Presenting Residents

Title: Obstetrics and gynecology residents as teachers: Impact of a defined curriculum on evaluation of teaching confidence
Authors: Elizabeth C. Cappelletti, MD
Preceptor: B. Star Hampton, MD
Other authors: Kristen A. Matteson, MD, MPH, Gary Frishman, MD
Baystate Collaborators: Carrie Bell, MD and Heather Z. Sankey, MD

Objective: To determine the impact of an Obstetrics and Gynecology (Ob/Gyn) specific Resident as Teachers (RATS) curriculum on resident self assessment of teaching confidence.

Methods: This is a prospective cohort study. Ob/Gyn residents at Women and Infants Hospital WIH) in Providence, RI and Baystate Medical Center in Springfield, MA were eligible. An intervention consisting of an Ob/Gyn specific RATS curriculum was designed and instituted within resident CORE curriculum, specifically focused on teaching oral presentations, written documentation and tactile skills. Participant baseline demographic information was obtained. A survey measuring resident self assessment of teaching confidence (scale of 1-10, higher scores indicating higher confidence) was designed and underwent expert review. Participants completed the survey at baseline, directly prior to intervention (three months later), and immediately post-intervention. Three and six month post-intervention surveys are planned. Sample size calculation called for 26 residents to have 80% power for detecting a >2 point increase in confidence score.

Results: 51 residents were eligible and enrolled (20 Baystate, 31 WIH) with mean age of 29.6 years. 72% had previous teaching instruction. 40 completed baseline and post-intervention questionnaires. Baseline mean composite confidence score increased with year of residency (6.0 for PGY1s to 7.5 for PGY4s, p=0.0002). Scores were higher for residents ≥ 29 years old than those <29 years old (6.6 vs 7.3 p=0.009). These relationships persisted post-intervention. Mean composite confidence scores for both institutions increased from 7.0 at baseline to 7.5 post-intervention (p<0.0001); with WIH resident mean score increasing from 7.1-7.6 (p<0.001) and Baystate mean score increasing from 6.9-7.3 (p=0.08). For the subset of WIH participants, there was not a significant change from baseline to pre-intervention mean composite confidence scores (7.0 to 7.1 (p=0.30)) but there was a significant increase in scores pre-intervention to post-intervention (7.2 to 7.6 (p=0.001)). For both institutions, mean composite confidence score in teaching oral presentation skills increased significantly baseline to post-intervention (6.7 to 7.7 p=0.0001) whereas there was a non-significant increase in mean score for teaching tactile skills and effective documentation (6.6 to 7.1 (p=0.08) and 7.8 to 7.9 (p=0.58) respectively.

Conclusion: A RATS curriculum can improve Ob/Gyn resident teaching confidence.

Title: Self-esteem and contraceptive use in adolescent mothers
Author: Jacquia L. Fenderson, MD
Preceptor: Maureen G. Phipps, MD, MPH
Other authors: Crystal Jocelyn, Monica Sull and Christina A. Raker, ScD

Objective: To understand the relationship between self-esteem and contraceptive usage in adolescent mothers to inform future interventions to increase postpartum contraceptive use and decrease rates of repeat teen pregnancies. We hypothesize Adolescent mothers with higher levels of self-esteem, as measured by the Rosenberg Self-Esteem Scale, will have higher rates of contraceptive usage compared with those adolescent mothers with lower levels of self-esteem. Secondary hypothesis was that adolescent mothers with high levels of self-esteem will use more effective, long acting contraceptive methods compared with adolescent mothers with low levels of self-esteem.

Methods: The study population consists of a Cohort of 100 adolescent mothers participating in the follow up phase of the REACH study at their 2-3 year follow-up period. The Rosenberg Self-Esteem (RSE) Scale, a validated global measure of self-esteem in adolescents, consists of 10 statements which represent a continuum of self-worth. Our independent variable was RSE score with < 30 indicating Low Self-Esteem
and \( \geq 30 \) indicating High Self Esteem. The primary outcome measure was contraceptive usage. The secondary outcomes measured are contraceptive types, compliance with usage and reliability of methods. Using EpiInfo Statcalc function, we found that we would need a sample size of 56 to 98 participants to detect a difference in contraceptive usage between teens with Low and High self-esteem.

**Preliminary Results:** Our results are based on responses from 54 participants. Adolescent mothers in the High Self-esteem group had higher rates of present contraceptive usage than those in the Low Self-esteem group, 78.6% and 50% respectively \((p=0.07)\) with odds ratio of 3.67 \((0.95-14.15)\). Adolescent mothers in the Low Self-esteem group had higher rates of delivery of a second infant compared with the High Self-estee group \((p=0.02)\).

**Conclusion:** Although data collection is ongoing, preliminary results show that higher levels of self-esteem in adolescent mothers correlate to better contraceptive choices and lower rates of second pregnancies. This information can be used to inform future programs and interventions to decrease repeat pregnancy in teens.

**Title:** Predictive value of initial serial human chorionic gonadotropin (hCG) decline in pregnancies of unknown location

**Author:** Melanie S. Greenman, MD

**Preceptor:** Sandra A. Carson, MD

**Other authors:** Wendy S. Vitek, MD, Christina A. Raker, ScD

**Objective:** Multiple approaches to managing pregnancies of unknown location (PULs) exist with the goals of identifying and treating ectopic pregnancies, while minimizing unnecessary interventions. Spontaneously resolving PULs are defined as unlocated pregnancies where hCG resolution is observed without medical or surgical intervention. The ability to predict the time to hCG resolution in this population would inform patient counseling and reduce the number of serial hCG levels drawn to confirm resolution. The hypothesis of this study is that the slope of decline between the initial serial hCG levels will predict the time to hCG resolution in spontaneous resolving PULs. Secondary aims of this study were to identify characteristics associated with provider intervention in managing PULs.

**Methods:** Retrospective review of the 1178 women managed through the Women & Infants Hospital beta board service from 2008 -2010 identified 351 subjects with the initial diagnosis of PUL. Of these 351 subjects, 70 subjects were classified as spontaneously resolving PULs given the following criteria; unlocated pregnancy upon initial evaluation, decline between the first and second hCG levels drawn within a 36-60 hour period from initial diagnosis, and spontaneous resolution of hCG to \(<5 \text{ mIU/ml}\) observed without medical or surgical intervention. The correlation between the slope of initial hCG decline and time to hCG resolution was analyzed using spearman rank correlation. Characteristics associated with provider intervention were analyzed using Fisher’s exact test or T-test.

**Results:** The slope of initial hCG decline and the time to hCG resolution was not correlated given a spearman rank correlation of -0.067 \((p=0.6)\). 16% underwent intervention such as uterine curettage or empiric methotrexate. A mean hCG decline of 22% was associated with an intervention. In contrast, a mean decline in hCG of 60% was observed in subjects ultimately diagnosed with spontaneously resolving PULs \((p<0.0001)\).

**Conclusion:** Although the slope of initial hCG decline in PULs was not predictive of time to hCG resolution, it was predictive of provider decision to perform an intervention.

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**Title:** Influence of clinical history and demographic factors on infertility patients’ willingness to participate in clinical research

**Author:** Megan L. McCoin, MD

**Preceptor:** Carol A. Wheeler, MD

**Other authors:** Vrishali Lopes, MS, Kristen A. Matteson, MD, MPH

**Objective:** In a population of infertility patients, to identify factors associated with patient willingness to participate in clinical research.

**Methods:** We performed a survey of women undergoing evaluation or treatment of infertility at Women and Infants Hospital between August 2010 and April 2011. Women who agreed to participate completed a
questionnaire about infertility treatments, knowledge about clinical research, and willingness to participate in research. Logistic regression was used to calculate odds ratios (OR) with 95% confidence intervals (CI).

**Results:** Of 272 surveys distributed, 213 were returned completed (78%). Thirty four percent of participants (n=72) indicated they would be willing to consider participation in clinical research. Perceived lack of research knowledge was the most common (46%) reason given for uncertainty (38%, N=81) or unwillingness (28%, N=60) to participate. Sixty one percent of uncertain participants stated they would be more willing to participate after a discussion with their provider. Age, race, parity, education, and insurance were not associated with willingness to participate. Controlling for potential confounders, patients who reported greater than 6 months of infertility treatment had greater odds than patients with less than 6 months of treatment of being willing to participate (OR = 3.4, 95% CI 1.18-10.3). Patients who had previously participated in clinical research had much greater odds of being willing to participate than patients who had not participated in research (OR = 7.9, 95% CI 2.04-30.4).

**Conclusions:** In this population, greater than 6 months of infertility treatment and previous participation in research were associated with willingness to participate in clinical research. Providing patient education on clinical research and involving providers in recruitment may improve participation of infertility patients in clinical research. Understanding factors associated with patient willingness to enter infertility research may help assist clinical trial recruitment strategies.

**Title:** The effect of pelvic organ prolapse severity on improvement in overactive bladder symptoms after pelvic reconstructive surgery

**Authors:** Jeannine M. Miranne, MD

  **Preceptors:** Cassandra L. Carberry, MD, Vivan W. Sung, MD, MPH

  **Other authors:** Vrishali Lopes, MS

**Objective:** Pelvic organ prolapse (POP) and overactive bladder (OAB) often coexist. It is unclear whether the severity of POP may impact OAB outcomes after surgical correction. Our objective was to evaluate the effect of baseline POP severity on OAB symptoms after POP surgery.

**Methods:** We performed a retrospective cohort study of women with baseline POP and OAB preoperatively who underwent surgical correction of symptomatic apical and/or anterior POP between 1/2006 and 6/2010. Women without OAB symptoms or who had concomitant anti-incontinence surgery were excluded. Preoperative OAB symptoms were defined as an affirmative response to item #15 (urinary frequency) and/or item #16 (urge incontinence) on the Pelvic Floor Distress Inventory (PFDI). POP severity was dichotomized as Stage 1-2 versus Stage 3-4 based on the POP-Q. POP severity was dichotomized as Stage 1-2 versus Stage 3-4 based on the POP-Q. Postoperative improvement in OAB symptoms was defined as either complete resolution or improvement in bother of urinary frequency or urge incontinence on the PFQI at 12 months postoperatively.

**Results:** 183 women met inclusion criteria; 77 (42%) had Stage 1-2 POP and 106 (58%) had Stage 3-4 POP. Women with Stage 3-4 POP were older than women with Stage 1-2 POP (69 ± 12 vs. 60 ± 13 years, p<0.01). The mean BMI was 27.8, 95% were white, 25% had prior prolapse surgery, 8% had prior incontinence surgery, and 4% were on anticholinergics preoperatively, and these did not differ between groups. There were no differences in smoking, duration of OAB symptoms, baseline UDI or POPDI scores between groups. A higher proportion of women with Stage 3-4 POP had detrusor overactivity (DO) on urodynamics (p=0.03). There were no differences in the types of surgical repairs performed between groups (p>0.05). At 12 months postoperative, 90% of women with Stage 1-2 POP versus 85% with Stage 3-4 POP reported improvement in urinary frequency (p=0.5). 94% with Stage 1-2 and 88% with Stage 3-4 POP reported improvement in urge incontinence (p=0.45). On multiple logistic regression, women with Stage 3-4 POP had a decreased odds of experiencing improvement in urge incontinence compared to women with Stage 1-2 POP (AOR=0.23 [95% CI 0.06-0.91]), after adjusting for baseline UDI scores, age, and DO on preoperative urodynamics.

**Conclusion:** Women with coexisting POP and OAB who undergo surgical correction of POP experience improvement in OAB symptoms after surgery, although women with more severe POP may be at higher risk for persistent urge incontinence.
**Title:** Effect of concomitant anterior vaginal repair on midurethral sling outcomes  
**Author:** Kristina Mori, MD  
**Preceptor:** Vivian W. Sung, MD, MPH  
**Objective:** To estimate the effect of concomitant anterior vaginal repair with midurethral sling (MUS) compared to MUS alone on the risk of post-operative urinary retention and sling failure within 1 year following surgery.  
**Methods:** This retrospective cohort study included women who underwent MUS alone or with concomitant anterior vaginal repair between 06/2008–12/2009. Our primary outcome is a composite of urinary retention (postoperative catheterization >3 days, or return to the operating room for sling revision for retention) and/or sling failure (affirmative response to PFDI question #17 or positive cough stress test post-operatively). Fisher’s exact test was used to compare the number of women with urinary retention and/or sling failure. Multivariable logistic regression was performed to estimate the effect of concomitant anterior vaginal repair with MUS on increasing the risk of urinary retention and/or sling failure compared to MUS alone, adjusting for potential confounders.  
**Results:** 185 women met inclusion criteria. 20% of women underwent concomitant anterior vaginal repair and MUS, and 80% underwent MUS alone. There were no significant differences in age, parity, race, BMI, prior history of anti-incontinence or prolapse surgeries, presence of intrinsic sphincter deficiency, type of midurethral sling, preoperative post-void residual volumes, or mean follow-up time between groups (p>0.05). A higher proportion of women in the combined procedure group received regional anesthesia (36.1% vs. 16.9%, p=0.03). A higher proportion of women in the combined procedure group experienced sling failure (14.8% vs. 10.8%), as well as urinary retention (16.2% vs. 8.0%) although these did not reach statistical significance. On multiple logistic regression, women who underwent concomitant anterior repair and MUS had increased odds of having the composite outcome of urinary retention and/or sling failure compared to women who underwent MUS alone (AOR 4.49, 95% CI 1.20-16.8) after adjusting for type of sling placed, anesthesia type, and pre-operative POP-Q scores.  
**Conclusion:** Women who underwent concomitant anterior vaginal repair and MUS are at increased risk for experiencing urinary retention and sling failure compared to women who underwent midurethral sling alone.

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**Title:** Will increasing the age for initiating screening mammography disproportionately delay cancer diagnosis in minority women?  
**Author:** Michaela A. Onstad, MD  
**Preceptor:** Trevor Tejada-Berges, MD  
**Objective:** With the United States Preventive Services Task Force (USPSTF) recent recommendations to increase the age for initiating screening mammography from 40 to 50 years old, we aim to explore the impact this may have on delaying breast cancer diagnosis in ethnic minorities and white women. We hypothesize that, among women aged 40-49 who receive screening mammograms, Hispanic and African American women are more likely to have abnormal mammograms and to be diagnosed with breast cancer compared to non-Hispanic white women.  
**Methods:** This is a retrospective cohort study of women who have received screening mammograms through the Rhode Island Women’s Cancer Screening Program. We include mammograms of women aged 40-49, who identify themselves as Hispanic or Black compared to non-Hispanic white women. We compare rates of abnormal mammograms and breast cancer diagnoses among these two groups. Using an α= 0.05 and power of 80%, in order to detect a 6.5% difference in the rate of abnormal mammograms we needed to achieve a sample size of 1010. This would allow us to detect a four-fold difference in breast cancer rates.  
**Results:** 330 of 1682 mammograms (20.2%) performed on women who identified themselves as Black and/or Hispanic were abnormal, compared to 206 of 1164 mammograms (17.7%) in non-Hispanic whites, with a RR = 1.14 (0.97-1.33). Breast cancer was the final diagnosis in 0.81% of mammograms performed on Black and/or Hispanic women, compared to 1.81% of non-Hispanic whites (p=0.44).  
**Conclusion:** There is no difference in the rates of abnormal mammograms among Black and/or Hispanic women aged 40-49, compared to their non-Hispanic white counterparts. There was also no difference in the rates of breast cancer diagnosis among the two groups, however the study was only powered to detect a four-
fold difference in cancer rates. This study highlights the need for additional research to further answer our question.

**Title:** Knowledge of cervical cancer screening and HPV vaccination among a low-income population in Buenos Aires, Argentina  
**Author:** J. Pablo Orezzoli, MD  
**Preceptor:** Katina Robison, MD  
**Other authors:** Silvio A. Tatti, MD, PhD, Veronica Suzuki, MD, Christina A. Raker, ScD

**Objective:** To determine the knowledge of cervical cancer and HPV vaccination among women attending a cancer-screening clinic in Buenos Aires, Argentina.

**Methods:** A cross-sectional study was performed at the University of Buenos Aires cervical cancer-screening program. An anonymous thirty-seven multiple-choice, self-administered questionnaire was distributed to eligible participants. A knowledge score was created with the five questions pertaining to cervical cancer. Based on correct answers, a scale from 0 – 5 defined knowledge levels in two categories “good” (score ≥ 3) and “poor” (score ≤ 2). Utilization of screening services, HPV vaccine awareness and attitudes as well as socio-demographic variables were obtained. Chi-square or Fisher’s exact test were used to compare categorical variables. Unadjusted odds ratios (ORs) and 95% confidence intervals (CIs) were calculated by simple logistic regression.

**Results:** A total of 141 subjects were recruited. Sixty-seven percent (n = 95) of all participants were over the age of 30 and 77% (n = 109) were Argentineans. Forty-nine percent (n = 69) attended secondary school, and 33% (n = 46) University. Fifty-eight percent had “good” knowledge scores (n = 77). Seven percent (n = 9) had never had a Pap smear and 69% (n = 97) had a Pap within the last year. Thirty-seven percent (n = 52) never heard about the HPV vaccine and 80% (n = 104) expressed interest in receiving the vaccine. Health insurance was the only statistically significant socio-demographic variable associated with “good” knowledge (OR 2.1, CI 1 – 4.2), and this was strongly associated with knowledge of the HPV vaccine (OR 3.9, CI 1.8 – 9.6) and willingness to vaccinate their children (OR 2.6, CI 1 – 6.5).

**Conclusions** The study found high rates of cervical cancer screening among the surveyed population. Interestingly, knowledge about cervical cancer and HPV was limited. HPV vaccination acceptance rate was high but none of the surveyed subjects had received the vaccine. Lack of awareness and mechanisms to guarantee access to the HPV vaccine to the low-income sector of the population might explain these results. Future efforts should be focused on educating the population and improving access to the vaccine.

**Presenting Fellows**

**Title:** Detection and quantification of mRNA in single human polar bodies: a minimally invasive test of gene expression during oogenesis  
**Author:** Peter C. Klatsky, MD, MPH  
**Preceptors:** Gary M. Wessel, PhD, Sandra A. Carson, MD

**Objective:** We tested the hypothesis that mRNA originating from expression in the meiotic oocyte is present and detectable in a single polar body prior to insemination.

**Methods:** Human oocytes were obtained from patients undergoing controlled ovarian hyperstimulation and intracytoplasmic sperm injection. Immature oocytes were cultured overnight and inspected the following day for maturation. Metaphase II oocytes underwent polar body biopsy followed by reverse transcription without RNA isolation. Sibling oocytes were similarly prepared. Complementary DNA from all samples were pre-amplified over 15 cycles for candidate genes using selective primers. Real-time PCR was performed to detect and quantify relative single-cell gene expression. Whole transcriptome amplification was then performed to compare transcriptome profiles between single polar bodies and oocytes using Illumina Deep Sequencing.

**Results:** Polar body mRNA was detected in 11 of 12 candidate genes. More abundant transcripts in the oocyte were more likely to be detected in replicates from single polar bodies.
Conclusions: Pre-amplification of cDNA synthesized without RNA isolation can facilitate the quantitative detection of mRNA in single human polar bodies. Polar bodies contain a robust profile of abundant mRNA found in the sibling oocyte.

Title: Comparison of hypnotherapy versus gabapentin in the treatment of hot flashes: a pilot study.

Author: Shannon D. MacLaughlan, MD
Preceptor: Don S. Dizon, MD,
Other authors: Sandra Salzillo, LCSW, Patrick Bowe, Sandra Scuncio, Bridget Malit, Christina A. Raker, ScD, C.O. Skip Granai, MD

Objective: The purpose of this study is to compare the efficacy of hypnotherapy versus gabapentin for the treatment of hot flashes in women with an increased risk or personal history of breast cancer.

Methods: In a prospective trial, eligible women were randomized to receive gabapentin (control arm) or hypnotherapy (experimental arm). Eligibility was defined by a personal history of breast cancer or an increased risk of developing breast cancer in women who reported at least one daily hot flash. The duration of participation was eight weeks, and women were asked to keep a daily journal of the number and severity of their hot flashes. The primary endpoints were number of daily hot flashes and hot flash severity score (HFSS). The secondary endpoint was quality of life, measured using the Hot Flash Related Daily Interference Score (HFRDIS).

Results: Twenty-seven women were enrolled (n=14 gabapentin, n=13 hypnotherapy) and 15 (56%) were considered evaluable for the primary endpoint (n=8 gabapentin, n=7 hypnotherapy). The median number of daily hot flashes at enrollment was 4.5 in the gabapentin arm, and 5 in the hypnotherapy arm. HFSS scores were 7.5 in the gabapentin arm and 10 in the hypnotherapy arm. After eight weeks, the median number of daily hot flashes was reduced by 41.7% among women in the gabapentin arm, and 80% in the hypnotherapy arm. The median HFSS was reduced by 33.3% in the gabapentin arm, and 85% in the hypnotherapy arm. HFRDIS scores improved by 51.6% in the gabapentin group and 55.2% in the hypnotherapy group.

Discussion: Hypnotherapy and gabapentin both demonstrate efficacy in improving hot flashes in women with an increased risk or personal history of breast cancer. Complementary and alternative medicine (CAM) therapies are preferable to many women over hormone therapy due to the perceived risk of breast cancer, but objective data have been lacking comparing its use to conventional therapies. This pilot study provides evidence supporting the use of hypnotherapy for the treatment of hot flashes and emphasizes the need to perform further studies aimed at defining evidence-based recommendations for CAM.

Title: Are early staged cancers being diagnosed with screening mammography in socioeconomically challenged populations accessing the Rhode Island screening program?

Authors: Marcia M. Schmidt, MD
Preceptors: Jennifer Gass, MD and Don Dizon, MD
Other authors: Trevor Tejada-Berges, MD and Jennifer Gao

Objective: Our primary objective was to determine if increased access to mammography (MMG) impacts on the stage at presentation of breast cancer among underserved populations. The secondary objective was to determine survival outcomes of women accessing the cancer screening program who were found to have breast cancer.

Methods: This is a retrospective study of patients with newly diagnosed breast cancer between June, 2006 and June, 2010 identified in the Tumor Registry at Women & Infants’ Hospital. Patients were cross-referenced against a database of women accessing MMG via the Women’s Cancer Screening Program (WCSP) versus all others. For purposes of this study, screening detected breast cancers were those with cancer preceded by an incomplete MMG (BIRADS 0) and a subsequent abnormal MMG (BIRADS 345) within the subsequent 6 months. Patients with a BIRADS 0 and subsequent cancer diagnosis were excluded from analysis as were those whose MMG was not performed or who did not receive treatment at WIHRI. Categorical variables were compared by Fisher’s exact test. Continuous variables were compared by T-test or Wilcoxon rank-sum test. First recurrence and overall survival at 2-years were analyzed by the Kaplan-Meier method and log-rank test. Hazard ratios and 95% CIs for these outcomes were estimated by Cox proportional hazards regression.
**Results:** There were 1,068 newly diagnosed cancers during study period from June 2006 to June 2010. Of those, 68 were in patients who were part of the WCSP and 1,000 were non-WCSP patients. The median age in the WCSP group was 50 vs. 55 in the non-WCSP (p=.3). Sixty-seven percent of the WCSP patients were Hispanic and 33% were white/other while 9% were Hispanic and 87% white/other in the non-WCSP group (p=.0006). There was no statistically significant difference in the TNM staging of the tumors between group with all the tumors categorized as T2 or less, Node status was similar with 90% negative in the WCSP vs. 91% in the non-WCSP(p=1.0). None of the patients had metastatic disease at diagnosis, and there was no significant difference in tumor grade between groups. The median tumor size (mm) showed no statistical difference with 11.5 in the WCSP vs. 13 in the non-WCSP(p=.3).

Comparing MMG characteristics in these groups, 9/68 (13%) cancers in the WCSP were diagnosed by screening while 71/1000 (7.1%) in the non-WCSP were detected by screening.

All patients continue to be alive to date, there is only one recurrence reported in the non-WCSP group. At 2-years, the overall survival is 100% in WCSP patients and 100% in non-WCSP patients.

**Conclusion:** The Women’s Cancer Screening Program has increased access to screening mammography in the Hispanic population compared to the non-WCSP patients. In both groups the cancer diagnosis occurred at a similar stage, with similar tumor characteristics and nodal involvement. Due to the short follow-up it is difficult to make conclusions about survival.

**Title:** Adjustment of maternal serum alpha-fetoprotein levels in women with pregestational diabetes  
**Author:** Nicole Sprawka, MD  
**Preceptor:** Geralyn Lambert-Messerlian  
**Other authors:** Glenn E. Palomaki, Elizabeth E. Eklund, and Jacob A. Canick  

**Objective:** Decreased second trimester levels of maternal serum alpha-fetoprotein (MSAFP) have been reported in women with pregestational diabetes leading some laboratories to use a correction factor. The aim of the present study is to determine if MSAFP levels in pregnant women with diabetes managed on oral antidiabetic agents is lower than non-diabetic controls and require adjustment similar to those on insulin.

**Methods:** We performed a nested case/control study of an existing dataset using women with pregestational diabetes who had routine MSAFP values available.

**Results:** Before adjusting the MSAFP value for weight, both the diabetic patients who used insulin (n=68) and those who used oral antidiabetic agents (n=37) showed a nonsignificant trend toward a lower MoM as compared with controls (n=244). After converting the raw MSAFP values to race-adjusted MoM and adjusting for weight, the median MSAFP MoM for women taking insulin (1.01) versus those on oral antidiabetic agents (1.00) were essentially the same. Furthermore, both of the diabetic groups were virtually identical to non-diabetic controls.

**Conclusions:** In our study, women with pregestational diabetes managed on either insulin or oral antidiabetic agents had weight-adjusted MSAFP MoM levels equivalent to those in control pregnancies and did not require a correction factor.

**Title:** Barriers to help-seeking for pelvic floor disorders among African American women  
**Author:** Blair B. Washington, MD, MHA  
**Preceptor:** Vivian W. Sung, MD, MPH  
**Other authors:** Christina A. Raker, ScD, Kavita Mishra, MD  

**Objective:** Pelvic floor disorders (PFDs) are common problems affecting many US women; however, proportionally fewer African American (AA) women present for care compared to other racial groups. Our primary objective was to identify barriers to help-seeking for PFDs among: 1) a general population of professional AA women and 2) professional AA women with prevalent PFD symptoms.

**Methods:** This is a cross-sectional survey of women registered for the 37th National Assembly of the Links, Inc.; a volunteer service organization of professional AA women. Women were excluded if they were not US citizens, unable to complete the English questionnaire, or were ≤ 20 years old. The de-identified questionnaire addressed the following domains: demographics, healthcare utilization, PFD symptoms, history of PFD diagnosis, attitudes regarding PFDs and help-seeking. The PFID-20, PFIQ-7, and a modified BICS-Q were also completed. We asked respondents what action they would take if they experienced PFD
symptoms and defined our outcome as the response “I would not seek care”. Barriers were defined as covariates associated with not seeking care. Two multivariable logistic regression models were constructed to identify barriers to help-seeking for PFD symptoms in all respondents and in women with prevalent PFD symptoms.

**Results:** 372/568 questionnaires were completed (response rate=65%) and 97% (362/372) had complete data. The mean age was 57 years (±11) and 99% had private/Medicare insurance. The majority of women held a graduate level degree (78%) and reported a household income >/=$100,000/year (71%).

6.4% of women responded they “would not seek care” if they experienced a PFD symptom. There were no differences in age, education, income, or prevalent PFD symptoms between women who would and would not seek care (p>.05 for all). A higher proportion of women who would not seek care had the attitude that PFDs are a normal part of aging (65% vs 38%, p=0.03) and felt embarrassment to discuss PFDs with their provider (40% vs 16%, p=0.01), compared to those that would seek care. Based on the modified BICS-Q, a higher proportion of women who would not seek care reported barriers related to practitioner relationship (practitioner does not take time or not interested), insurance (too complicated, delays in payment), and fear as barriers to seeking care for PFD symptoms (P<.05 for all). On multivariable logistic regression, attitude that PFDs are a normal part of aging (5.56, 95% CI 1.46-21.23) and concern about insurance complexity (AOR=3.80, 95% CI 1.39-10.33) were significant barriers to help seeking.

30% (110/362) of women reported having prevalent PFD symptoms. In this subset, only 26% had accessed care. Women who accessed care were older (p=.05) and a higher proportion reported prolapse symptoms (p=0.02) compared to women who had not accessed care. On multivariable logistic regression, pelvic organ prolapse symptoms in the previous 3 months and age ≥65 years were predictors of help-seeking (AOR=0.11, 95% CI 0.02-0.67) and (AOR=0.17, 95% CI 0.03-0.85) respectively.

**Conclusions:** Among educated and insured AA women, attitudes about aging and insurance complexity are barriers to help-seeking for PFDs. In women with prevalent PFD symptoms, recent prolapse symptoms and age ≥65 years were associated with help-seeking.