Abstract Session A1: Women’s Health

Racial Disparities in Breast Cancer Stage at Diagnosis in the Mammography Era

Neal Chatterjee1; Yulei He2; Nancy L Keating3. 1Department of Medicine, Massachusetts General Hospital, Boston, Massachusetts; 2Department of Health Care Policy, Harvard Medical School, Boston, Massachusetts; 3Department of Health Care Policy, Harvard Medical School and the Division of General Internal Medicine, Brigham and Women’s Hospital, Boston, Massachusetts. (Proposal ID # 8760)

BACKGROUND: The efficacy of mammographic screening is related to its ability to shift stage at diagnosis from distant to earlier-stage disease. Despite equivalent rates of mammography since the late-1990s, black women have higher breast cancer mortality than white women. Since stage at diagnosis is the strongest predictor of survival in breast cancer, we sought to assess dynamic changes in stage at breast cancer diagnosis for black and white women since mammography became available.

METHODS: Population-based observational study involving 143,249 white and 13,571 black women aged 50-69 diagnosed with invasive breast cancer between 1982-2007 living in a Surveillance, Epidemiology, and End Results (SEER) region. We assessed odds of distant (versus local or regional) disease at diagnosis by race, adjusted for patient demographic (age, marital status, SEER region) and socioeconomic factors (area-level estimates of insurance status, education, income) known to affect stage at diagnosis. Behavioral Risk Factor Surveillance System data were used to calculate biennial mammography rates for black and white women, aged 51-70, from 1990-2006 in all states where the SEER9 regions were located. We used logistic regression to assess the association of year of diagnosis and race with distant cancer diagnosis. Logistic regression was also used to compare linear trends in rates of distant cancer diagnosis for black and white women, before and after 1998 (a time corresponding to peak mammography for both races). Year was treated as a continuous variable and an indicator variable was included for pre vs. post-1998 to assess change.

RESULTS: Overall, 5.8% of whites and 10.2% of blacks were diagnosed with distant breast cancer. The black-white disparity in the proportion of distant cancers narrowed until 1998 (adjusted difference 0.65%), before increasing (Figure). Biennial mammography rates in the SEER9 states peaked in 2000 for both races; rates were lower for blacks than whites in the early 1990s, but equalized by 1996 (Figure). Between 1982-1997, the proportion of distant cancers decreased over time for both black women (adjusted odds ratio [AOR] per year=0.973 [95% CI=0.960-0.987]) and white women (AOR per year=0.978 [95% CI=0.974-0.984]), and the rate of decline for black and white women did not differ significantly (P for interaction=0.61). From 1998-2007, the odds of distant breast cancers increased more rapidly for black women (AOR per year=1.036 [95% CI=1.014-1.060]) than for white women (AOR per year=1.011 [95% CI=1.001-1.021]) (P for interaction=0.04). Sensitivity analyses using 1997 and 1999 as alternate time points did not change statistical associations.

CONCLUSION: After a narrowing of the black-white disparity in the proportion of distant breast cancers diagnosed until 1998, the proportion of distant-stage cancers has since increased more rapidly in black women than white women. The narrowing of the black-white disparity coincides with peak rates of mammography for black and white women. We propose two possible explanations for our findings. First, given more aggressive tumor biology in black women, the disproportionate increase of distant disease may reflect less benefit for black women at current screening intervals (every 1-2 years). Second, rates of mammography have declined for both black and white women since 2000. In a background of different tumor biology, similar decrements in screening rates may be associated with widening of the stage at diagnosis disparity. Black women may benefit more from higher absolute rates of mammography than white women. Given the marked survival difference between early and late stage breast cancer, further attention to racial disparities in stage at diagnosis is warranted.
Persistence with Adjuvant Hormonal Therapy in Older Breast Cancer Survivors Tyler Hedin 1; Changbin Guo 1; Ann Nattinger1. 1Medical College of Wisconsin, Milwaukee, Wisconsin . (Proposal ID # 10132)

BACKGROUND: Breast cancer survivors with hormone receptor positive disease are typically prescribed tamoxifen or an aromatase inhibitor (AI) as adjuvant hormonal therapy for a 5-year course to reduce the likelihood of recurrence. Despite its benefit in breast cancer patients, prior studies on tamoxifen have found sub-optimal rates of adherence to the prescribed 5-year course. Less is known about adherence rates in patients using an AI. This study aims to identify the extent of non-persistence to adjuvant hormonal therapy among older breast cancer survivors as well as examine self-reported reasons for non-persistence.

METHODS: We recruited 3083 Medicare breast cancer patients who underwent initial surgery in 2003 and resided in California, Florida, New York, or Illinois. Four survey waves between 2005 and 2008 assessed receipt of hormonal therapy (HT) as well as demographic, social, and treatment factors. Stage 1 or 2 subjects who initiated HT within 1 year of surgery (n=1402) were included. In accordance with the International Society for Pharmacoeconomics and Outcomes Research Medication Compliance and Persistence Work Group, patients were defined as “persistent” if HT was utilized for at least 5 years from the initiation of therapy without a gap in treatment of more than 60 days. A multinomial model was constructed to determine which demographic factors were associated with which self-reported reasons for non-persistence.

RESULTS: Of the 1402 breast cancer survivors studied, 325 (23%) discontinued their HT within 5 years of their surgery. Reasons for non-persistence were provided by 280 (86%) of those discontinuing therapy early. The most common reason for non-persistence was side effects (47% of subjects), followed by belief they had finished therapy (17%), physician-directed discontinuation (15%), and cost (8%). Thirteen percent had other reasons for discontinuation and were excluded from the multinomial analysis. Factors associated with reasons for non-persistence were age (p=0.025), marital status (p=0.015), household income (p=0.045), and supplemental insurance in addition to Medicare (p=0.047). The multivariate model concurrently controlled for each of these factors, enabling comparisons to those discontinuing due to side effects. Older subjects (>75 years) were more likely to discontinue treatment due to physician direction (p=0.01) or completion of treatment (p=0.04) than due to side effects. Married subjects were less likely to discontinue due to cost (p=0.05) than due to side effects. Higher income subjects were less likely to discontinue due to cost or completion of treatment (p=0.04) than due to side effects. Subjects with no supplemental insurance were more likely to discontinue due to cost (p=0.06) than due to side effects. Race, marital status, education, stage of disease, co-morbidities, and type of surgery were not significantly associated with specific reasons for non-persistence.

CONCLUSION: This study confirms that a substantial minority of patients are failing to remain on adjuvant HT for the standard duration of 5 years. Most women discontinued due to perceived side effects. Cost was a particular issue for those who were older, unmarried, poorer, and with poorer insurance coverage. Some women believed they had completed treatment prior to 5 total years of therapy. Identifying the predictors and reasons for early discontinuation of treatment is essential to formulating intervention strategies to improve persistence.
CONTRACEPTIVE CARE IN THE VA HEALTHCARE SYSTEM  

Sonya Borrero 1; Maria Mor 2; Xinhua Zhao 2; Melissa McNeil 1; Said Ibrahim 3; Patricia Hayes4. 1University of Pittsburgh, Pittsburgh, Pennsylvania ; 2VA Pittsburgh Healthcare System, Pittsburgh, Pennsylvania ; 3VA Medical Center, Philadelphia, Pennsylvania ; 4Women Veterans Health Strategic Health Care Group, Washington D.C., District of Columbia . (Proposal ID # 10702)

BACKGROUND: Primary care providers (PCPs) treat many women of reproductive age and are well positioned to address risk of unintended pregnancy. As contraceptive effectiveness is a major factor in women's contraceptive decision making, it is important for PCPs to convey accurate information on the risk of unintended pregnancy with and without available methods of contraception.

METHODS: We distributed an online survey to 550 PCPs trained in General Internal Medicine or Family Medicine and practicing in Western Pennsylvania, Central Pennsylvania, Rhode Island, or Oregon, in 2009. The survey focused on PCPs' experiences using electronic medical records and clinical decision support. In addition, the survey contained 6 open-ended questions to assess their knowledge of the prevalence of unintended pregnancy in the United States, risk of pregnancy among non-users of contraception, and the failure rates of available contraceptive methods with typical use. Responses were considered to be "correct" if they were within two percentage points above or below the typical use failure rates provided by the 19th edition of Contraceptive Technology: for condoms (15%), oral contraceptive pills (8%), contraceptive injections (3%), and IUD's (< 1%). Similarly, estimates of the prevalence of unintended pregnancy in the US were considered correct if they ranged from 48-52%, and estimates of the risk of pregnancy with use of no contraception were considered correct if they were between 83-87%.

RESULTS: One hundred and seventy-two PCPs completed the online survey, a response rate of 31%. The majority (54%) of respondents underestimated the prevalence of unintended pregnancy in the US and 81% underestimated the risk of pregnancy among non-users of contraception. On average, those that underestimated the prevalence of unintended pregnancy underestimated it by 23 +/- 8 percentage points. Those that underestimated the risk of pregnancy among women using no contraception underestimated it by a mean of 35 +/- 20 percentage points. The majority of PCPs also underestimated the typical use failure rate of most contraceptive methods, with the exception of the IUD. Specifically, 86% of PCPs underestimated the typical use failure rate of oral contraceptive pills, 62% underestimated the typical use failure rate of condoms, and 16% underestimated the typical use failure rate of contraceptive injections. Although the majority of PCPs correctly reported the failure rate of IUDs as < 1%, they were more likely to overestimate the failure rate of IUDs than any other contraceptive. Male PCPs were significantly more likely to underestimate the prevalence of unintended pregnancy than were female PCPs (70% vs. 42%, p=0.001). But male and female PCPs were equally likely to underestimate the risk of pregnancy among women using no form of contraception (80% males vs. 83% females, p=0.53).

CONCLUSION: Many PCPs have inaccurate perceptions of rates of unintended pregnancy with typical use of available contraceptives, and many underestimate the risk of pregnancy when no contraception is used. Whether more accurate perceptions of rates of unintended pregnancy would improve PCPs' provision of preconception and contraceptive counseling is unknown, but deserves further study.
Perceptions Of Rates Of Unintended Pregnancy Among Primary Care Providers Eleanor Bimla Schwarz 1; Eleanor Bimla Schwarz 1; Sara M. Parisi 1; Mindy Sobota 2; Melissa Nothnagle 3; Cynthia Chuang 4.
1University of Pittsburgh, Pittsburgh, Pennsylvania; 2Oregon Health Sciences University, Portland, Oregon; 3Brown University/Memorial Hospital of Rhode Island, Pawtucket, Rhode Island; 4Penn State College of Medicine/Milton S. Hershey Medical Center, Hershey, Pennsylvania. (Proposal ID # 11029)

BACKGROUND: High quality, equitable contraceptive care is a growing priority in the Department of Veteran’s Affairs (VA) as the number of women veterans using the VA health care system continues to rise. The objective of this study was to examine contraceptive use within the VA by race/ethnicity and to determine whether receiving primary care in a VA women’s health clinic enhances contraceptive provision.

METHODS: We used national VA administrative databases to describe use of contraceptive methods among female veterans aged 18-45 who made at least 1 visit to either a VA women’s health clinic (WHC) or a traditional VA primary care clinic (PCC) in fiscal year (FY) 2008. The outcome variable for this study was a prescription or procedure indicating contraceptive use during FY 2008. The primary predictor variables of interest were patient race/ethnicity (Hispanic, non-Hispanic black, and non-Hispanic white) and receipt of care in a WHC. Covariates included socio-demographic information, medical diagnoses that may impact choice of contraceptive method, number of visits, whether the subject had a VA gynecology visit, geographic location, and whether the site was a hospital- or community-based clinic. Chi-square tests were used to compare variables by race/ethnicity. We examined the bivariate relationships between each covariate and contraceptive use and computed the unadjusted odds ratios for each pair. We then used multivariable regression models to examine the associations between race/ethnicity and receipt of care in a WHC with contraceptive use while controlling for potential patient-level and facility-level confounders.

RESULTS: A total of 103,950 women veterans were included in the study cohort: 6% were Hispanic, 39% white, and 24% black. Approximately 45% of women had been seen in a WHC. Nearly 70% of women did not have any other insurance. Only 22% of women had documented use of any contraception. After adjusting for potential confounders, Hispanic and black women had significantly lower contraceptive use compared to white women (OR: 0.82; 95% CI: 0.76-0.88 and OR: 0.85; 95% CI: 0.82-0.89, respectively). Women who had received care in a WHC were significantly more likely to have contraception compared to those who received care in a PCC (OR: 2.05; 95% CI: 1.97-2.14), and this trend was seen across all race/ethnicity categories. Other factors significantly associated with higher rates of contraception in the adjusted analysis included younger age, not being married, increasing frequency of clinic visits, having seen gynecology, presence of non-VA insurance, being seen in a hospital-based clinic, and a diagnosis of migraines with aura. A diagnosis of breast cancer, tobacco use and age ≥35, stroke, coronary artery disease, and diabetes were all associated with a significantly less likelihood of having any contraceptive method.

CONCLUSION: We found that overall contraceptive use in the VA is low, especially among minority women. We also found that receipt of primary care in a VA women’s health clinic is associated with significantly higher rates of documented contraception.
Mothers Avoiding Depression Through Empowerment Intervention Trial (MADE IT) Elizabeth A Howell 1; Amy Balbierz 1; Wang Jason 1; Leventhal Howard2. 1Dept. of Health Evidence & Policy, Mount Sinai School of Medicine, New York, New York ; 2Institute for Health, Health Care Policy and Aging Research, Rutgers University, New Brunswick, New Jersey . (Proposal ID # 11346)

BACKGROUND: Postpartum depression negatively affects the quality of life and daily functioning of mothers. Postpartum depression is particularly problematic for low-income black and Latina women who often don't have adequate mental health care coverage and are less likely to receive depression treatment. The objective of this study was to evaluate the effectiveness of a behavioral educational intervention to prevent postpartum depression among self-identified black and Latina postpartum mothers.

METHODS: We conducted a randomized controlled trial at a large urban hospital. Mothers were recruited during their postpartum hospital stay (N=540) and randomized to a 2-part behavioral educational intervention or enhanced usual care. Eligible subjects were black or Latina, 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. Participants randomized to the intervention arm received a culturally-tailored 2-step intervention that prepares and educates mothers about modifiable factors associated with postpartum depression (physical symptoms, low social support, low self-efficacy, and infant factors), bolsters social support, enhances management skills, and increases participants' access to resources. Enhanced usual care participants received a list of community resources and received a 2-week control call. Participants were surveyed prior to randomization during their postpartum hospital stay, at 1-month, at 3-months, and at 6-months postpartum to assess depressive symptoms. For ethical reasons, all women who had severe depressive symptoms were referred for psychiatric assessment/treatment and a priori subgroup analyses were planned to assess impact of the intervention on mothers who did not receive psychiatric referral at baseline. The primary outcome, depression, was assessed using the Edinburgh Postnatal Depression Scale (EPDS>10 vs. <10). Study attrition rate was low (20% at 6 months) and equivalent across treatment groups. By examining baseline data for drop outs versus those retained in the study, we concluded that the data were likely missing at random. We used repeated measure analysis to assess changes in depression over time.

RESULTS: Among the 668 mothers approached and for whom contact could be made prior to discharge, 128 refused (19%) and 540 enrolled. Mean age of participants was 28 (range 18-46); 62% were Latina and 38% were black. Sixty-three percent had Medicaid insurance, 56% earned ≤ $30,000 annually, 35% were foreign born, and 21% spoke Spanish. There was only one significant difference between enhanced usual care vs. intervention at baseline: presence of comorbid conditions was higher among enhanced usual care vs. intervention (27% vs. 20%, respectively). Analyses including mothers referred at baseline for psychiatric assessment/treatment (N=540), showed those in the enhanced usual care group as compared with the intervention group were more likely to exceed depression criteria at all time points but significant only at one month (15.3% vs. 8.8%, p=.03 respectively). Excluding the 45 mothers referred for psychiatric assessment/treatment at baseline, positive depression screens were significantly more common among the enhanced usual care group than the intervention group post hospitalization: at 1-month (14.4% vs. 7.1%, p=.01), at 3-months (11.4% vs. 6.3%, p=.058) and at 6-months (13.1 vs. 7.5%, p=.068). In repeated measure analysis for up to 6-months of follow up, the intervention was protective against a positive depression screen with an OR of 0.57 (95% CI: 0.37-0.88).

CONCLUSION: A simple, culturally tailored intervention prevented postpartum depression among black and Latina mothers in an urban setting. More research is needed to determine whether this intervention is effective in other settings.