analysis was based on the total weighted sample of women with either a primary or secondary ICD-9 code of 626.2 (excessive or frequent menstruation). Statistical analysis included weighted frequencies to account for complex sampling design and to allow for national estimates. Multivariable logistic regression was used to examine factors associated with admission.

**Results:** There were 225,069 encounters for excessive menstruation from 2009–2011. Excessive menstruation accounted for 12.6% of all encounters for menstrual disorders to emergency departments. 86.1% of encounters resulted in treatment and release from the ED, with 13.2% resulting in admission to the same hospital. The mean age was 31.8 years (SE 0.05), with 34.5% of encounters from zip-codes with median household income < $40,000. The most common primary payer was private insurance (35.4%) followed by Medicaid (30.7%) and self-pay (25.0%). The average total charges to ED services were $2,343 (SE $17.08). Excessive menstruation encounters cost a total of $416 million over the three years. Women presenting from zip codes with the highest median household income quartile were more likely to be admitted than those from the lowest income quartile (Adjusted OR 1.35, 95% CI: 1.30-1.40).

**Conclusions:** The majority of ED visits for excessive menstruation resulted in discharges from the hospital. While the ED is often perceived as an easier and more visible access point for health care, helping women seek care in the appropriate settings could improve healthcare delivery and efficiency.

## P78. Demographics of Clinically Diagnosed Gonorrhea and Chlamydia; The Need for Increased Sexual Education for Women of all Ages in Rural Haiti

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**Background:** As a poor country with a low physician-to-population ratio, Haiti is a common destination for international physicians to provide health aid. A team from Wayne State University School of Medicine travelled to Morne L'Hopital, Haiti in March 2014 to provide free health care to residents in a rural, mountainous area without access to healthcare. Health data was collected and used to reflect on disease prevalence.

**Objective(s):** This investigation aims to improve understanding of the demographics of patients with G/C at the clinic. We aim to identify at-risk populations, thereby guiding appropriate antibiotic use and preventing STI complications. Lastly, we aim to determine if it is feasible to use current U.S. screening recommendations for G/C in this setting.

**Material/Methods:** Each patient had demographic information, symptoms, history of present illness, diagnosis, and treatment recorded. These were reviewed to determine G/C demographics. Diagnosis of G/C was based on clinical presentation; using pH strips, whiff test, urinalysis, history and physical exam, other diagnoses were ruled out.

**Results:** There were 300 women seen, 19 of these (6.30%) were diagnosed with G/C. Patients ≤ 25 years old had a G/C prevalence rate of 2.5%, while patients > 25 years old had a prevalence rate of 6.7%. The highest prevalence rate, 17% was found in women ages 26–35 years.

**Conclusions:** This population had a high prevalence of G/C. The patients seen had a higher STI prevalence rate in women older than 25 years. This highlights the need to understand the

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specific population being treated. The high prevalence rate of STIs in this area makes it obvious that sexual health education and G/C screening is necessary for all age groups.

## P79. What Drives Engagement? Using Women's Feedback to Build an Academic Medical Center (AMC)-Faith Based Organization (FBO) Research Partnership to Improve Health

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**Background:** FBOs are trusted members of communities and have been sought by AMCs to engage under-represented research cohorts. Although partnering with FBOs can diversify research participation, there are limited data on the recruitment biases that can result from these partnerships.

**Objective(s):** To determine the demographic factors associated with research participation among women in an AMC-FBO partnership.

**Material/Methods:** A convenience sample was obtained from attendees at a community fair hosted by an FBO in Chicago, IL. Participants completed a survey which included demographic data and previous/future research participation. Qualifying participants were English-speaking women aged 18 and older who finished > 50% of the survey.

**Results:** 328 women completed the survey. 95% were African-American. Subjects had a mean age of $51.4 \pm 12.8$ years. The majority had health insurance (76.2%), had seen a primary care physician within the last year (84.1%), and felt confident filling out medical forms (64.6%). 47% of participants had participated in research and 76% were interested in future research participation. Chi-square analysis revealed that having been seen by a doctor within the last year ($p < 0.001$) and positive health condition ($p < 0.001$) were associated with interest in research participation. Confidence in filling out medical forms was associated with both past research participation ($p = 0.03$) and interest in future research participation ($p < 0.001$).

**Conclusions:** Being seen by a doctor within the last year, positive health condition, and confidence in filling out medical forms are factors associated with interest in future research participation. These data are helpful in understanding the potential bias that exists in community recruitment. While an AMC-FBO partnership is an excellent means of diversifying a research population, it may attract a healthier, more health literate subgroup within the target population.

## P80. How a Divorcee's Sexual Life is Socially Constructed and Understood in the Iranian Culture

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**Background:** Sexual wellbeing is an important factor in post-divorce adjustment and presents various challenges for divorced women in Iran. With an alarming number of marriages ending in divorce in Iran, the post-divorce sexuality adjustment process has become a major concern. Meanings attached to the sexuality of a divorcee necessitate different adjustment and coping strategies among women. How these meanings are generated, negotiated, and modified in Iranian contexts has yet to be explored.

**Objective(s):** How these meanings are generated, negotiated, and modified in Iranian contexts has yet to be explored.

**Material/Methods:** We used a grounded theory approach to analyze the extensive rich data obtained through sustained interaction with the informants as well as using in-depth individual interviews and focus group discussions.

**Results:** 'Socio-sexual problems' was found as one of the main domains in our study. Participants experienced a negative impact from divorce on their sexual lives, including sexual interactions. Social isolation and social exclusion resulted from the avoidance of stereotypic interactions and was often a consequence of difficulties with concealment of sexual needs due to stigma. Women discussed a range of negative experiences arising in response to their sexual needs in post-divorce life.

**Conclusions:** The analysis revealed the complexities of gendered post-divorce sexual trajectories. Based on the findings, articulating a sexual health model specific for divorced women seems important.

## P81. Cardiovascular Disease (CVD) in Hyperandrogenic Postmenopausal Women

C. Meun[1], Loes Jaspers[1], Taulant Muka[1], Maryam Kavousi[1], Oscar Franco Duran[1], Joop Laven[1]

[1]*Erasmus MC, Rotterdam, 3000 CA, Netherlands*

**Background:** Polycystic ovary syndrome (PCOS) is a common reproductive disorder, characterized by menstrual irregularity, polycystic ovarian morphology and hyperandrogenism. With increasing age, the menstrual cycle gradually shortens and ovarian volume, follicle number and androgen levels decrease too. Except for hyperandrogenism, which is probably maintained into the postmenopausal period, all others symptoms disappear after menopause. Hyperandrogenism in PCOS women has been associated with increased prevalence of the metabolic syndrome and increased cardiovascular risk factors. This has led to the assumption that women with PCOS are at increased risk for CVD during the postmenopausal years.

**Objective(s):** To assess the potential association of postmenopausal androgen levels with CVD in a population based sample. Hence, women with postmenopausal androgen levels above the 90th percentile were compared with age matched controls with androgen levels between the 40th and 60th percentiles. Between groups differences in the prevalence of cardiovascular disease (coronary heart disease, heart failure, stroke) were assessed.

**Material/Methods:** We analyzed 3635 women 55 years of age or older, included in the Rotterdam Study, a large population-based prospective cohort of elderly, postmenopausal subjects. All patients underwent standardized interviews assessing their general and cardiovascular health. Subsequently, all participants had a thorough physical examination followed by an assessment of steroid levels using LC-MS

**Results:** The median age was 69.6 (range 55,1–105,7). Women with testosterone levels exceeding P90 showed an increased prevalence of heart failure ($< p0.05$). Moreover, neither Androstenedione and DHEAS levels nor the free androgen index (i.e. Testosterone x 100/SHBG) were associated with CVD.

**Conclusions:** Heart failure is more prevalent in postmenopausal women with hyperandrogenism compared to women with normal androgen levels. No significant increase in the prevalence of stroke was found in women with hyperandrogenism. These findings indicate that women with PCOS might be at greater risk to develop CVD in their postmenopausal years.

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## P82. Cardiovascular Disease (CVD) in Hypoandrogenic Postmenopausal Women

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[1]*Erasmus MC, Rotterdam, 3000 CA, Netherlands*

**Background:** Premature Ovarian Insufficiency (POI) is an uncommon reproductive disorder, characterized by premature loss of ovarian function resulting in early menopause. Because ovarian function ceases early in life these women are underexposed to estrogens, progestagens as well as to androgens. Androgen levels also gradually decrease after menopause in healthy women. Hence, in those with POI levels might be very low. Since POI has been associated in the past with an increased risk for CVD hypoandrogenism might be associated with increased prevalence of cardiovascular risk factors.

**Objective(s):** To assess the potential association of postmenopausal androgen levels with CVD in a population based sample. Hence, women with postmenopausal androgen levels above the 90th percentile were compared with age matched controls with androgen levels between the 40th and 60th percentiles. Between groups differences in the prevalence of cardiovascular disease (coronary heart disease, heart failure, stroke) were assessed.

**Material/Methods:** We analyzed 3635 women 55 years of age or older, included in the Rotterdam Study, a large population-based prospective cohort of elderly, postmenopausal subjects. All patients underwent standardized interviews assessing their general and cardiovascular health. Subsequently, all participants had a thorough physical examination followed by an assessment of steroid levels using LC-MS

**Results:** The median age was 69.6 (range 55,1–105,7). An increased prevalence of CVD, coronary heart disease and heart failure was found in women with DHEA levels below P10 ($P < 0.001$). Women with androstenedione levels below P10 showed an increased prevalence of CVD and coronary heart disease ($P < 0,05$).

**Conclusions:** CVD is more prevalent in postmenopausal women with hypoandrogenism compared to women with normal androgen levels. No significant increase in the prevalence of stroke was found in women with hypoandrogenism.

## P83. How Evidence - Based is the Daily Obstetrics Practice in Today's Romania? A Cross-Sectional Study

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**Background:** Episiotomy became routine practice well before emphasis on using outcomes research to inform practice. In Romania obstetric health care practitioners who view episiotomy favorably endorse survey items that state that episiotomy should be used to ''prevent perineal trauma and to prevent pelvic floor relaxation''. Furthermore, they agree that they ''prefer to employ episiotomy frequently because it is easier to repair than the laceration.''

**Objective(s):** To evaluate episiotomy practice in Romanian maternities in order to identify factors associated with the high rate of the procedure and strategies to reduce it.

**Material/Methods:** In total 11863 patients were recorded in 8 Romanian maternities in our clustered cross-sectional study aiming to assess the prevalence of episiotomy. We used the random effects Poisson model to estimate the prevalence ratio.

**Results:** From the total number of 11863 patients included in our analysis, 8475 (71.4%) had episiotomy. The prevalence was 92.7% for primiparae, 73.2% for patients at the second vaginal birth and 35% for the third vaginal birth. There was strong evidence of association between the prevalence of episiotomy and labial scar, vaginal scar and cervical tear. The total need for suture rate was higher than the episiotomy rate for all patients (79.2%).

**Conclusions:** Routine episiotomy is the norm in Romanian maternity units and the rates are among the highest in Europe. The chances for a primipara to leave a Romanian maternity with an intact perineum is only 5%. Episiotomy use is driven by local professional norms and individual practitioner preference rather than variation in the needs of individual women at the time of birth. Without an ''optimal'' rate of episiotomy, effort should be made to reduce the over-medicalization of vaginal birth, without putting patients at risk for severe perineal laceration.

## P84. Associations Between Cumulative Breastfeeding Intensity and Maternal Mediators of Vascular Inflammation and Cardiovascular Disease Risk

Hmellisa Mlo[1], Laila Anthony[1], Alison Stuebe[1], Karen Grewen[1]

[1]*University of North Carolina, Chapel Hill, North Carolina, USA*

**Background:** Not breastfeeding or weaning early is associated with an increased risk of maternal cardiovascular disease (CVD), compared with exclusive and/or prolonged lactation. Inflammation plays a causal role in CVD. Early postpartum is a high pro-inflammatory state; however epidemiological studies suggest that lactation is cardio-protective.

**Objective(s):** To determine effects of lactation on cardiovascular activity and biomarkers of systemic (C-reactive protein) and vascular inflammation (sV-CAM, sP-Selectin, sE-Selectin).

**Material/Methods:** 68 mothers were tested at 3 months postpartum (33 exclusive breast-feeders, 10 exclusive formula-feeders, 25 mixed feeding). Cumulative breastfeeding intensity (cBFI) was calculated for the first 12 weeks. We assayed plasma oxytocin, C-reactive protein (CRP) and soluble cell adhesion molecules (E-Selectin, P-Selectin, ICAM1, VCAM1). A subset of 15 mothers (8 Exclusive Breast, 7 Exclusive Formula) underwent fasting flow-mediated dilation (FMD) of brachial artery to assess endothelial function.

**Results:** Exclusive Breastfeeders had: lower CRP compared with low cBFI and Exclusive Formula groups ($F = 3.67$, $p < .05$); lower sE-Selectin relative to all other groups ($F = 7.42$, $p < .0001$). Oxytocin was inversely related to sE-Selectin ($r = -29$, $p < .05$) and sP-Selectin ($r = -38$, $p < .02$). cBFI was negatively correlated with CRP ($r = -.39$, $p < .01$), sE-Selectin ($r = -.49$, $p < .0001$), BMI ($r = -.51$, $p < .001$) and waist circumference ($r = -.59$, $p < .0001$). Relative to Exclusive Breastfeeders, Exclusive Formula-feeders demonstrated higher resting SBP ($p < .005$) and DBP ($p < .05$), and non-significantly lower FMD response, adjusted for age, BMI, race and resting SBP. Endothelial function was inversely related to sVCAM expression ($r = -.50$, $p = .05$).

**Conclusions:** Lactation is associated with multiple cardio-protective measures in the early postpartum. Associations between oxytocin, cell adhesion molecules expression and FMD suggest lactation may inhibit atherogenic activity during the perinatal transition, which may be a critical period of elevated CVD risk.

## P85. Effects of Lactation on Maternal Mediators of Vascular Inflammation and Cardiovascular Disease

Hmellisa Mlo[1], Laila Anthony[1], Alison Stuebe[1], Karen Grewen[2]

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**Background:** Mothers who do not breastfeed and those who wean early are at increased risk of cardiovascular disease (CVD) compared with those who practice exclusive and/or prolonged lactation. Inflammation plays a causal role in CVD. Early postpartum is a high pro-inflammatory state, however epidemiological studies suggest that lactation is cardio-protective.

**Objective(s):** Determine effects of lactation on cardiovascular activity and biomarkers of systemic (C-reactive protein) and vascular inflammation (sV-CAM, sP-Selectin, sE-Selectin).

**Material/Methods:** 68 mothers were tested at 3 months postpartum (33 exclusive breast-feeders, 10 exclusive formula-feeders, 25 supplemented lactation with formula). Cumulative breastfeeding intensity (cBFI) was calculated for the first 12 weeks. We assayed plasma oxytocin, C-reactive protein (CRP) and soluable cell adhesion molecules (E-Selectin, P-Selectin, ICAM1, VCAM1). A subset of 15 mothers (8 Exclusive Breast, 7 Exclusive Formula) underwent fasting flow-mediated dilation (FMD) of brachial artery to assess endothelial function.

**Results:** Exclusive Breastfeeders had: lower CRP compared with low cBFI and Exclusive Formula groups ($F = 3.67$, $p < .05$); lower sE-Selectin relative to all other groups ($F = 7.42$, $p < .0001$). Oxytocin was inversely related to sE-Selectin ($r = -29$, $p < .05$) and sP-Selectin ($r = -38$, $p < .02$). cBFI was negatively correlated with CRP ($r = -.39$, $p < .01$), sE-Selectin ($r = -.49$, $p < .0001$), BMI ($r = -.51$, $p < .001$) and waist circumference ($r = -.59$, $p < .0001$). Relative to Exclusive Breastfeeders, Exclusive Formula-feeders demonstrated higher resting SBP ($p < .005$) and DBP ($p < .05$), and non-significantly lower FMD response, adjusted for age, BMI, race and resting SBP. Endothelial function was inversely related to sVCAM expression ($r = -.50$, $p = .05$).

**Conclusions:** Lactation appears to play multiple roles in protecting cardio-metabolic function in early postpartum. Links between oxytocin, cell adhesion molecules expression and FMD suggest lactation may inhibit atherogenic activity during the perinatal transition, which may be a critical time of elevated risk for CVD.

## P86. Phototherapy 660 nm for the Prevention of Radiodermatitis in Breast Cancer Patients Receiving Radiation Therapy: Preliminary Results of a Randomized Controlled Trial

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**Background:**Approximately 90% of breast cancer patients undergoing adjuvant radiotherapy develop acute skin reactions. Despite several studies have addressed this adverse event, an effective prophylactic approach remains unavailable.

**Objective(s):** The aims of this study are to assess whether InGaAlP operated at 660nm can minimize the occurrence of radiodermatitis and to decrease the pain due to radiodermatitis.

**Material/Methods:** The calculated sample size for this trial is 52 patients. Here we present preliminary results from 19 patients. Patients undergoing radiotherapy for breast cancer (stages I to III) were prospectively enrolled. Patients were randomly allocated to a group who received laser therapy ($n = 10$) or to a control group who received a placebo (the same procedure were performed without activation of the laser, $n = 9$). Both procedures were applied five days a week, before the radiotherapy session. A nurse, a radiotherapist, and an oncologist, all of them blinded, assessed patients weekly regarding radiodermatitis, by means of CTC 4.0 and RTOG criteria, until the end of treatment. Patients also answered a modified visual analogue scale for pain. The same procedures were repeated 90 days after the beginning of radiotherapy. ClinicalTrials.gov identifier: http://NCT02003599.

**Results:** Patients in both groups were matched for the main clinical and oncologic variables. Three patients in Laser Group and two patients in Placebo Group developed radiodermatitis $\geq 2$ ($p = 0.608$). With regard to pain, the average scores were 2.9 in Laser Group and 3.3 in placebo group ($p = 0.835$).

**Conclusions:** These preliminary results suggest that the laser was not effective in reducing radiodermatitis $\geq 2$ or in reducing pain.

## P87. HPV Specific Immunotherapy for Cervical Intraepithelial Neoplasia using VGX-3100 Induces Regression of Cervical Lesions and Potent T-cell Responses: Results from a Randomized, Double-Blind, Placebo-Controlled Phase II Study

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**Background:** The advent of an immunotherapy that imparts a significant impact on the clinical status of advanced cervical intraepithelial neoplasia (CIN) has the potential to provide physicians an important alternative to surgery to treat CIN 2/3 disease. Our previous two Phase I studies of VGX-3100, a highly optimized DNA immunotherapy for HPV16/18 delivered using electroporation, drove seroconversion as gauged by ELISA to at least one HPV antigen (E6 or E7) in 100% of patients while 78% of patients mounted a detectable Interferon Gamma (IFNg) ELISpot response. Flow cytometric analysis revealed IFNg production from both the CD4+ and CD8+ T cell subsets, as well as the ability of patient CD8+ T cells to synthesize the lytic proteins Granzyme B and Perforin. Moreover, all patients showed the presence of CD8 T cells exhibiting full HPV-specific cytolytic functionality, a readout thought to be informative of the ability of VGX-3100 to induce an immune response that may be important for the direct elimination of HPV infected cells.

**Objective(s):**The Phase II study, designated HPV-003, assessed the safety and efficacy of VGX-3100 in 167 women with biopsy-proven CIN 2 or CIN 3 with concurrent HPV16 and or HPV18 infection.

**Material/Methods:** The randomized, placebo-controlled, double-blind study, was stratified by age and severity of CIN and evaluated cervical tissue changes after three 6 mg intramuscular doses of VGX-3100 followed by electroporation (EP) with Inovio's CELLECTRA® 2000 device at weeks 0, 4, and 12. Cervical tissue was examined before starting blinded treatment and 9 months later.

**Results:** The study met its primary efficacy endpoint; the percentage of patients who had regression of CIN 2 or CIN 3 to CIN 1 or no disease at 6 months post third dose was significantly higher in the VGX-3100 group compared to the placebo group ($p = 0.017$). In addition, the trial demonstrated the ability of VGX-3100 clear HPV infection concurrent with regression of CIN lesions. The study also explored cell mediated immune responses to VGX-3100 in blood samples taken prior to the first vaccine dose and periodically thereafter. IFN-? ELISpot results revealed higher responses in the VGX-3100 treated group than in the placebo group, suggesting that VGX-3100 was able to robustly engage the cellular arm of the patients' immune system. Finally, subjects were monitored for tolerability and safety. The treatment was generally well-tolerated, with only administration site redness occurring significantly more frequently in the VGX-3100 group compared to the placebo group in the 7- and 28-day periods following treatment.

**Conclusions:** Altogether, the successful phase 2 results represent a significant milestone in the development of active immunotherapies to treat cancer and infectious diseases and have the potential to provide physicians an important alternative to surgery to treat CIN 2/3 disease. They illustrate the highly promising potential of therapeutic immunization with DNA followed by electroporation for the treatment of HPV-related precancerous cervical disease in women and present the possibility of treating HPV-associated cervical, head and neck, and anogenital cancers.

## P88. Assessment of Quality of Antenatal Care Rendered at a Northern Nigeria Primary Health Care Center, Zaria

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**Background:**:Primary health care centers closest to community, they provide first aid care and referrals. Offering quality Antenatal care services at this level is pre-requisite to reducing pregnancy complications. Reports have shown that Eclampsia is the leading course Maternal Mortality in Northern Nigeria. Ensuring quality care by skilled attendants during pregnancy is essential

**Objective(s):** This study was aimed at assessing the adequacy of the antenatal care rendered at this level of a care center.

**Material/Methods:** A cross sectional study was conducted at Babban-dodo primary health center Zaria. Questionnaires were administered to 400 pregnant women and providers. Information on their socio-economic status, educational level, salary scale, geographical accessibility, affordability and availability of the care and provider's qualification and years of experience were analyzed using SPSS version 18.

**Results:** Despite the availability, accessibility and affordability of services at the health center only 37.5% these women had their blood pressure measure routinely. The services were not liked by 2% of the respondents. Forty-six (46%) percent were satisfied while 22.5% were highly satisfied. Those that were just satisfied were 22% although none of the respondent was highly dissatisfied. There was only one nurse and no medical doctor neither on a temporary nor on visiting bases. The structure is situated in the center of the town and well attended.

**Conclusions:** There is total disregard for standard of care for antenatal services expected at this level. Routine examination, sure as Blood Pressure measurement was not done. The nurse was experienced and qualified been alone means when she is not available these pregnant women are not seen. There is therefore the need for re-assessment of all primary health care centre been the first point of contact with our pregnant women, if reducing maternal mortality rate is great concern to all of us.

## P89. Vitamin D Deficiency in Pregnant Women Refer Two Private Office of Gynecologists in Rasht, Iran

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**Background:** Vitamin D is a key modulator of calcium metabolism that an important role for maternal health, fetal skeletal growth, and optimal maternal and fetal outcomes in pregnancy. Vitamin D deficiency is one of the major health problems with very high prevalence in worldwide.

**Objective(s):** This study was conducted to determine the vitamin D status of pregnant women in Rasht, north of Iran.

**Material/Methods:** In a retrospective cross-sectional study, all pregnant women in any gestational age without history of vitamin D supplement use before three month ago of pregnancy from two private offices of gynecologists in Rasht were studied from spring 2013 till summer 2014. All data were collected which one recorded and blood sampling was done to measure serum 25 (OH) vitamins D. Vitamin D deficiency and insufficiency defined as levels of 25 (OH) $D < 20$ and $< 30$ ng/ml for

pregnant women, respectively. All data analyzed by descriptive and analysis tests.

**Results:** The mean age of pregnant women was 27.5 ± 4.6. Mean serum 25(OH) D of those was 15.6 ± 9.8 mg/dl Vitamin D deficiency and insufficiency was observed 69.3% of cases (124 subjects) and 20.7% (37 subjects), respectively. Also, There was a positive correlation between the vitamin D levels and use of vitamin D supplementation before pregnancy ($r = 2.473$, $p = .00$)

**Conclusions:** There was a high prevalence of vitamin D deficiency in the pregnant women in our area. Vitamin D supplementation can be help to arise 25(OH) D levels. However, because duration of supplementation appeared important, women should ideally start vitamin D supplementation a few months before becoming pregnant.

## P90. Relevant Factors with Quality of Life and Body Image Among women with Breast Cancer at Educational and Therapeutic Hospitals in Rasht in Iran

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**Background:** Breast cancer is one of the most common cancers among women. Stress due to disease diagnosis, treatment and it's side-effects are affected factors on quality of life (QOL) and body image (BI). As result, important is assessment of related-factors with QOL and BI.

**Objective(s):** The purpose of the study was to evaluate Quality of Life and Body Image and relevant factors with them among women with breast cancer.

**Material/Methods:** This is an analytically descriptive study among 170 women with breast cancer in educational and therapeutic hospitals in Rasht in 2011–2012. Data were collected by demographic information, Health-Related Quality of Life (WHOQOL-BREF) and Body Image Scale (BIS) questionnaires. Data were analyzed using SPSS software version 16, And descriptive statistics and t-test, ANOVA, Pearson correlation coefficients and linear regression.

**Results:** Results indicated that samples age mean was 50.67 ± 10.04. Health-related quality of life score mean was 48.65 ± 9.07 and BI score mean 8.6 ± 5.38. Assessment related factors with quality of life and body image indicated that there was significant differences between marital status, occupation, the breast surgery type with health-related quality of life and age, disease diagnosis time and breast surgery type with body image by usage multiple regression ($p < 0.05$).

**Conclusions:** Health-Related Quality of Life was lower in psychological health domain even averagely with past 2 years of disease diagnosis. BI of patients was positive. Also, Related-factors with QOL and BI patients including age, marital status, occupation, disease diagnosis time and surgery type.

## P91. Considerations When Recommending OTC Antifungals for Vulvovaginitis: Equivalence to Prescription Intervention & Potential Health Care Savings

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**Background:** When patients are able to utilize a non-prescription rather than prescription medication to treat a specific malady, there are many potential benefits, including access, affordability and patient empowerment. Data suggest OCT medications in the US provide $102 billion in value to the health care system. However, with each choice of prescription vs. non-prescription drug, the issue of onset of medication effect and efficacy must be addressed. In women's health, yeast vulvovaginitis is a common problem and women have a choice of obtaining a prescription medication from their clinician or of using an OTC intervention.

**Objective(s):** Data suggest that when a patient uses an OTC medication, for every $1 spent, they are saving the US healthcare system $6 to $7. In fact, without OTC drugs, it has been reported that 60 million US citizens would not seek treatment for their medical problem. Additionally, OTC medications offer $23 billion in potential productivity benefits. One common problem in women is yeast vaginitis. A head to head comparison evaluated an OTC vs a prescription intervention for yeast vulvovaginitis.

**Material/Methods:** A randomized, double blind, parallel-group study compared time to symptom relief between a prescription oral treatment vs an OTC vaginal treatment in women with a vulvo-vaginal yeast infection.

**Results:** The prescription intervention was not superior in time to symptom relief. The OTC product provided symptom relief in 1 hour vs 4 hours for the prescription drug.

**Conclusions:** These data support the use of OTC antifungal treatment for women with vulvovaginal candidiasis, which, as consistent with available data, will be a cost saving alternative to a prescription intervention.

## P92. Osteoporosis Screening of Women Aged 18–49 Living in One if the Largest Suburbs of the Capital City and the Assessment of Risk Factors: An Epidemiological Work

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**Background:** Osteoporosis decreases the life quality of the individuals, causes morbidity and mortality increasing the risk for bone fractures.

**Objective(s):** This research has been performed for the aim of osteoporosis screening in women aged 18 to 49 living in Cubuk town center, one of the largest suburbs of the capital of Turkey and the assessment of the risk factors.

**Material/Methods:** The research designed in cross-sectional and epidemiological terms was carried out from January to April, 2014. The subject of the research consisted of 17.641 women aged 18–49 and the sampling group consisted of 1.792 women. Introductory Information Form and Osteoporosis Risk Analysis Scale (ORAS) was used in the collection of the data. In the first stage of the research the osteoporosis risk level of women was classified in accordance with ORAS, and in the second stage, 75 women who were at medium and high risk

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levels according to the scaling score and were screened for osteoporosis with Dual Energy X-Ray Absorptiometry (DXA) method. The number, percentage, average, standard deviation, chi-square test and logistic regression analysis were used in the analysis of the data.

**Results:** In the study, it was identified that 80.1% of women carried low, 6.9% of women carried medium and high risk for osteoporosisand 13.0% did not have any risk. When DXA and BMD levels of the women having medium and high risk for osteoporosis were assessed, 9.3% was seen to be osteoporotic and 42.7% was seen to be osteopenic. According to the regression analysis, osteopeniaor osteoporosisoccurrence was higher for the smokers, the ones having a sedentary lifestyle, the light skinned, the ones with late and the ones with osteoporosis history in the family.

**Conclusions:** In this content, developing the national strategies and performing further investigations oriented for protecting the bone health from the early ages is of critical importance in our country.

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## P93. Study of the Effect of Obesity on Pulmonary Function in Adult South Indian Women

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**Background:** Obesity is reported to be associated with decreased lung function. There are very few studies evaluating this effect in Indian women.

**Objective(s):** The present study was thus designed with the aim to evaluate the effect of obesity on pulmonary function, FEV1 and FVC in adult women at a tertiary care medical centre.

**Material/Methods:** Fifty adult female subjects between 20–45 yrs., with BMI between 30–35 kg/m2 and not having any history of lung disease were enrolled in the study after written informed consent to the protocol approved by institutional ethics committee. Control group consisted of Forty five healthy women aged 20–45 yrs. and having a BMI 20 and 28 kg/m2. Spirometry was performed in all subjects between 7:30-9 am in the morning under fasting conditions. Three reading were taken and the mean value was recorded. Significance of difference between the groups was calculated using ANOVA and t test and $p < 0.05$ was considered significant.

**Results:** The mean age of obese subjects was $32.4 \pm 3.6$ years and a mean BMI of $33.4 \pm 2.3$ kg/m2, and that of healthy controls was $25.7 \pm 4.1$ years and $22.8 \pm 3.4$ kg/m2. There was significant difference in FEV1, FVC between the two groups. FEV1 values were $2.1 + 0.3$ and $2.6 + 0.5$ L in obese and normal subjects respectively, where FVC was $2.2 + 0.4$ in obese subjects and $2.7 + 0.6$ L in normal subjects. These values were found to be much lower than the age, gender matched values that are reported in the western population.

**Conclusions:** Obesity is associated with decrease in pulmonary function. However correlation with waist-hip ratio and other pulmonary parameters needs to be done in a larger sample.

## P94. Acceptability of Human Papilloma Virus Self-testing for Cervical Cancer Screening

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**Background:** High-risk human papillomavirus (HPV) testing has become the primary screen for cervical cancer, as triage for pap and/or referral for colposcopy. HPV self-collected (HPV-SC) specimens have shown high concordance with clinician-collected HPV specimens (HPV-CC).

**Objective(s):** Our primary aim was to compare the negative predictive value (NPV) of vaginal swab HPV-SC to CC-HPV and pap and to evaluate the acceptability of home-based HPV-SC.

**Material/Methods:** Recruitment of women age 25–65 to perform HPV-SC prior to receiving CC-HPV and pap screening was conducted in an integrated health care system. Means/medians and proportions were used to describe the women and compare the acceptability questionnaire responses by demographic characteristics (age, race/ethnicity, BMI, and income) and clinical characteristics (BMI, reason for HPV/pap, history of abnormal HPV/pap). Sensitivity analysis compared NPV of HPV-SC to HPV-CC and to pap results. Chi-square tests compared demographic and clinical characteristics between women willing to perform HPV-SC versus unwilling.

**Results:** A total of 338 women were recruited/consented between 2/27/14-4/17/14; 303 women (90%) performed HPV-SC and completed acceptability questionnaires. The NPV of HPV-SC to HPV-CC was 98.9% and 98.5% to pap results. There were no significant demographic or clinical differences between women willing to perform HPV-SC versus unwilling. The women performing HPV-SC were non-Hispanic white (36%), Asian (34%), Hispanic (19%), Black (5%), or other/unknown (6%); with a mean age of 41.8 (95% CI: 40.6-43.1) and a mean BMI of 26.7 (95% CI: 25.9-27.4). Most women (90%) reported no pain/discomfort, 85% felt safe, 78% felt comfortable and 88% reported they would likely perform HPV-SC at home and mail specimens back to the lab.

**Conclusions:** The NPV of HPV-SC was high compared to HPV-CC and pap and women reported acceptability of home-based HPV-SC regardless of demographic differences. Further studies are needed to assess the acceptability and feasibility of home-based HPV-SC in a more demographically diverse population.

## P95. Are Asian Women at Higher Risk for Severe Perineal Lacerations?

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**Background:** Women who undergo a vaginal delivery are at risk for experiencing severe perineal lacerations. Literature has shown that severe lacerations are related to future pelvic floor dysfunction. While many well-established risk factors for severe lacerations exist, Asian race has not been consistently demonstrated as an independent risk factor.

**Objective(s):** To evaluate whether Asian race is an independent risk factor for severe perineal lacerations.

**Material/Methods:** We performed a population-based retrospective cohort study to estimate the relationship between Asian race and severe perineal lacerations. Data were collected

from the 2010 Healthcare Cost and Utilization Project Nationwide Inpatient Sample (HCUP-NIS). Characteristics of Asian women were compared with those of non-Asian women. Outcomes of interest were severe perineal lacerations. Multivariable logistic regression was used to refine the risk associations between Asian race and perineal lacerations, adjusting for confounding. We selected a confidence interval of 99% and designated p value $< 0.0001$ as significant.

**Results:** 2,559,128 women with singleton vaginal deliveries were identified. Among these, 120,452 (4.7%) were Asian. Asian women were more likely to be diagnosed with diabetes (9.8% vs 4.9% $p < 0.0001$) and more likely to have an operative vaginal delivery (10.1% vs 7.2% $p < 0.0001$). Asian fetuses were less likely to be macrosomic (1.0% vs 1.5% $p < 0.0001$). After adjusting for potential confounders, Asian women were still more likely to experience severe perineal lacerations (5.8% vs 3.0%, adjusted odds ratio [aOR] 1.82, 99%CI 1.57-2.12, $p < 0.0001$). There was a statistically significant increased incidence of third degree lacerations in Asian women (aOR 1.86, 99%CI 1.62-2.13, $p < 0.0001$). Fourth degree lacerations were also at increased incidence (aOR 1.52, 99%CI 1.14-2.02, $p = 0.0002$).

**Conclusions:** Asian race is an independent risk factor for severe perineal lacerations and thus, future pelvic floor dysfunction and dyspareunia.

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## P96. Prevalence of Sexual Dysfunction in Iran: A Systematic Review Update

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**Background:** Sexual disorder is one of the most prevalent psychiatric problems in general population. Achieving a reliable estimation about the prevalence of sexual disorder is an essential step towards its prevention and treatment

**Objective(s):** The present systematic review was performed to estimate the prevalence rate of sexual dysfunction in Iranian general population.

**Material/Methods:** A broad search was conducted to complete the information from the previous systematic review that was published in 2007. The present study reviewed all available published data on the prevalence of different types of sexual disorders/dysfunctions among general Iranian population (from January 2007 through December 2013. The data was obtained by searching PubMed, ISI web of Science, PsychINFO, CINAHL, EMBASE, and 3 Iranian databases (IranPsych, IranMedex, and Scientific Information Database (SID)) by using related keywords.

**Results:** Nineteen studies were finally included. Despite the fact that the number of the published articles was much more than those in our previous review, most of them were not of an acceptable, standard quality. Most of the reviewed original articles were conducted in females. This may be reflecting many years of cultural-male-superiority in Iran which seems to be moderating nowadays. Besides, it was noted that there was a large diversity among the results of different studies that perhaps was due to not using the standard methodologies. As a consequence, performing meta-analysis was not seem to be possible.

**Conclusions:** It seems that the prevalence of sexual disorder is relatively high among the Iranian population. It is suggested to pay more attention to the duration of evaluation in cross-sectional studies, reporting the response rate, utilizing reliable and valid measures and applying appropriate sampling methods in order to improve the quality of future research in this area. Educating general population by those health professionals who are involved in the treatment of sexual disorders is highly recommended.

## P97. Sexual Function and Marital Satisfaction in Female OCD Patients

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**Background:** Although sexual dysfunction and marital dissatisfaction are relatively common problems in female patients with obsessive compulsive disorder (OCD), there are sparse clinical research on correlation between OCD subtypes and marital dissatisfaction with different phases of sexual response cycle.

**Objective(s):** This study was undertaken to assess marital satisfaction, sexual function and its different phases in a group of female Iranian patients with OCD

**Material/Methods:** Method: The study population consisted of 36 female married OCD patients (according to a psychiatric

interview and DSM IV questionnaire based on SCID) between 18 and 50 years old who were referred to outpatient clinic of Roozbeh psychiatric hospital and 3 private psychiatric clinics in Tehran from 2011to 2013. Five Questionnaires were used for study purposes including: Iranian validated form of FSFI, MOCI, OCI-R, a self- designed marital satisfacton questionnaire and a questionnaire which has provided demographic data and other relevant information regarding sexual function, marital satisfaction and OCD.

**Results:** The prevalence of sexual dysfunction among female patients with OCD were 80/6%(with 95% confidence interval). Besides, the frequency of disorders in different subscales of FSFI including sexual desire, sexual arousal, lubrication, orgasm, satisfaction and sexual pain are 50%, 58/3%, 36/1%, 44/4%, 41/7% and 52/8%respectively. Moreover, there were significant correlations between marital dissatisfaction with arousal, lubrication, sexual satisfaction, sexual pain and total score of FSFI and between marital dissatisfaction and washing subscale according to MOCI.

**Conclusions:** Evaluation of sexual function and marital satisfaction in all female patients with OCD is recommended.

## P98. Clinical Care of Female Patients: Importance of Providing an Exercise Prescription

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**Background:** Data confirm the importance of regular exercise in both preventive and interventive health strategies. For older women, with a tendency to weight gain, compliance with an exercise regimen is even more critical.

**Objective(s):** Regular exercise decreases the risk of many types of cancer (breast, colon, endometrial); is critical in both weight maintenance and weight loss; may lower risk of cardiovascular disease; and appears to ameliorate many conditions (osteoarthritis, depression, migraine headaches and fibromyalgia). However, very few patients leave a clinical encounter with a specific template on what exercises they should engage in.

**Material/Methods:** A Pubmed review of the available literature

**Results:** Each clinical practice should utilize an exercise prescription that is given to each patient. It includes: 1) need for medical clearance, 2) frequency and duration of exercise weekly, 3) intensity, 4) precautions due to pre-existing disease, 5) appropriate use of exercise equipment, 6) types of appropriate exercises, 7) use of a buddy system, 8) use of apps and smart phone devices, 9) educational resources and 10) when it appropriate to take time off.

**Conclusions:** Although most people know the benefits of engaging in a regular exercise program, many do not establish a daily routine. By the clinician offering an exercise prescription, especially to the aging female, not only is the importance of routine exercise reinforced to the patient, but the patient is also provided with guidelines on how to commence an exercise routine in her life. The exercise prescription be configured into the electronic medical record of the patient. An exercise prescription would enhance the counseling that clinicians already engage in when discussing ways to achieve a healthy life style.

## P99. Patterns of Pregnancy Screening Prior to Induction Chemotherapy for Adolescents with Acute Lymphoblastic Leukemia and Acute Myeloid Leukemia Within the Pediatric Health Information System

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**Background:** Young adults with cancer engage in high-risk sexual practices. Implications for sexually active adolescents with cancer are substantial given chemotherapy teratogenicity. There is no data regarding pregnancy screening compliance for adolescents with hematologic malignancies.

**Objective(s):** Study objectives were to (1) determine patterns of pregnancy screening among patients with acute lymphoblastic leukemia (ALL) and acute myeloid leukemia (AML) before induction chemotherapy initiation and (2) compare rates of pregnancy screening in patients with ALL and AML with female patients in the Emergency Room (ER) receiving a CT abdomen and/or pelvis.

**Material/Methods:** This retrospective cohort study was conducted using validated cohorts of de novo ALL and AML patients within the Pediatric Health Information System (PHIS). The study was limited to patients aged 10–18 years. Patients with leukemia who received a CT chest, abdomen, or pelvis during the index induction admission were excluded. The primary outcome was an appropriately timed pregnancy test, defined as a pregnancy test done the same day or prior to the teratogenic exposure within the same admission. Chi-square test and logistic regression analyses were used for comparisons between cohorts.

**Results:** The proportion of patients with a pregnancy test was 35%, 65%, and 58% in ALL (N = 907), AML (N = 141), and ER (N = 34,664) cohorts, respectively. Logistic regression analyses adjusting for age, insurance, race and region demonstrated patients with ALL were less likely to have a pregnancy test compared to the ER cohort (OR 0.494, 95% CI 0.43-0.57). Patient with AML were more likely to have a pregnancy test compared to the ER cohort (OR 1.57, 95% CI 1.10-2.25).

**Conclusions:** Adolescents with ALL are not appropriately screened for pregnancy before chemotherapy initiation. There is a need for standardized guidelines for pregnancy screening for adolescents with cancer given the serious consequences of pregnancy for their health and the health of a future pregnancy.

## P100. Predictors of Hepatitis C Testing Intention and Treatment Benefits Among Female African American Baby Boomers

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**Background:** Hepatitis C (HCV) infection is the primary cause of hepatic failure, hepatocellular carcinoma, and liver transplanta-

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tions in the United States (US). Baby Boomers (BBs) are responsible for three-quarters of Hepatitis C (HCV) infections in the US. The Centers for Disease Control and Prevention (CDC) reported that BBs are five times more likely to be infected with HCV than other age groups. The prevalence of HCV in males is as twice as females; however, HCV testing is distinctly underused by both of them.

**Objective(s):** This study was to assess the intention of female Africa American Baby Boomers (AABBs) to test for HCV in Washington DC area.

**Material/Methods:** A cross-sectional study using Audio Computer Assisted Self Interview (ACASI) was conducted to assess determinants of HCV testing intention among female AABBS. Factors evaluated included age, knowledge about HCV, previous HCV test, prior 1992 blood transfusion, perceived threat, perceived barriers, perceived benefits, cues to action, and subjective norms. The study was guided by the health belief model (HBM) and theory of reasoned action (TRA) integrated framework. Descriptive statistics for all study variables were computed. Predictors of intention to test for HCV were assessed using logistic regression analysis. All analyses were performed using SPSS at an alpha value of 0.05.

**Results:** Of the 83 female participants in the study, 44.6% had at least a college education, and the majority had health care coverage. Overall, the average knowledge level of HCV was 49.40%, about 42.20% received a previous HCV test, 16.7% had prior 1992 blood transfusion, and 25.30% had intention to test for HCV. Multivariable analyses showed that having a blood transfusion prior to 1992 and perceived benefits were the only significant predictors for intention to test for HCV (OR = 9.87, 95% CI: 1.97- 49.35; OR = 1.58, 95% CI: 1.02-2.46) respectively. Findings on perception of treatment benefits showed that knowledge was the only predictor of perception of treatment benefits (OR = 1.65, 95% CI: 1.01-2.68).

**Conclusions:** Female AABBs was found to have inadequate knowledge about HCV, while prior to 1992 blood transfusion and perceived benefits were the only significant predictors of intention to test for HCV. These findings can be used to develop future HCV testing initiatives for African American women.

## P101. Wellness on Wheels – Making Healthy Choices Program: Improving the Health of Rural & Underserved Women in Indiana

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**Background:** According to ''America's Health Rankings,'' Indiana fell six points from 35 of 50 states in 2009 to 41 in 2012 and 2013. New rankings for 2014 state we have not improved overall, and we still at the bottom with a health rank of (41) out of the 50 states. Factors contributing to poor overall health include obesity(42), physical inactivity(43), diabetes - all risk factors for cardiovascular disease (CVD), the number one killer of Indiana women. According to the Indiana State Department(ISDH) Indiana is also ranked 45th out of 50 states in Infant mortality and is the 8th most obese state in the nation, resulting in Indiana Hoosiers paying $3.5 billion a year in obesity-related medical costs. Data from our existing outreach program (n = 1,000 women) revealed that free screening, education and a health coach model is necessary because those with and without health insurance are NOT regularly seeing a physician, compliant with medications, or properly educated about cardiovascular risk and preconception health. The Indiana University National Center of Excellence in Women's Health (IUNCOE) a program of the IU School of Medicine - Department of OBGYN seeks to improve the health of rural and underserved Indiana women through our WOW- MCH program by providing cardiovascular disease (CVD) risk reduction and preconception education; comprehensive follow-up and empowering women to make healthy behavior changes to improve their health.

**Objective(s):** IU NCOE, will demonstrate how WOW- MHC works successfully with community partners (local public health departments, hospital health systems, college campuses, and other non-profit agencies) to improve access to care, connecting 70% of those in the program to health resources and improving knowledge (CVD, preconception healthy lifestyle behaviors) by 80%. In addition, our data will demonstrate that because we are not a ''health fair on wheels'', but a program that provides health coaching, and navigation to those with abnormal biometric screenings, over 60% of participants will make a healthy behavior change, ultimately helping us in our mission to improve the health of Indiana women.

**Material/Methods:** WOW-MHC utilizes a 42-foot bus to reach rural and underserved women statewide. Health Care Providers (HCP) give CVD risk assessments, free biometric screenings, CVD risk reduction education, and tools to track their health and progress. HCP's are inclusive of medical students who are mentored by our physician to learn about the challenges in working with diverse communities and consider practice in primary care. Participants with abnormal results or poor lifestyle behaviors are followed up with by the health coach a 1,3 and 6 month intervals. They set goals with the HC, are connected to resources and provided incentives (movie tickets, or produce vouchers) for reaching their goals. Data is captured through health risk assessments and surveys. Evaluation analysis is provided by outside evaluation R. Saywell and Associates, LLC.

**Results:**78% connected to resources 94.2% are completely aware of healthy behaviors to improve pregnancy outcomes 85% increase in CVD Knowledge 82.8% are aware of effective contraception methods, including abstinence 97.2% are able to list different options of how they can be physically active 82.1 responded that they received useful resources 65% behavior change

**Conclusions:** Participants in this program were more likely to make a behavior change when in the follow-up program for at least 3 months. We really did not need to incentivize to get behavior change. Participants established a relationship with the health coach that empowered them and accountability became the motivator for change. Goal setting with accountability, problem solving, health system navigation were effective strategies in behavior change. It is also worth noting that through the mentorship of medical students, a survey demonstrated that as a result of the program, 75% showed interest in primary care. This is very important considering the shortage Indiana has in women primary care physicians. In summary, the IUNCOE WOW-MHC program is not just a ''health fair on wheels'', but a program that successfully connects, educates and empowers women to make healthy lifestyle behaviors, to improve their health.

## P102. Metabolic Syndrome in Brazilian Postmenopausal Women

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**Background:** Metabolic syndrome (MS) is a complex disorder represented by a set of cardiovascular risk factors commonly associated with central fat deposition and insulin resistance, it should be highlighted its importance from the epidemiological point of view, responsible for increased cardiovascular mortality.

**Objective(s):** To compare the prevalence of metabolic syndrome according to the criteria of the NCEP and the ADA in Brazilian postmenopausal women.

**Material/Methods:** The 124 postmenopausal women were classified as having metabolic syndrome to those having three or more of the following: increased waist circumference, elevated serum triglycerides or decreased HDL cholesterol; hypertension (or use of antihypertensive medication) and elevated fasting blood glucose or diabetes.

**Results:** The MS parameters found are shown as means ± standard deviation: triglycerides were 159.7 + 65.6 mg/dL, HDL cholesterol was 48.5 + 10.4 mg/dL, blood glucose was 101.6 + 36.2 mg/dL, systolic blood pressure was 131.8 + 21.4 mmHg and diastolic blood pressure was 81.9 + 10.8 mmHg and abdominal circumference was 92.5 + 8.7 cm. The prevalence of MS was 47.6% (59 cases) by the NCEP and 55.6% (69 cases) by the ADA.

**Conclusions:** The prevalence of MS in the population of 124 women attended from 2013 to 2014 was 47.6% by the NCEP and 55.6% by the ADA. There was an accretion of ten new diagnosed cases of metabolic syndrome by the ADA, however without presenting significant difference.

## P103. Use of a Blood Based Test Incorporating Sex, Age, and Gene Expression Components Influenced Referral Rates to Cardiology Among Female Patients Presenting with Symptoms Suggestive of Obstructive Coronary Artery Disease in the Primary Care Setting: Subgroup and Interim Results of the PRESET (A Registry to Evaluate Patterns of Care Associated with the Use of Corus® CAD in Real World Clinical Care Settings) Patient Registry

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**Background:** Current evaluation of stable, non-acute patients presenting with symptoms suggestive of obstructive coronary artery disease (CAD) is costly and exposes patients to radiation and contrast-dye side effects. In female patients, these risks are coupled with poor diagnostic accuracy due to high false positive rates and exercise intolerance.

**Objective(s):** We hypothesized that use of a score incorporating age, sex, and gene expression derived from a blood-based test would improve risk stratification among female patients considered for referral to cardiology.

**Material/Methods:** The prospective PRESET Registry (NCT01677156) will enroll 1,000 stable, non-acute patients presenting with chest pain and related symptoms to 21 US primary care practices. The previously validated blood-based diagnostic test incorporating age, sex, and gene expression showed a 96% NPV in evaluating patients with stable symptoms suggestive of obstructive CAD who are non-diabetic with no previous history of myocardial infarction or revascularization. Patient demographics, clinical history, the age, sex, and gene expression score (ASGES) (predefined as low [≤ 15] or elevated [> 15]), pre- and post-ASGES evaluation plans, diagnostic tests performed, and cardiology referrals were collected.

**Results:** In the interim cohort of 393 patients, 199 patients (50.6%) were female with a median age of 56 and the median BMI of 29.1. The median ASGES was 8 (range, 1–40), and 156 patients (78.4%) had low scores. Results showed that 18/156 (11.5%) patients with low scores were referred to cardiology, whereas 20/43 (46.5%) patients with elevated scores were referred (OR 6.6, $p < 0.0001$). At 30-day follow-up, no major adverse cardiac events were reported among low-score patients.

**Conclusions:** In this primary-care patient registry on cardiac diagnostic testing, initial results show that this blood-based test incorporating age, sex, and gene expression components was adopted into clinical practice and showed clinical utility in helping clinicians rule out women at low risk for obstructive CAD.

## P104. Public Savings Through Prevention of Unintended Pregnancies: Does Title X matter?

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**Background:**Established in 1970, the Family Planning Program, or Title X as it is commonly known, has provided funding to 4,100 sites to provide contraception services. As of 2011, Title X sites had served 4.7 million clients, many of whom are at risk. Yet funding to this program continues to be cut, even with research showing that provision of contraception to prevent unintended pregnancies, shows significant savings.

**Objective(s):** To determine the public savings due to prevention of unintended pregnancies through provision of contraception and contraception education at a Title X clinic.

**Material/Methods:** To determine the cost savings due to provision of low cost contraception in Wyandotte County, the number of pregnancies from typical use of each contraception method were determined. This number was then used to determine the number of unintended pregnancies averted as well as the cost of pregnancies to the county to public funders of health services.

**Results:** Based on contraceptive information form women's first 2012 visit, it is estimated that Wyandotte County's Title X program saved public funders $6.3 million dollars in 2012 through prevention of approximately 1,519 pregnancies.

**Conclusions:** The provision of contraception to women interested in prevented unintended pregnancy may significantly reduce public health expenditures for pregnancy and delivery of pregnancies that were unintended.

## P105. Evaluation of the Accuracy of a 'Two Question Screening Tool' in the Detection of Intimate Partner Violence in a Primary Healthcare Setting in South Africa

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**Background:** Intimate partner violence (IPV) has been recognized as a human rights violation. The benefits of early intervention strategies, such as screening, have been noted. Currently the concept of using a screening tool to detect IPV has not been widely explored in a primary healthcare setting in South Africa and it was for this reason that this study has been undertaken.

**Objective(s):** 1) To determine the operating characteristics of a two-question screening tool for IPV (WAST-short) ; 2) To estimate the prevalence of IPV among women attending an Outpatient Department (OPD), using a validated questionnaire (Women Abuse Screening Tool, WAST)

**Material/Methods:** A cross-sectional study was conducted prospectively at the OPD of a Level 1 Hospital, with systematic sampling of 1 in 8 women over a period of 3 months. The WAST-short, a two-question tool, was used to screen patients for IPV. To verify the result of the screening, women were also asked the remaining questions from the WAST.

**Results:** Data was collected from 400 participants, with a response rate of 99.3%. The prevalence of IPV in the sample was 32%. Operating characteristics of the screening tool: sensitivity 45.2%, specificity 98%, positive predictive value 98%, negative predictive value 79%

**Conclusions:** IPV is a health problem of note at this facility. The WAST-short lacks sufficient sensitivity and therefore is not an ideal screening tool for this setting. Improvement in the sensitivity of the WAST-short in this setting may be achieved by lowering the threshold for a positive result for IPV screening, and modification of the screening questions to better reflect IPV as understood by the local population.

## P106. Gender Differences on Multi-Indicators of Stress-Related Growth Following Cancer Diagnosis and Treatment

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**Background:** A diagnosis of cancer has a profound impact on an individuals' physical and emotional well-being. Stress-related growth is regarded as a multidimensional concept that encompasses the individual's well-being in aftermath of an extremely stressful life event. Stress-related growth studies in women with cancer have reported the ways in which life can be improved in the new circumstances after cancer diagnosis.

**Objective(s):** This study sets out to identify whether and to what extent gender is associated with stress-related growth and explores whether significant gender differences are observed on multidimensional indicators of stress-related growth.

**Material/Methods:** The study examined data in a sample ($n = 350$) of respondents with a history of cancer diagnosis and treatment (M age = 50.23, S.D. = 10.91). Analyses included t-tests and ANOVA and Ordinary Least Squares (OLS) regressions. Three separate models of hierarchical multiple regressions were performed in order to estimate unique impact of gender on self-reported growth.

**Results:** Results suggest gender affects appraisal of coping with cancer, which in turn results in differential reports of stress-related growth. A higher sense of personal strength was associated with being female (Slope = .37; B = .20, $p \leq .001$). Women also reported higher levels of ability to handle difficulties as a result of cancer diagnosis (Slope = .37; B = .16, $p \leq .002$). Developing new interests was also associated with being female (Slope = .29; B = .10, $p \leq .004$).

**Conclusions:** The rising prevalence of cancer as a result of population aging and medical advancements that prolong longevity increase the importance of assessing not only medical but also psychological outcomes. In view of evidence of significant associations between gender and multi-dimensional indicators of stress-related growth following diagnosis and treatment of cancer, it is important to investigate the pathways through which gender operates on coping strategies.

## P107. Have You AEIOU'D? The Next Step to Addressing Intimate Partner Violence During Pregnancy

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**Background:** Intimate partner violence (IPV), involving physical, sexual, or psychological harm against a partner or spouse, is a serious issue, particularly during pregnancy. More active interventions are needed for expectant mothers to alleviate the increased morbidity and mortality that results.

**Objective(s):** The 3.9 to 8.3% of US women who experience IPV during pregnancy suffer from more severe violence than non-pregnant women. It is correlated to many negative outcomes like poor maternal weight gain, miscarriage, antepartum hemorrhage, preterm labor, cesarean delivery, low birth weight, and fetal/neonatal death. Interventions during pregnancy reduce the incidence of IPV more than screening alone.

**Material/Methods:** A Pubmed search of the literature was conducted.

**Results:** Data suggest that healthcare providers typically do not address IPV. Discomfort with the issue, lack of knowledge, and time constraints are barriers. Although several methods for IPV screening exist, we propose (as formulated by NP) a simple, ten-minute intervention for routine prenatal visits for women who screen positive for IPV. Screening will be done by the SAFE method during each trimester. For women with at least 2 affirmatives to the 4 SAFE questions, the intervention corresponding to the mnemonic ''Have you AEIOU'D?'' will be pursued: Acknowledge the abuse, Educate about the cycle of abuse, Inform the patient about her options, Outline a safety plan, Utilize your resources, and Document the patient's injuries and exact words. The components of this intervention are based on CDC guidelines for addressing IPV during pregnancy.

**Conclusions:** This AEIOU'D intervention can be efficiently completed within time constraints of a routine prenatal visit. By both identifying and providing support, resources, and a plan of action to victims, a reduction in negative pregnancy outcomes caused by IPV should result.

## P108. Gender Differences in the Association between Adverse Childhood Experiences and Cognitive Impairment Later In Life

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**Background:** Studies of veterans and holocaust survivors consistently find an association between experiences of trauma and rapidity of cognitive aging. The literature also shows that women are more likely to experience PTSD, but little is know

about gender differences in the association between trauma and cognitive aging.

**Objective(s):** To date no studies have examined the effects of adverse childhood experiences (ACE), an indicator of trauma before age 18, on cognitive functioning later in life. This study investigates gender differences in this association.

**Material/Methods:** Data came from the 2011 Behavioral Risk Factor Surveillance System (BRFSS) survey and include adults over the age of 50. Cognitive functioning was assessed using self-reported indicators of poor memory, confusion and memory loss, and of cognitive limitations. ACE was measured using the standard ACE self-report questionnaire, which examines exposure to abuse, violence, and household dysfunction before age 18. Bivariate and Multivariate regressions were conducted to ascertain the relationship between ACE measures and indicators of cognitive aging.

**Results:** In our bivariate analysis, we found that ACE was associated with increased odds of poor self-reported memory among women (OR = 1.33) and men (OR = 1.21). In our multivariate analysis we found that women who ever experienced household dysfunction had increased odds of poor memory (OR: 1.63-1.66), while no association was observed in men. Women who ever experienced abuse in their childhood had increased odds of several cognitive aging indicators (OR: 1.81-2.33). Men who experienced abuse had increased odds of poor memory (OR = 1.68) and no other indicator.

**Conclusions:** PTSD is a known cause of incident cognitive impairment in highly-traumatized populations. This study suggests that such trauma in the general population might also be associated with more rapid cognitive aging, particularly for women. These results suggest that women that experienced childhood trauma are at higher risk for cognitive impairment later in life.

## P109. Mixed Hypomanic and Depressive Symptoms are Associated with Delayed Sleep Timing in Perinatal Women

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**Background:** Hypomanic symptoms in the early postpartum (e.g., elation, racing thoughts, decreased need for sleep) are linked to increased risk of postpartum depression (PPD). Although women experience profound changes in sleep during the perinatal period and decreased sleep may precipitate mania/hypomania, links between hypomanic symptoms and sleep have not been studied at this life transition.

**Objective(s):** To examine associations between sleep duration and timing, circadian phase, and hypomanic symptoms in women at risk for PPD.

**Material/Methods:** We studied 30 women (mean age 28.3 +/-5.3 years) with a history of major depressive disorder from 3rd trimester of pregnancy to 16 weeks postpartum. Potential participants were excluded if they met criteria for a mood episode (confirmed with the Structured Clinical Interview for DSM Disorders) at study enrollment (33 weeks gestation). Participants rated hypomania symptoms on the Highs Scale (Glover et al., Br J Psych, 1994); depressive symptoms [Hamilton Rating Scale for Depression (HAM-D-17)] were measured at 2, 6, and 16 weeks postpartum. Sleep onset and offset times and total sleep time (TST) were estimated with wrist actigraphy averaged over one week at 33 weeks gestation and postpartum weeks 2, 6, and 16. Salivary dim light melatonin (DLMO) was measured at 3rd trimester and 6 weeks postpartum.

**Results:** At postpartum week 2, average Highs score was $1.8 \pm 2.0$ (range = 0-8). The most common symptoms were racing thoughts (endorsed by 44.3%) and feeling more active than usual (endorsed by 30%). Two groups based on Highs Score at 2 weeks postpartum included a Euthymic Group [EG; n = 15; Highs Scores < 2 (mean = $0.3 \pm 0.5$)] and Hypomanic Symptom Group [HG; n = 15; Highs Scores > 2 (mean = $3.3 \pm 1.6$)]. At 3rd trimester and 2 weeks postpartum, HG women had later estimated sleep onset (Week 33: HG = $00:16 \pm 66$ min vs. EG = $22:47 \pm 50$ min, t = -4.15, df = 28, p < .001; Week 2: HG = $00:06 \pm 80$ min vs. EG = $23:11 \pm 60$ min, t = -2.12, df = 28, p = .04) and sleep offset (Week 33: HG = $8:31 \pm 85$ min vs. EG = $7:22 \pm 72$ min, t = $-2.41$, df = 28, p = .02; Week 2: HG = $8:55 \pm 101$ min vs. EG = $7:47 \pm 63$ min, t = -2.18, df = 28, p = .04) than EG women. DLMO tended to be later in HG ($21:54 \pm 95$ min) compared to EG ($20:53 \pm 88$ min; t = -1.73, df = 24, p = .09) at 33 weeks. Sleep timing did not differ between groups at 6 or 16 weeks postpartum, and TST did not differ between groups at any time point. HG women had higher HAM-D-17 scores than the EG group at all postpartum time points, even when sleep items were excluded.

**Conclusions:** Self-reported hypomanic symptoms during the early postpartum are associated with later bedtimes and rise times at 3rd trimester of pregnancy and 2 weeks postpartum. Women experiencing mixed depressive/hypomanic symptoms are more likely to experience PPD. Later sleep timing may be a modifiable risk factor for development of PPD.

## P110. Medicaid Expansion and Access to Care Among Breast Cancer Survivors

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**Background:** Breast cancer survival is improving due to early detection of the disease and advances in treatment. The Institute of Medicine recommends that each cancer survivor be provided with a survivorship care plan to facilitate follow-up care. However, access to healthcare services remains a barrier to completing needed treatment. Medicaid expansion under the Affordable Care Act improves access to care among vulnerable populations, but almost half of the states chose not to expand the program.

**Objective(s):** We shed light on the potential effect of Medicaid expansion on access to care among breast cancer survivors by assessing inability to see a doctor due to cost before Medicaid expansion in non-expansion states versus expansion states.

**Material/Methods:** We use data from the Behavioral Risk Factor Surveillance System (BRFSS) for the years 2009, 2010, and 2012. The BRFSS is a nationally representative survey that collects information on self-reported preventive health practices and risk behaviors. Our sample consists of women ages 40 to 64, and who were diagnosed with breast cancer (n = 3,743). We use a logistic model and control for demographics, insurance status, and general health.

**Results:** Preliminary results suggest that breast cancer survivors in non-expansion states had significantly higher odds of being unable to see a doctor due to cost (OR = 1.5, 95% CI = 1.01, 2.25).

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**Conclusions:** Living in a state that expands Medicaid will be an advantage for breast cancer survivors because it will improve their access to healthcare services. Existing disparities in access to care are likely to widen between breast cancer survivors in non-expansion states and expansion states. Non-expansion states could potentially leave many breast cancer survivors with no affordable insurance coverage.

## P111. Medicaid Disenrollment and Racial Disparities in Access to Care

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**Background:** Tennessee's Medicaid program experienced a dramatic decrease in eligibility among adult enrollees after implementing a new benefit policy in 2005. Despite the fact that this was the largest disenrollment in the history of Medicaid, little is known about the effects of this policy change.

**Objective(s):** We assess the effects of this policy on access to preventive services among low-income black women. We compare low-income women who lived in Tennessee with a similar group, who lived in neighboring states but did not experience Medicaid disenrollment.

**Material/Methods:** We use data from the Behavioral Risk Factor Surveillance System (BRFSS) from 2003–2009. The BRFSS is a nationally representative survey that collects information on self-reported preventive health practices and risk behaviors. The sample used for this study consists of women aged 21 to 64 with an income less than 100 percent of the federal poverty level. We estimate a differences-in-differences-in-differences model and calculate the changes in access to care among low-income adult women in Tennessee versus other states before and after Tennessee's 2005 Medicaid disenrollment.

**Results:** Results suggest that there were reductions in probabilities of access to care among low-income women who lived in Tennessee compared to those who lived in neighboring states. In particular, low-income black women who lived in Tennessee experienced a significant increase in their inability to see a doctor due to cost as well as a decrease in the ability to have a personal doctor.

**Conclusions:** While many states are expanding Medicaid eligibility under the Affordable Care Act, some states may opt to reduce eligibility once full federal funding expires. This study provides relevant evidence on the potential impact of Medicaid disenrollment on disparities in access to care in states that may consider future changes to Medicaid eligibility.

## P112. Patient Knowledge of Adverse Reproductive and Health Outcomes Associated with Smoking

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**Background:** An estimated 7.9 million adult women smoke cigarettes. It has been established that cigarette smoking increases the risk of cancer, cardiovascular and pulmonary disease. Cigarettes have also been linked to subfertility and poor obstetric outcomes. Despite increased epidemiological knowledge of the health effects of smoking, public knowledge of this has not sufficiently followed suit.

**Objective(s):** To evaluate the knowledge of adverse reproductive and health conditions linked to cigarette smoking in a primary care patient population. To assess the effect of race, income, education and smoking status on patient knowledge.

**Material/Methods:** This was a prospective cohort study. Adult female patients at an Obstetrics and Gynecology clinic were administered a survey to assess their knowledge of health effects of cigarette smoking. Demographic and survey data were analyzed using descriptive statistics, ANOVA with post hoc analysis via SPSS software.

**Results:** Of the total 162 participants, 30.2% correctly identified the link between smoking and diabetes ($p = 0.017$), 35.8% for cervical cancer ($p = 0.027$), and 56.8% with risk of stroke ($p = 0.007$). When examined according to race, a greater percentage of both black and white participants correctly associated smoking with infertility ($p = 0.008$) and diabetes ($p = 0.003$) than their hispanic counterparts. More non-smokers identified diabetes as an effect of smoking ($p = 0.009$), whilst smore smokers identified cervical cancer as an effect of smoking ($p = 0.013$). A greater proportion of participants with income less than $25,000 were unable to associate smoking with early menopause ($p = 0.033$) or diabetes ($p = 0.004$) when compared to those with income between $26,000 and 50,000.

**Conclusions:** Knowledge disparities regarding of smoking and adverse reproductive and health outcomes exist amongst study participants. Significant differences in knowledge were found when examined according to race, income and smoking status. Improving patient education of the health effects of cigarette smoking, may influence patient behavior and ultimately impact health outcomes.

## P113. Perspectives on Mammography After Experiencing a False Positive Screen: What Do the Women Think?

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**Background:** The utility of mammography screening as an efficacious tool for early detection is being contested due to the risk of potential harms including false positives and over-diagnosis. Yet there is little research regarding women's experiences, values or preferences for participating in mammography programs.

**Objective(s):** Our aim was to explore women's actual experiences of a false positive mammography screen and their perceptions of the value, risks and benefits given their recent experience among a diverse group of mammography screeners.

**Material/Methods:** Semi-structured interviews were completed with 40 women who experienced a recent false positive mammogram at an urban academic hospital that provides care to low-income, medically underserved women. Interviews were recorded and transcribed verbatim. A directed content analysis was used to identify and explore primary themes. Knowledge of breast cancer risk was also assessed.

**Results:** Most (70%) women spoke to the necessity of mammography despite the worry incurred by the FP. One third of women wanted more risk/benefit screening information. Only 22.5% correctly identified lifetime risk of developing breast

cancer and 57.5% (n = 23) underestimated this risk. The FP experience also stimulated greater interest in modifiable breast cancer risk factors (32.5%; n = 13).

**Conclusions:** In a diverse sample of women whose voices are typically underrepresented in ongoing medical dialogue regarding mammography, we found that women considered FP an acceptable risk. However, it is clear that more prevention/early detection information is required. Further, our results suggest that breast cancer screening programs may provide a unique opportunity to deliver additional prevention interventions.

## P114. Nicotine Withdrawal and Craving in Women Exposed to Social and Environmental Cues: Does the Menstrual Cycle Play a Role?

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**Background:** Research suggests that women have a more difficult time quitting smoking than men and experience greater nicotine withdrawal and craving (W&C).

**Objective(s):** This study explores the relationship between exposure to social and environmental cues and W&C during short-term smoking abstinence by menstrual phase. We hypothesize that W&C will be higher during smoking abstinence for women exposed to social and environmental cues and that this relationship will vary by menstrual phase.

**Material/Methods:** Participants were female smokers aged 18–40 who were randomly assigned to temporarily quit during the follicular or mid-luteal phase of their menstrual cycle. At baseline, they provided information on their exposure to social and environmental cues, smoking behavior and demographics. On day three of smoking abstinence, participants completed the Minnesota Withdrawal Scale. A two group t-test was used to test mean W&C between groups. A two-way ANOVA was used to test the interaction between groups and menstrual phase.

**Results:** Participants (N = 154) were 28.8(±6.70) years old and smoked 12.1(±5.80) CPD. Craving scores were higher in participants where smoking was allowed ''anywhere in the home'' (3.34 ± 0.87), followed by ''some places in the home'' (3.27 ± 0.92) and ''nowhere in the home'' (3.01 ± 1.98; t = 1.86;p = 0.07). After controlling for race and age, craving scores were lower in participants who had ''few or no friends or family that smoked'' (2.88 ± 0.91) followed by ''about half'' and ''almost all'' (3.28 ± 0.92, 3.23 ± 0.98, respectively; t = 2.67;p = 0.07). Despite these clear trends in craving, no significant differences were found in withdrawal or craving by social and environmental cues. The interaction by menstrual phase was also not significant (p = 0.12).

**Conclusions:** These data suggest that not allowing others to smoke in the home and restricting the number of friends or family who smoke may decrease craving during smoking abstinence in women. Future research should explore how these observations may extend to permanent smoking cessation efforts and how the menstrual cycle may play a role.

## P115. Changes in Smoking Behavior Pre-Partum to Postpartum

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**Background:** Smoking cessation rates are significantly lower in women than in men and may be influenced by ovarian sex hormones. Clinical studies have reported a protective effect of progesterone against smoking related symptomatology. Since pre-partum to postpartum is a period of dramatic change in these hormones, it is a novel time to examine smoking behavior.

**Objective(s):** The purpose of this study is to characterize smoking behavior and smoking-related symptomatology from pre-partum to postpartum. We hypothesized that smoking behavior would increase postpartum in part due to the precipitous drop in progesterone levels following delivery.

**Material/Methods:** This is a cross sectional within subject study involving pregnant women 18–35 who smoked ≥ 5 cigarettes per day (CPD) and gave consent to complete the follow-up postpartum. At baseline, pregnant participants completed questionnaires assessing their smoking behavior and symptomatology. After participants delivered their baby, they were invited to participate in a follow-up study via a phone interview and online survey. Paired t-tests were used to compare measures pre-partum and postpartum.

**Results:** Participants (N = 15) were 27.1 ± 4.5 years of age and mostly white, non-Hispanic (66.7%). No significant difference was found in CPD postpartum compared to pre-partum (M = 10.8 ± 5.5, 11.9 ± SD = 4.3, respectively; p = .302). CES-D scores, however, were nearly twice as high postpartum compared to pre-partum (M = 12.1 ± SD = 7.2, 6.7 ± 3.6, respectively; p = .018). Significant differences were also found in the QSU-Brief Factor 1 (M = 18.8 ± 8.1, 10.8 ± SD = 6.0, respectively; p = .001) and Factor 2 (M = 14.5 ± 8.7, 7.1 ± 3.7, respectively; p = .005).

**Conclusions:** These data suggest that although smoking behavior (ie. CPD) did not differ pre-partum to postpartum; desire to smoke, anticipation of relief from negative affect (QSU-Brief Factors 1 & 2, respectively) and depressive symptoms (CES-D) were significantly greater postpartum. Sex hormones may play a role in this change and further studies are needed to determine how progesterone may be involved.

## P116. Assessment of Sexual Health Outcomes After Consultation in Mayo Clinic's Women's Health Clinic

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**Background:** Female sexual dysfunction is prevalent globally and most often involves low libido and difficulties with orgasm. Current treatment practices reflect the complex nature of the female sexual response and address associated sexual health factors.

**Objective(s):** To assess whether women experience improved sexual function after consultation in a specialty clinic and to characterize the consultative experience.

**Material/Methods:** The study population included women evaluated for sexual concerns between July 2012 and June 2013 in Mayo Clinic's Women's Health Clinic, Rochester, MN. A baseline Female Sexual Function Index (FSFI) questionnaire was completed at presentation. The Women's Sexual Concerns Survey was developed to collect outcome data. It consisted of a

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follow-up FSFI, questions on variables of sexual function (depression, anxiety, non-sexual pain, quality of life, partner satisfaction) and patients' consultative experience. Baseline and follow-up FSFI forms were scored using a validated method. The PHQ-2 tool screened for depression. Remaining factors were assessed by self-report, numerically or descriptively.

**Results:** Of 90 respondents, 67 women (mean age 53.3 years, range 25–79 years, 76.7% post-menopausal) had complete data for analysis. Total FSFI scores improved [from 14.7 (+/-8.9) to 17.6 (+/-10.4), $p = 0.004$], as did most sub-scores, particularly desire [2.1 (+/-1.0) to 2.6 (+/-1.3), $p = < 0.001$]. Qualitative data suggest this change was clinically significant. Score improvement correlated with satisfaction with partner emotional support ($p = 0.025$). Most women (60.9%) felt distressed less often after consultation and overwhelmingly found their visit helpful (87.6%).

**Conclusions:** Improvement in women's sexual function with a positive change in FSFI is associated with emotional support from one's partner. Our findings support previous studies identifying partner and relationship factors as determinants of women's sexual health. Further exploration of these determinants and therapeutic aspects of the clinical visit are warranted to better understand and treat women with sexual dysfunction.

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## P117. Mothers at Risk: Factors Effecting Postpartum Stay

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**Background:** The emphasis in perinatal research has focused primarily on neonatal outcomes especially with increasing rates of prematurity and low birth weight. Trends over the past several years show maternal death and morbidity due to complications in pregnancy, delivery, and postpartum to be much more prevalent problems than previously assumed. These complications are often preventable when appropriate resources and prompt treatment are available. As complications increase, the likelihood of longer postpartum stays due to the need for more extensive care will also increase.

**Objective(s):** Identify maternal risk factors with predictive value in determining postpartum length of stay in order to inform the development of a maternal morbidity metric.

**Material/Methods:** Linked 2008–2009 California hospital discharge and birth certificate data was used to examine obstetric complication codes considered relevant for population surveillance. Odds ratios for complications in women experiencing an extended length of stay were compared, using normal length of stay as the reference group.

**Results:** At least one comorbidity/complication was present in 17% of pregnancies and multiple comorbidities/complications were seen in 1%. Chronic hypertension was associated with ELOS for both modes of delivery (OR 5.9 [4.4-7.9] vaginal; OR 3.6 [3.1-4.2] cesarean). Puerperal infections (OR 6.9 [5.7-8.2]), eclampsia (OR 17.1 [13.8-21.6]), and transfusion (OR 11.7 [9.2-17.8]) were among the most prevalent of complications and conferred the highest odds of an ELOS for vaginal deliveries. Similarly, these complications as well as cerebrovascular conditions (OR 15.3 [11.9-19.6]) were seen most frequently in cesarean section births.

**Conclusions:** Various factors contribute to the occurrence of an extended length of stay during postpartum hospitalization. Use of a maternal morbidity metric can help improve the readiness and efficiency of obstetrical units thus decreasing maternal adverse outcomes including mortality. Health care facilities should develop guidelines for systematic identification of women at risk and ensure the availability of appropriate resources required to provide care.

## P118. Randomized Controlled Trial on Dressing Wear Time After Breast Reconstruction

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**Background:** Understanding infection risk factors for breast operations is essential to develop infection-prevention strategies and improve surgical outcomes. One of the major risk variables for surgical site infection is wound management in the postoperative period. However, the evidence to support dressing standards for breast surgery wounds is empiric and scarce.

**Objective(s):** This randomized controlled trial aimed to assess whether dressing wear time could influence surgical site infection rates and skin colonization. Patients' perception at self-assessment was also analyzed.

**Material/Methods:** A total of 200 patients, undergoing immediate or delayed breast reconstruction, were prospectively enrolled. Patients were randomly allocated to group I (dressing removed on postoperative day 1, $n = 50$) or group II (dressing removed on postoperative day 6, $n = 50$). Surgical site infections were defined by standard criteria from the Centers for Disease Control and Prevention. Patients were assessed weekly, for 30 days, and whenever a prosthesis was used patient were also assessed after one year. Skin colonization was assessed by culture of samples collected at predefined time points. Patients scored dressing wear time in regard to safety, comfort and convenience. Trial registration: ClinicalTrials.gov identifier: NCT01148823

**Results:** Groups were similar with regard to age, body mass index, duration of operation, technique and moment of reconstruction (immediate/delayed). Nine (4.5%) patients had infection, six from group I and three from group II ($p = 0.497$). There was no difference between the groups regarding skin colonization prior dressing, but, on postoperative day 6, there was a higher skin colonization by coagulase-negative staphylococci in group I ($p < 0.0001$). Patients considered keeping dressing for six days a safer choice ($p < 0.05$).

**Conclusions:** There was no difference in surgical site infection rates between groups, but colonization was higher in group I, on postoperative day 6. Patients perceived keeping dressing for six days postoperatively as a safer choice.

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## P119. Are There Sex Differences in the Presentation of Depression in Primary Care Settings?

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**Background:** Depression is twice as prevalent among women as men, but men with depression are half as likely as women to be diagnosed with depression in the primary care setting. Efforts to incorporate screening for depression into clinical care settings would be furthered by a better understanding the factors that motivate depressed individuals to seek primary care. The current study examined whether chief complaints differed among men and women who were identified by primary care providers (PCPs) as depressed vs. non-depressed.

**Objective(s):** The current study examined whether chief complaints differed among men and women who were identified by primary care providers (PCPs) as depressed vs. non-depressed.

**Material/Methods:** The chief complaints of patients with and without depression were evaluated using 2009 data from the National Ambulatory Medical Care Surveys (NAMCS), a nationally representative database of patient visits within the US. The current study comprised 11,478 primary care visits by adult patients (66.7% female). A total of 1489 (13%) patients were considered to be depressed by their PCP (3.2% males; 9.8% females). We examined the top 25 chief complaints for all patients in the sample to determine which were associated with a diagnosis of depression, after adjusting for demographic factors.

**Results:** Depression was associated with higher numbers of chronic conditions ($p < .001$), higher BMI ($p < .001$), more physician visits in the past 6 months ($p < .001$), and lengthier visits with physicians ($p < .001$). Compared to healthy controls, depressed men and women were significantly more likely to have an appointment for psychological indications (OR 9.94; OR 4.15) and significantly less likely to cite medical reasons (OR .43; OR .34), and were more likely to report depression or anxiety as the primary reason for seeking care. Depressed women were significantly more likely than non-depressed women to list headache (OR 1.45) or back pain (OR 1.39) as chief health complaints. Depressed men were significantly less likely than non-depressed men to list hypertension as a chief complaint (OR .422), and significantly more likely to list insomnia (OR 2.84) or thyroid dysfunction (OR 3.28) as chief complaints

**Conclusions:** Among patients who do not cite psychological reasons for seeking care, there are sex differences in the presentation of depressed patients who obtain care from primary care providers.

## P120. Evaluation of Online Sexually-Transmitted Infection Information for Pregnant Women and Their Partners

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**Background:** Sexually transmitted infections (STIs) during pregnancy can have a profound negative impact on maternal and infant health. Since most pregnant women in the U.S. access health-related information online, the layout and content of online information about STIs during pregnancy on popular websites may influence the behaviors and attitudes of pregnant women regarding prenatal care and subsequent childbirth.

**Objective(s):** To systematically evaluate popular websites containing STI information for pregnant women and their partners for relevancy, literacy demand, cultural appropriateness, and overall content.

**Material/Methods:** A comprehensive list of 40 search terms were utilized in three separate search engines to identify websites that frequently populated search results by our audience regarding information on STIs during pregnancy. Content, layout, and other facets of each identified website were assessed by using the Suitability Assessment of Materials (SAM) instrument. In addition, adequacy and readability of each website were assessed by calculated total suitability scores as well as Flesh-Kincaid, SMOG, and FOG Readability Scores.

**Results:** Fourteen unique websites were identified through overlapping searches by the authors. The content of most identified websites was fact-oriented, rather than behavior-oriented; furthermore, the majority of websites had an inappropriately high reading level (i.e., 9th grade or higher) and did not define complex medical terminology. Most websites scored well (i.e., adequate or superior) for layout, typography, and cultural appropriateness.

**Conclusions:** The online presentation of information pertaining to STIs during pregnancy is inadequate. Specifically, the consistent focus on informative facts over desirable behaviors may complicate how pregnant women absorb and inform their own behaviors regarding their pregnancy and childbirth from this information. Ultimately, this approach results in missed opportunities to influence positive efficacious behavior change in a vulnerable population trying to access accurate, useful health information outside of a health care provider's office.

## P121. "A Somali girl is Muslim and does not have premarital sex. Is vaccination really necessary?" A Qualitative Study into the Perceptions of Somali Women in the Netherlands of the Prevention of Cervical Cancer

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**Background:** The participation in Human Papillomavirus (HPV) vaccination and Papanicolaou Screening (Pap smears) is low among ethnic minorities in the Netherlands and hardly any information is available about Somali women living in the diaspora.

**Objective(s):** This qualitative study is based on the Health Belief Model (HBM) and an intersectionality frame work study and explores the perceptions of Somali women living in the Netherlands regarding the measures to prevent cervical cancer.

**Material/Methods:** Semi-structured interviews were conducted with young Somali women aged 17–21 years ($n = 14$) and Somali mothers aged 30–46 years ($n = 6$). Two natural group discussions were conducted with 12 and 14 Somali mothers aged 23–66 years. Data were analysed thematically for content.

**Results:** Three themes were distinguished in which gender and culture play a role: (1) perceived barriers to uptake of preventive measures: distrust of the Dutch health care system and embarrassment to get Pap smears due to Female Genital Mutilation (FGM) and having a Dutch male practitioner; (2) other ways of information and decision-making: the women used

mainly peers to exchange information; (3) risk perception: perceived susceptibility to HPV and cancer is low because of the religious norms that prohibit sex before marriage. Susceptibility to HPV through (future) male partners was unknown.

**Conclusions:** The current measures in the Netherlands to prevent women from cervical cancer hardly reach the Somali women, because these are perceived not to be relevant to them. Education about cervical cancer deviates from traditions to exchange information within the Somali community. Teachers can provide culturally sensitive information to young Somali women at schools. For Somali mothers, oral education, e.g. poetry or theatre, about the Dutch health care system and men's role in HPV transmission may be useful. An intersectionality approach, grounded in the HBM, is recommended to promote equal access to preventive health care for Somali women.

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## P122. Training Community Health Workers to Discuss Cousin Marriage and Genetic Risk with Migrant Women in the Netherlands (Family, Health and Genetics, G3-project phase I)

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[3]*Dona Daria, Rotterdam, Netherlands*

**Background:** Consanguineous marriage occurs among Dutch Moroccan and Turkish women. They have a higher risk for children with genetic diseases. Family, Health and Genetics (FHG/G3) is a community project in two cities.

**Objective(s):** G3 aims to contribute to informed reproductive choices by increasing these women's knowledge on consanguinity in local courses. In phase I, community health workers (CHWs) were trained and a handbook was developed by Dutch genetics experts (medical aspects), migrant-organizations (organization and didactic tools) and researchers. How did different stakeholders in phase I evaluate the preparation of CHWs for their role? Which lessons did we learn?

**Material/Methods:** In a Participatory Action Research (PAR) project in 2013, two migrant-organizations recruited and organized three training sessions each for in total 10 CHWs and two expert meetings about consanguinity, genetic risk, preconception genetic screening and reproductive options. A handbook for CHWs was written and two education meetings with migrant women are piloted. Data include transcripts and notes of training sessions, expert meetings, a focusgroup with genetics experts, education meetings, and 12 transcribed interviews with individual stakeholders. Framework analysis was applied to the data.

**Results:** The training was found complex. CHWs require initial competencies such as group work experience, migrant-organizations must organize exchange of experiences and need networks in the community, and all stakeholders need reflexivity. Normative beliefs defined the importance and choice of information: religious background (CHWs) or a correct understanding of genetics (experts). According to CHWs, practices that were religious taboos deserved less attention. For Dutch experts incorporating genetic screening in partner choice appeared uncomfortable.

**Conclusions:** Translating genetic knowledge into a shared message for migrant women was challenging by various presumptions of stakeholders. A community-based approach seems promising and opportunities to improve regular health care were revealed.

## P123. Intimate Partner Violence and the Effects on Breastfeeding Outcomes

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**Background:** Background: Intimate partner violence (IPV) is a major public health problem that negatively affects the health and well-being of society. Not only is IPV the most prevalent type of violence against women in the world, it is often seen as a violation of women's human rights (World Health Organization [WHO], 2013). IPV outcomes for women include homicide, suicide, injuries, induced abortions, unintended pregnancies, sexually transmitted diseases, low birth weight babies, an array of mental health problems, and poor overall health (Violence against Women, 2014). In addition to well-known outcomes of IPV, IPV before pregnancy and during pregnancy might be a risk factor for initiation of breastfeeding and a shorter duration of breastfeeding.

**Objective(s):** We sought to assess the relationship between breastfeeding outcomes (initiation and duration) and abuse by identifying if abuse before pregnancy or during pregnancy, or if abuse at any time was predictive of breastfeeding initiation or duration.

**Material/Methods:** Data was collected from the Pregnancy Assessment Monitoring System (PRAMS) Phase 5 (2004–2008) and Phase 6 (2009–2011). The sample includes women who recently had a live birth. Logistic regression was used to determine if abuse before pregnancy or abuse during pregnancy affected breastfeeding initiation or duration. Data was analyzed using SAS version 9.4 statistical software.

**Results:** Women who were abused 12 months before pregnancy, abused during pregnancy, and abused either before or during pregnancy were less likely to initiate breastfeeding and are more likely to breastfeed < 5 weeks compared to women who were never abused.

**Conclusions:** The results suggest that abuse 12 months before pregnancy or abuse during pregnancy predicts breastfeeding initiation. The results also suggest that abuse may predict breastfeeding duration.

## P124. Collaborating to Improve Care for Women with Gestational Diabetes and Impact the Prevention of Type 2 Diabetes

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**Background:** Gestational diabetes (GDM) affects 6% of pregnancies in the United States. Women with GDM have a 70% chance of developing type 2 diabetes ((T2DM) in the decades following the pregnancy. Only about 50% of women with GDM receive post-partum glucose tests to screen for diabetes. In one state, only 19.5% of providers reported testing glucose levels in women with GDM ''all of the time'' at post-partum visits. Various factors influence low levels of testing (e.g., gaps in surveillance, GDM documentation errors, lack of awareness about the association between GDM and increased risk for T2DM

**Objective(s):** To share the achievements and lessons learned of the GDM Collaborative Better Data Better Care

**Material/Methods:** The Centers for Disease Control and Prevention partnered with the National Association of Chronic Disease Directors to establish a multistate collaborative (''the Collaborative'') to identify gaps in GDM data, improve documentation, increase post-partum glucose testing, and increase GDM education.

**Results:** Health departments, university and tribal health systems in 9 states and 4 tribal organizations used existing surveillance data to conduct quality improvement strategies to improve and change policies and systems. To improve documentation, fields were added to electronic birth certificates to indicate a diagnosis of GDM, resulting in a 30% increase reporting over the study period. To increase postpartum testing, a reminder was mailed to mothers with live births and GDM, associated with a 35% increase in testing. States conducted professional education venues based on surveys among providers to identify professional education needs.

**Conclusions:** The Collaborative's findings can serve as a model for others to replicate these interventions to potentially reduce the risk of women progressing from GDM to type 2diabetes

## P125. Influence of Physician Sex on Treatment of Low Back Pain

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**Background:** Low back pain (LBP) is a prevalent and costly public health issue and a leading cause of disability. Improved outcomes have been shown with evidence based guideline (EBG) treatment. Yet adherence to EBG remains inadequate. Different practice styles have been associated with physician gender and are poorly understood. The purpose of this study is to investigate the effect of physician gender on the management of LBP.

**Objective(s):** This study was part of a larger study aimed at understanding nonclinical factors that affect physician management of LBP, including the effect of physician sex.

**Material/Methods:** Clinical vignettes were used to query physicians on prescription for acute nonspecific LBP, asking for treatment prescription in six different domains. All domains are those for which EBG provide recommendations. Each physician read one vignette. The independent variables were patient gender, socioeconomic status (high/medium/low) and patient presentation (somatic/affective) and the outcome was treatment recommendation.

**Results:** 284 primary care physicians participated in the study (male = 144; 15 unreported). Six prescribed treatments were associated with physician gender. Male physicians were ten times more likely to refer to an orthopedist ($p = 0.004$) and 2.5 times more likely to refer to a physiatrist ($p = 0.005$), both 'against EBG' recommendations. Treatments associated with pain relief were more often recommended by female physicians, including muscle relaxors ($p = 0.01$) (against EBG), thermal modalities ($p = 0.01$) and manipulation ($p = 0.03$), as were the use of CT scans for diagnostic purposes ($p = 0.01$) (against EBG).

**Conclusions:** Differences in treatment were observed with no clear explanations as to why. Empathy is associated with female caregivers and may provide insight. As concerning as the variations in care, is that all physicians provided care associated with the progression of LBP to chronicity. Further studies are needed to understand physician managing LBP and to promote EBG care of this prevalent and costly condition.

## P126. Awareness of Heart Disease and the Red Dress Among Women in Georgia

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**Background:** Heart disease remains the leading cause of death (LCOD) among women in the United States. The National Heart, Lung, and Blood Institute (NHLBI) and the American Heart Association (AHA) have launched national RED DRESS brand campaigns aimed at increasing awareness among women about their risk of heart disease. The impact of the Red Dress brand in states with higher heart disease death rates is unknown.

**Objective(s):** This study examined the association of RED DRESS symbol recognition and heart disease awareness among women in Georgia.

**Material/Methods:** A web-based survey was administered to a convenience sample of women, ages 30 to 60, residing in the state of Georgia ($N = 447$). A cross-sectional analysis was performed. Associations of Red Dress symbol recognition and heart disease awareness were assessed by chi-square.

**Results:** Sixty percent of Georgia residents recognized AHA's Go Red Dress symbol, and 83.3% correctly identified the NHLBI's Heart Truth® symbol. Heart disease awareness was significantly associated with AHA GRFW and NHLBI Heart Truth® symbol identification. Awareness of heart disease was also strongly associated with two risk behaviors (i.e. smoking and blood sugar screening). No significant racial/ethnic differences were found in awareness of heart disease; however behavioral risk patterns were not consistent among the racial/ethnic groups studied. For example, the average BMI in African-American (AA) women was 2% points higher than other racial groups, however AA women were more likely to report having their cholesterol checked and were less likely to be current smokers. Finally, significant racial/ethnic variations were noted in GRFW symbol identification, but not NHLBI Heart Truth®.

**Conclusions:** Results of this online study provide evidence of moderate levels of awareness and Red Dress recognition among women in a state with disproportionately high rates of heart disease. Further study of regional and ethnic variations in awareness, Red Dress recognition, and risk behaviors is needed.

## P127. Sex Subgroup Analysis from US and International Sites for Pivotal Clinical Trials of New Drugs and Biologic Products Approved by CDER/FDA in January-July 2014

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**Background:** Since the 1980s, concerns have been raised about whether US women are being adequately represented in premarket drug trials. In addition, drug development increasingly relies upon data from international sites, raising additional concerns about generalizability to the US population.

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**Objective(s):** The purpose of this study is to assess the participation of women from US and international sites in pivotal trials for new drugs approved by CDER/FDA in January-July 2014.

**Material/Methods:** A retrospective review of sex subgroup analysis in pivotal trials for New Molecular Entity (NME) and Original Biologic License Application (BLA) marketing applications approved by CDER from January-July 2014 was conducted.

**Results:** CDER approved 16 NMEs and 7 BLAs in this time period. Overall, women accounted for 32.3% of subjects in pooled pivotal efficacy trials, 34.4% at US and 31.3% at international sites. Percent female participation was generally similar at US and international sites for most disease indications. One example of an exception was a Chronic Obstructive Pulmonary Disease (COPD) drug program, where female participation was higher in the US (43.1%) than internationally (18.8%).

**Conclusions:** Female participation in clinical trials varies depending on the therapeutic area. Generally, female participation for US vs. international sites was similar. The difference in the COPD program was likely due to differences in disease prevalence by region; however, efficacy by sex in the US trial was still able to be assessed.

## P128. Use of Plasma Cell-Free DNA as Prognostic and Predictive Biomarker in Non-Invasive Analysis of Breast Cancer

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**Background:** Early detection of breast cancer greatly increases the chances for cure and long terms survival. For this reason, screening tests are recommended for early detection of specific cancers. To date, however, only mammography for breast cancer is widely adopted for both technical and economical reasons. Therefore, it is essential to develop a new and more universal screening assay that is applicable to early detection and prognosis of breast cancer. Circulating tumor DNA carries mutations derived from the original tumor such as point mutation, deletions, duplication, methylations and microsatellite aberrations. Therefore it has long been proposed to use ctDNA as a molecular marker for early detection of cancer.

**Objective(s):** To explore the characterization of ctDNA which would be used for early diagnosis and prognosisof breast cancer.

**Material/Methods:** Five patients with advanced breast cancer were followed over 1–2 years. For each case, targeted tumor related genes sequencing was performed on 3-6 plasma samples spanning multiple courses of treatment. Quantification of allele fractions in plasma identified increased mutant alleles in association with tumor genome evolution and possible driver mutations. We identified high-level of CNV and SV mutations in ctDNA and confirmed the results in paired tumor DNA samples.

**Results:** Some of the mutated chromosome regions harbor genes with oncogenic activities reported before, including RAD51, CHEK2, BRIP1 and ATM. Through optimization of ccfDNA library construction and re-design of capturing probes targeting specifically for ctDNA, we improved the capturing efficiency to cover more than 97% of the cancer genome, which is comparable to the assay utilizing tumor DNA. Here we set up a novel approach to analyze ctDNA with greatly improved sensitivity and reduced cost, which may enable its application as early screening assay for breast cancer diagnosis and prognosis.

**Conclusions:** Our study demonstrated the potential of circulating tumor DNA biomarker studies in advanced breast cancer patients for personalized treatment. Further studies to enable the incorporation of this non-invasive biomarker into the standard of breast cancer patient care are needed.

## P129. Ethnicity Does Not Play a Role in Tumor, Nodal or Tumor and Nodal Down-Staging in Patients with Breast Cancer Post Neo-Adjuvant Chemotherapy

Sharon Yu[1], Huan Vu[2]

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[2]*VCU Dept of Surgical Oncology, Richmond, Virginia, USA*

**Background:** Ethnicity plays a role in receptor status. However, whether or not ethnicity plays a role in tumor or node response to neo-adjuvant therapy has not been studied.

**Objective(s):** To determine the significance of ethnicity in the response rate for patients who have undergone neo-adjuvant chemotherapy for breast cancer.

**Material/Methods:** A retrospective analysis of African-American (AA) and Caucasian (C) women with breast cancer was conducted to determine the role of ethnicity in tumor response (TR), nodal response (NR) or both tumor and nodal response (TNR) after neo-adjuvant chemotherapy. ''Response'' was defined as down staging of the tumor, nodal status or both. The T responders, N responders and T&N responders between the two ethnic groups were compared using the Fischer's exact test. The study groups were analyzed for differences between clinical T stage (cT stage) using a Chi-squared test, while differences between estrogen receptor (ER), progesterone receptor (PR), HER2/Neu receptor (HER2R), triple negative receptor (EPHN) status and clinical N stage (cN stage) was evaluated with the Fischer's exact test.

**Results:** Forty-six AA and 66 C women eligible for analysis. The two groups differed in ER status (32.6% + AA and 62.1% + C; $p = 0.0030$), PR status (21.7% + AA and 50% + C; $p = 0.0145$) and EPHN status (47.8% + AA and 24.2% + C; $p = 0.0145$). No difference in the HER2R status (21.7% + AA and 30.3% + C; $p = 0.3879$). Both groups had similar cT stage ($p = 0.8334$) and cN stage ($p = 0.0526$). Following neo-adjuvant chemotherapy, analysis revealed no difference in tumor response rate (47.8% AA and 59.1% C; $p = 0.2540$), nodal response (43.55% AA and 45.5% C; $p = 0.8494$) or both tumor and nodal response (30.4% AA and 31.8% C; $p = 1.0000$).

**Conclusions:** Despite differences in receptor status, both ethnicities experienced similar tumor, node or tumor and node response rates with neo-adjuvant chemotherapy for breast cancer.

## P130. A Retrospective Study on Receptor Status in African American and Caucasian Patients with Breast Cancer and Its Effects on Sentinel Lymph Node Identification Rate

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**Background:** Ethnicity plays a role in receptor status. However the role of ethnicity and receptor status on the rates of sentinel node identification has not been studied.

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**Objective(s):** To determine the significance of ethnicity and receptor status in sentinel lymph node identification rate (SNIDR).

**Material/Methods:** Retrospective comparison of African American (AA) and Caucasian (C) patients with breast cancer. Estrogen receptor (ER), progesterone receptor (PR), Her2 receptor (HER2R) and triple negative receptor (EPHN) status was compared. The differences between clinical T stages (cT stage) were evaluated using a Chi-squared test. The differences between clinical N stage (cN stage), ER, PR, HER2R, EPHN status, tumor (T) response, nodal (N) response, tumor & nodal (T&N) response and SNIDR were compared using the Fischer's exact test. ''Response'' was defined as down staging of the tumor, nodal status or both.

**Results:** Forty-six AA and 66 C women eligible for analysis. There was no difference in their cT stage, cN stage, T response, N response, T&N response or HER2R status ($p = NS$ for all). The two groups differed in ER status ($p = 0.0037$), PR status ($p = 0.0145$) and EPHN status ($p = 0.0145$). SNIDR was lower in AA (80.4%) than for C (93.9%) overall ($p = 0.0370$). SNIDR was lower for AA (73.3%) than for C (100%) with positive ER status ($p = 0.037$). Also true for positive PR status ($p = 0.0498$) with 80% identification in AA and 100% in C. However with either negative ER status or negative PR status, no difference found in SNIDR ($p = NS$ for both). For HER2R status, no difference found in SNIDR with HER2R positive ($p = NS$) but a difference if HER2R was negative ($p = 0.0088$). EPHN status showed no difference in SNIDR whether positive or negative ($p = NS$ for both).

**Conclusions:** AA and C patients had similar cT, cN stages, tumor response, nodal response and tumor & nodal response. AA were more likely to have ER, PR negative and EPHN status; the rates of HER2R were similar. Overall, AA women were less likely to have sentinel lymph node identification than C. SNIDR was also lower in AA women with positive ER status, positive PR status or negative HER2R status than C patients, but no difference in relation to EPHN status.

## P131. The Study of the Validity and Reliability of the Turkish Version of Women's Physical Activity Self-Worth Inventory

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**Background:** The research is based on Jenifer Huberty and others work ''Developing an instrument to measure physical activity related self-worth in women: Women's Physical Activity Self-Worth Inventory (WPASWI)'' Because of the gap and need in this field the Author conducted the Turkish version of the research.

**Objective(s):** The aim of this methodological study is to test the reliability and validity of the Turkish version of Women's Physical Activity Self-Worth Inventory.

**Material/Methods:** Translation and back-translation technique were used for the psycholinguistic validity of the Turkish version of the inventory. Exploratory factor analysis was used to determine the construction validity of the inventory.

**Results:** According to the results of factor analysis, the original scale with the Turkish version of the subscales were similar. Changes were observed in the order of PA Knowledge SW (16 items) and PA Social SW (13 items) subscales. The internal consistency and item analysis were used to determine the reliability of the Turkish version of the Women's Physical Activity Self-Worth Inventory. Both the split-half correlation coefficient (0.74) and the alpha coefficient (0.91) are well above the 0.70 criterion for the split-half reliability and internal consistency reliability. Cronbach's alpha values of subscales were between 0.80 - 0.91. All of the correlations between inventory items were significantly higher. Positive correlations were observed between the variables.

**Conclusions:** Turkish version of Women's Physical Activity Self-Worth Inventory was found to be a reliable and valid means to assess non- physical aspects of physical activity (PA)-related self-worth (SW). In line with the results obtained from the research, it is recommended that the Women's Physical Activity Self-Worth Inventory Turkish version should be applied on wider populated groups and the validity and reliability of analysis should be examined.

## P132. Building a Neural Model for Mindfulness' Mechanism of Action in Women with IBS and Other Chronic Pain Disorders

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**Background:** Previous research shows that women's pain experiences in chronic functional disorders are partially maintained by maladaptive neural coupling. In these women, brain areas that encode complex pain sensations (e.g., right anterior and posterior insula) are abnormally coupled to brain areas that support ongoing maintenance of the ''task-off'' network that is most active during rest (e.g., posterior cingulate cortex). One way to interpret these findings is to view the pain experience in these disorders as a product of excessive salience and attention towards normally innocuous sensations. This view is in line with other studies showing that mindfulness training appears to normalize functional coupling between the relevant brain regions.

**Objective(s):** The objective of this study is to examine baseline functional connectivity in a baseline scan of women with irritable bowel syndrome (IBS) enrolled in a RCT evaluating Mindfulness Based Stress Reduction (MBSR) vs. Treatment As Usual (TAU). These data will be used to develop a mechanistic model for understanding therapeutic change in bowel symptoms, mood and somatization in the RCT. Our theoretical model posits that any MBSR-related improvement observed will be correlated with adaptive re-organization of altered neural couplings between brain areas of the resting-state network and brain areas involved in pain processing.

**Material/Methods:** Women with IBS ($N = 26$) enrolled in a RCT of MBSR vs. TAU. Here we present baseline brain connectivity from the preliminary fMRI resting-state scans.

**Results:** These data indicate that IBS symptom severity (IBS-SS) and somatization are associated with altered coupling between body sensation encoding areas in the anterior insula with attentional areas (e.g, dorsolateral prefrontal cortices dlPFC) of the brain in women at baseline. Additionally, the anterior insula appears to be more decoupled from the posterior cingulate cortex

(PCC) in patients with higher baseline levels of IBS-SS and somatization.

**Conclusions:** These baseline findings indicate that women with IBS and chronic pain may not be activating the traditional resting state network in relation to their ongoing IBS-related body sensations. Instead, women with IBS and chronic pain may be hyper-attending to body sensations in a dysfunctional way that engages the executive attention network (e.g., dlPFC). These findings suggest that any improvements in symptom severity and quality of life following MBSR may be mediated by changes in the coupling of attentional areas from the body-state and pain encoding areas.

## P133. Accomplishments of the US Army's Women's Health Task Force

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The Women's Health Task Force was established in 2011 in response to then Major General Patricia Horoho's deployment to Afghanistan. MG Horoho deployed with a group of experts from varying health disciplines, from information technology to combat casualty care and women's health. Upon return in Fall of 2011, the group of women's health professionals wrote ''The Concerns of Women Currently Serving in the Afghanistan Theater of Operations (ATO)'' White Paper. The Health Services Support Assessment team integrated this document into its larger report, which identified 26 tasks that were specific to women's health, centered on six broad categories. These include Health Education, Barriers to Seeking Care, Uniform and Protective Gear Fit and Function, the Effects of Deployment on Family and Children, and Sexual Harassment Assault Response and Prevention (SHARP).

Significant improvements include the introduction of education into new Soldier and leader courses, more robust marketing of the Female Urinary Diversion Device (FUDD), and the establishment of a website with health education content for female Soldiers and providers. Algorithms were developed to help give medics and providers in austere settings the screening tools necessary to treat in place and avoid unwarranted evacuation. Armor was modified to ensure the anthropometric differences between males and female were considered. Finally, prospective studies are underway that will study the pre and post deployment effects on children, spouses and service members.

With decreasing deployments to Iraq and Afghanistan, the ability to quantitatively study the benefits of the changes are difficult. Additional studies will focus on simulating deployment through analysis during field training exercises. The Women in the Military Self Diagnosis kits, which would give females Soldiers the ability to self-test for a variety of conditions, may benefit from further study and work.

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