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<td><strong>Beth Israel Deaconess Medical Center</strong>&lt;br&gt;Infectious Disease</td>
<td><strong>Pilot Survey to Assess the Acceptability of HIV Pre-Exposure Prophylaxis Among African American Women in Boston</strong>&lt;br&gt;This survey project constituted phase II of a mixed methods study aimed at exploring the acceptability of PrEP among black women in Boston, and the personal barriers/motivators associated with uptake. The survey was piloted on women at Dimock Health Center to collect quantitative data (to corroborate findings from focus groups) on the following domains: risk perception, barriers to uptake, intent to use PrEP, preference of formulation, concerns about side effects, preferred provider, and current prevention practices. The survey is now being refined based on feedback, and will be fully administered to 200 women. This research will provide information that may help characterize the potential role of PrEP for black women that can then be used to design targeted HIV prevention strategies.</td>
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<td><strong>Boston University School of Public Health</strong>&lt;br&gt;Community Health Sciences Department</td>
<td><strong>Does provider choice matter?: Maternal experience with obstetricians, family medicine physicians, and midwives</strong>&lt;br&gt;<strong>Objective:</strong> The objective of this analysis is to determine whether a mother’s original choice of maternity care provider profession had any impact on the profession of the provider who attended the birth and her risk of cesarean section.&lt;br&gt;<strong>Background:</strong> Past research suggests that family physicians and midwives approach maternity care differently than obstetricians, without significant differences in rates of maternal or neonatal complications.&lt;br&gt;<strong>Methods:</strong> Listening to Mothers III (LTM3) is a 2012 United States national survey of 2,416 mothers concerning their childbirth experiences in the year prior to the survey. The survey was developed through collaboration between Childbirth Connection and the Boston University School of Public Health and was conducted by Harris Interactive. Results from LTM3 are still pending, so LTM2 was used to illustrate the preliminary analyses. LTM2 included 1,373 online and 200 telephone interviews with women aged 18-45 years who had given birth to a single child in a U.S. hospital in 2005. Data analyses conducted using STATA (version11.2) included 2x2 tables with chi-square tests and multiple logistic regression.&lt;br&gt;<strong>Results:</strong> Eighty percent of women chose an obstetrician for their prenatal care, and 93.4% of these women were attended by an obstetrician at delivery. 8.3% of women chose a family physician for their prenatal care, and only 68.8% of these women were attended by a family physician at delivery (21.1% switched to an obstetrician). 9.4% of women chose a midwife for their prenatal care, and 67.6% were attended by a midwife at delivery (26.2% switched to an obstetrician). Preliminary analysis of maternal risk profiles suggests not all the variation can be accounted for by maternal prenatal health. Women who did not switch providers exhibited variable c-section rates, 35% for women attended by obstetricians, 22% for women attended by a family physician, and 11% for women attended by a midwife. Among those who switched providers, 11% of women who switched from a family physician to an obstetrician at the time of delivery had a cesarean section, while 43% of women who switched from a midwife to an obstetrician at the time of delivery had a cesarean section. Further results are forthcoming.&lt;br&gt;<strong>Conclusions:</strong> According to the preliminary analysis, obstetricians featured the lowest rate of switching, while midwives and family physicians demonstrated similar rates of switching to obstetricians. However, the rate of c-section among those who switched from family physicians to obstetrics was markedly lower than the rate of c-section among women who switched from a midwife to an obstetrician. This may be related to more frequent switching of patients between family physicians and obstetricians for reasons unrelated to risk factors. Further analysis will further characterize transfer levels and the likely causes for mothers to switch from family physicians and midwives in prenatal care to obstetricians for birth.</td>
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<td><strong>Brigham and Women’s Hospital</strong>&lt;br&gt;Center for Surgery and Public Health</td>
<td><strong>The Kidney Donor Profile Index Does Not Predict Graft Survival as Expected in Older Transplant Recipients</strong>&lt;br&gt;The Kidney Donor Profile Index (KDPI) is a new donor organ quality metric proposed to guide deceased donor kidney allocation policy. The KDPI is known to predict transplant graft survival in such a way that the organs with lower scores have a lower risk of graft loss. However, the predictive effect in the older population was not known and we determined that the KDPI did not predict graft survival similarly in older transplant recipients.</td>
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### 2013 - MPH Quantitative Methods

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| Brigham and Women's Hospital  | **Risk factors for malignancy among germ cell tumors: an epidemiologic comparison of mature teratomas and germ cell malignancies**  
**Purpose:** To compare demographic, reproductive, and lifestyle factors between women diagnosed with mature or immature teratomas in order to identify risk factors for malignancy in women diagnosed with a germ cell tumor.  
**Background:** Evidence suggests the potential for hormonal, ethnic, and lifestyle factors to be implicated with the risk of germ cell malignancies of the ovary. These associations have been seen in collaborative studies and have been implicated for other types of ovarian malignancies. No prior study has compared these factors between malignant and benign cases of germ cell tumor of the ovary; thus, this study attempts to evaluate these risk factors between malignant and benign cases. Secondarily, limited research has implicated potential etiologic similarities between mature and immature teratomas; therefore, this study also evaluates risk factors between malignant teratoma, a subset of malignant germ cell tumor, as compared to benign teratoma.  
**Methods:** Using a population-based, case-control study, the authors identified 30 cases of germ cell tumor, including 19 cases of malignant teratoma in women over 18 years old living in New Hampshire and eastern Massachusetts (May 1992-November 2002) and compared these cases to 19 identified cases of benign teratoma in individuals over 18 years old who have frequented participating Boston hospitals since 2009.  
**Results:** The study found a strong inverse association between age and malignant germ cell tumor compared to benign teratoma (1-year multivariate OR 0.75; 0.64-0.88) and between malignant teratoma and benign teratoma (1-year multivariate OR 0.54; 0.38-0.79). Interestingly, use of genital talc powder was associated with germ cell malignancy as compared to benign teratoma (multivariate OR 5.69; 1.40 – 23.30), but was not associated with malignant teratoma. Smoking status (former, current, never) was associated with germ cell malignancy (42.17; 0.69 >999.9) and malignant teratoma (675.26; 0.02 >999.9) as compared to benign teratoma, but failed to meet statistical significance. A dose response between pack-years and malignancy was not observed. Other hormonal variables were not associated with malignancy in this study.  
**Conclusion:** While analyses were limited by sample size, they provide important directions for future hypotheses to evaluate the etiology of germ cell tumors and, specifically, malignant teratomas. It will be important to further investigate genital talc powder use and smoking history, with further analysis of potential confounding variables, and to correlate findings with previous findings on germ cell tumors. Such efforts will assist clinicians in the future to more effectively risk stratify ovarian masses for malignancy in affected younger women. |
| Channing Laboratory           | **A prospective study of caffeine intake and incident tinnitus**  
**Background:** Caffeine is a commonly consumed substance that has long been thought to play a role in the development of tinnitus, but prospective data are lacking. This study investigates the association between caffeine intake and incident tinnitus.  
**Methods:** We prospectively evaluated the association between caffeine intake and self-reported tinnitus. Participants were 65,085 women in the Nurse’s Health Study II, aged 30-44 years and without tinnitus at baseline in 1991. Study participants completed questionnaires about lifestyle and medical history every two years and food frequency questionnaires every four years. Information on self-reported tinnitus and date of onset was obtained from the 2009 questionnaire, with cases defined as those reporting symptoms “a few days/ week” or “daily.” Multivariable-adjusted hazard ratios (HRs) were calculated using Cox proportional hazards regression models.  
**Results:** After 18 years of follow-up, 5310 incident cases of tinnitus were reported. There was a significant inverse association between caffeine intake and the incidence of tinnitus. Compared with women with caffeine intake less than 150 mg/ day, the multivariate adjusted hazard ratios were 0.85 (95% CI 0.76-0.95) for those who consumed 450-599 mg/ day and 0.79 (0.68-0.90) for those who consumed 600mg/day or more.  
**Interpretation:** In this prospective study, higher caffeine intake was associated with a lower risk of incident tinnitus. |
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| Centers for Disease Control and Prevention | Exposure to Secondhand Smoke amongst US Middle and High School Students, 2011  
   This was a cross sectional study using 2011 data from the National Youth Tobacco Survey (NYTS). The NYTS was designed to provide national data on long-term, intermediate, and short-term indicators key to the design, implementation, and evaluation of comprehensive tobacco prevention and control programs. It provides nationally representative data about middle and high school youths, and the questionnaire had 81 questions designed to extract valuable information about middle and high-school students’ tobacco-related beliefs, attitudes, behaviors and exposure to pro- and anti-tobacco influences. Data analysis was done by find Prevalence, Adjusted and Crude odds ratios, Conducting omnibus tests (univariate analysis) taking into consideration characteristics like Age, Sex, Race, School Level and Smoking Status.  
   **Results:** The prevalence of exposure to secondhand smoke while on school grounds is lowest among youths aged 9 – 11 (15%) and increases steadily in older age groups, reaching a peak between the ages of 15 – 17 (32%). The prevalence was higher in High school students (57%) compared to middle school students (43%). Males were less likely to be exposed compared to females. Native Hawaiians had the highest exposure (32%) and Asians had the least (20%). Using white students as the reference population, Blacks and Asians had slightly lower risks of being exposed while Hispanics and American Indians had higher risks. |
| Harvard Medical School Channing laboratory | Dietary Intake of Animal Products and the Risk of Endometrial Cancer: a Dose Response Meta-Analysis  
   **Objective:** The aim of this study was to evaluating whether dietary intake of animal products is related to the risk of endometrial cancer in dose-response manner. Public Health Impact: This study shows that dietary factors such as red meat, animal fat, and saturated fat may associated with the increased risk of endometrial cancer, which provides health information on cancer prevention with diet to general population.  
   **Background:** Endometrial cancer is known to be associated with unopposed estrogen. Red meat or fat intake may alter estrogen balance and involve in carcinogenesis through unknown mechanisms. Thus far bunch of studies have explored the relationship between intake of animal products and the risk of endometrial cancer.  
   **Methods:** We searched PubMed, EMBASE, the Cochrane Library in March 2013. Two of the authors independently reviewed and selected eligible studies, based on pre-determined selection criteria. We performed a dose response meta-analysis using glst analysis.  
   **Results:** We include four case-control studies for red meat, five case-control studies for animal fat, and six case-control studies for saturated fat in dose response meta-analysis out of 337 articles retrieved from databases and relevant bibliographies. In a dose response meta-analysis of case-control studies, red meat intake was associated with increased risk of endometrial cancer (odds ratio[OR] per 10 g/day intake,1.034; 95% confidence interval [CI], 1.017, 1.050). Animal fat intake and saturated fat intake were also associate with increased risk of endometrial cancer (OR per 10 g/day intake, 1.148 [95% CI, 1.083, 1.218] and 1.106 [95% CI,1.046, 1.170] respectively). There was no statistically significant publication bias (p-value for meta-bias were 0.438 for red meat, 0.530 for animal fat, and 0.905 for saturated fat, respectively). However, two cohort studies for red meat, one cohort study for animal fat and saturated fat showed no significant association with the risk of endometrial cancer.  
   **Conclusions:** Our dose response meta-analysis of case-control studies found that there is dose-response relationship between intake of animal products (red meat, animal fat, and saturated fat) with increased risk of endometrial cancer despite of negative results from cohort studies. |
| Harvard School of Public Health | Dichlorophenol Pesticide Exposure and Childhood Obesity  
   I examined the association between dichlorophenol pesticided exposure--as measured by urinary concentration--and childhood obesity. The sample population was from the 2003-2010 NHANES. Logistic regression was implemented in order to account for a number of possible and known confounders. |
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| Harvard School of Public Health Nutrition Department | **Sugar-sweetened beverage on sperm quality in young men**  
**BACKGROUND:** Sugar-sweetened beverage intake is a strong risk factor for obesity, which is, in turn, a well characterized risk factor for low semen quality and male factor infertility. Yet, data on the relation between sugar-sweetened beverage intake in and semen quality or male fertility is scarce.  
**METHODS:** 189 men, aged 18-22, from the Rochester, NY area participated in the study. Men provided semen and blood samples, underwent a physical examination, and completed a previously validated food frequency questionnaire (FFQ). Linear regression was used to analyze the association between sugar-sweetened beverages and sperm parameters while adjusting for potential confounders.  
**RESULTS:** Sugar-sweetened beverage intake was inversely related to the progressive motility. The adjusted percentage of progressively motile sperm (95% Confidence Interval) in increasing quartiles of sugar-sweetened beverage intake was 58.8 (54.4-63.1), 60.8 (56.8-64.9), 60.4 (56.5-64.3), and 53.7 (49.1-58.3) (p,trend=0.04). This association was stronger among lean men (p,trend=0.01). There was also an inverse association between sugar-sweetened beverage intake and FSH levels of borderline statistical significance (p,trend=0.05). Sugar-sweetened beverage intake was unrelated to other semen quality parameters or reproductive hormone levels.  
**CONCLUSIONS:** High consumption of sugar-sweetened beverages was associated with lower sperm motility among healthy, young men. |
| Kilimanjaro Christian Medical Centre, Moshi, Tanzania Joint Malaria Programme | **Which Health worker characteristics predict appropriate testing and treatment for Malaria in the TACT cluster randomized trial, Northeastern Tanzania?**  
A secondary analysis using data from the TACT cluster randomized trial, using 43884 individual patient encounters in 36 health facilities in Northeastern Tanzania. Data from 104 health workers were included in the analysis, which accounted for clustering at health worker and health facility levels. Multivariate mixed effects logistic regression models were built to explain predictors of two outcomes; whether a health worker tested a patient appropriately for malaria when indicated by guidelines, and whether they refrained from prescribing antimalarial medications when the Rapid Diagnostic Test was negative. I found that less experienced, less educated and younger health workers were more likely to follow testing guidelines when faced with a febrile patient, but they were also more likely to prescribe an antimalarial medication following a negative test. We hypothesized that this may be due to lack of knowledge regarding differential diagnoses, when compared to their more experienced counterparts. |