Theme: Health Care Systems/Access to Prevention and Care   National

Moderator: Anthony Omojasola, CEO
Park DuValle Community Health Center

Immune Cell Infiltration In African American Breast Cancer Patients
Presenter: LaKeisha Batts, University of Texas, MD Anderson Cancer Center

Breast cancer (BC) is the second most deadly form of cancer in women in the U.S. and is the leading cause of death among African American (AA) women. Nationally reported incidence and mortality rates show the incidence of breast cancer in AA women is lower than in White (WH) women; however, the mortality rates are significantly higher in the AA population[1-3]. From 2004-2008 in Texas, non-Hispanic white women had the highest incidence rates (121.6 cases per 100,000 women) compared to African American women (117.1 cases per 100,000 women) [1]. The breast cancer incidence rates within the Houston Affiliate service area of the Susan G. Komen for the Cure® reported the highest rates among non-Hispanic white women compared to all other racial/ethnic groups for women 40 years of age and older; however, African American women had similar rates to non-Hispanic white women across the same age groups [4]. In contrast, incidence rates for AA women younger than 39 years of age were higher compared to all racial/ethnic groups [4]. Interestingly, in Harris County (one of the seven service areas), the incidence rates of breast cancer in AA women younger than 39 years of age (126.1 cases per 100,000 women) exceeded that of non-Hispanic white women (120.4 cases per 100,000 women) compared to averages within Texas and nationally [4]. The exact causes of the disparity are unclear, but have been attributed to differences in tumor biology, environmental factors and socioeconomic differences between AA and WH women; however at cellular and molecular levels, questions still persist.

On a cellular level, leukocytes infiltrate tumor tissue and have been shown to contribute to tumor invasion, growth and metastasis based on studies using murine models of breast cancer [5-8]. Several subtypes of CD45-expressing leukocytes infiltrate breast tumors, including tumor-associated macrophages (TAMs), CD20⁺ B cells, CD4⁺ and CD8⁺ T cells (DeNardo 2009 Clin Cancer Res 3:817-819). TAMs participate in the development of a microenvironment that favors tumor cell invasion and metastasis [5-8]. The presence and function of TAMs within mammary tumors correspond to their clinical role of promoting tumor development and anti-tumor activity in human breast cancer. In conjunction with CD4⁺ and CD8⁺ T cells, increased TAM infiltration in human breast cancer has been correlated with poor patient prognosis [8, 9].

Using patient tumor samples acquired from African American women with breast cancer that participated in the Randomized Controlled Trial of the Effect of a Plant-Based Diet on Breast Cancer Recurrence: the WHEL Study, a study is underway that will combine demographic data and immunohistological results to evaluate relationship between immune responses and breast cancer prognosis in AA women.
Developing a Framework for Community Health Needs Assessments: An Opportunity for Collaboration between Schools of Public Health and Non-Profit Hospitals

Presenter: Donna Almario Doebler, University of Pittsburgh

Improving population health includes efforts related to health care services and public health activities (IOM 2011). Recent changes to the IRS requirements of non-profit hospitals to maintain their tax exempt status provide an opportunity for schools of public health and non-profit hospitals to collaborate. IRS requirements include specific efforts, such as a community health needs assessment (CHNA) of how non-profit hospitals are addressing the needs of their community. The University of Pittsburgh Graduate School of Public Health (GSPH) has partnered with the University of Pittsburgh Medical Center health system (UPMC) to assist UPMC in conducting a CHNA for each of the 13 licensed hospitals by June 2013. Using the UPMC-GSPH partnership as an example, the process of conducting a non-profit hospital's CHNA will be described using the public health core functions of assessment, policy development, and assurance as the framework. The ongoing collaboration between GSPH and UPMC will highlight opportunities to improve population health.

Factors Influencing Emergency Room Use for Primary Care

Presenter: Kimberly Enard, University of Texas, MD Anderson Cancer Center

An estimated one in five people in the U.S. visit an emergency room (ER) at least once annually, resulting in increased demand for ER services even while the number of ERs across the country continues to decline. As a result, many ER patients, particularly those in urban areas serving large proportions of racial/ethnic minorities and other vulnerable populations, leave ERs without being seen due to overcrowding and long wait times. Those most likely to use ERs are patients who are: 75 years and older, non-Hispanic Blacks, Medicaid beneficiaries or uninsured, chronically ill, or low income. Medicaid beneficiaries and the uninsured are also most likely to visit the ER multiple times in one year, often to receive primary care or for conditions that could have been prevented by appropriate primary care use. ER use for primary care is associated with fragmented, poorly coordinated healthcare delivered from many different providers, greater risk for medical errors and adverse events, and increased exposure to
duplicative, expensive tests. In Houston/Harris County, TX, the setting for this study, more than 40 percent of ER visits in 2009 by were primary care related.

The objective of this multicenter study, conducted in collaboration with Memorial Hermann (MH) – the largest not-for-profit healthcare system in Texas – is to increase knowledge about the actual and perceived barriers to utilization of office- or clinic-based primary care among frequent ER users and to identify factors that may influence these patients to consistently seek and obtain primary care in appropriate settings. We conducted mixed methods research (focus groups, target n=60 and surveys, target n=400) with adults 18 to 64 years of age who utilize or who are the primary care givers (i.e., and parents or legal guardians) of children who utilize the one of three Memorial Hermann ERs for primary care. Preliminary descriptive quantitative and qualitative data will be presented, and health policy implications will be discussed. The findings may help us better predict who is most at risk for using the ER for primary care and contribute to the development of interventions that effectively transition vulnerable populations to the most appropriate healthcare delivery settings.

Cytokinesis-Blocked Micronuclei Assay (CBMN) as a biological cancer risk assessment tool

Presenter: Stacy Lloyd, University of Texas, MD Anderson Cancer Center

Lung cancer is the leading cause of all cancer-related deaths in the US. Given the lack of effective screening modalities, the need to develop more accurate cancer risk assessment tools is imperative to improve the ability to identify individuals that are at greatest risk of developing this disease.

The Cytokinesis-Blocked Micronuclei Assay (CBMN) presents a sensitive, specific, and rapid method of assessing DNA damage, a hallmark of cancer. We have previously reported that this assay is extremely sensitive to genetic damage caused by the tobacco specific nitrosamine 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK), and that binucleated cells with micronuclei, nucleoplasmic bridges, and nuclear buds in lymphocytes (chromosome damage endpoints measured by the assay) are strong predictors of lung cancer risk.

To further identify the specific chromosomes involved in lung carcinogenesis, we conducted Spectral Karyotyping (SKY) on a population of n=116 cases and n=126 controls on whom CBMN data are available. SKY was performed on both baseline and NNK-treated blood lymphocytes. After adjusting for age, gender, race/ethnicity, smoking status, pack years (intensity), and smoke years (duration), we observed consistent significant results for damage on chromosomes 1, 3, 4, 9, 13, 16, 17, 19, 22, and X (all p’s ≤ 0.05) and lung cancer risk. Several of these identified chromosomes are well known to harbor critical genes involved in lung carcinogenesis, such as the FHIT gene (chromosome 3), p16/CDKN2A (chromosome 9), PADPRP (chromosome 13) and TP53 (chromosome 17).

Our results support the utilization of CBMN as a cancer risk assessment tool, and when used in conjunction with other cytogenetic methodologies can increase our ability to identify specific regions of DNA damage, thereby improving our understanding of the underlying mechanisms involved in individual cancer predisposition.
Rethinking the "C" in MCH: The Role of the Community and DRUM Healthy Families in Addressing Health Disparities

**Presenter: Ndidi Amutah, Morgan State University**

**Background:** Baltimore City has the highest rate of infant mortality in the state of Maryland. In 2009, 128 infants died before reaching their first birthday. DRUM Healthy Families, a nonprofit organization in Baltimore has a mission of reducing the infant mortality rate in Baltimore and improving the lives of women and children that they serve. Utilizing community-based participatory research methods, the DRUMming up Data maternal and child health research project was born. The mixed methods study examined the effectiveness of a home visitation model aimed at improving birth outcomes for pregnant women, reducing the incidence of low birth weight and preterm birth, and educating women on healthy pregnancies.

**Methods:** Focus groups and key informant interviews were conducted (n=40) to determine the impact of participating in the DRUM home visitation program had on the women’s lives and birth outcomes. A quantitative cross-sectional survey was administered (n=30) to determine the current status of women who have successfully completed the program and their subsequent birth outcomes.

**Results:** Barriers to use of health services for women include lack of insurance, lack of social support from partners, lack of knowledge of available services, and competing issues such as employment, other children, and lack of transportation. Women who have successfully completed the DRUM home visitation model reported having the skills to cope with life stressors and effectively parent their children.

**Policy Implications:** The initial results of the study indicate that increased funding and a sustained commitment to home visitation at the local, state, and national levels would further improve the lives of pregnant and parenting women and children in an urban environment.

Detroit Youth Passages: Economic Crises, Residential Instability, and Changing Sexual Geographies of African-American Transgender Women

**Presenter: Louis Graham, University of Michigan**

This Ford Foundation funded project explores the relationship between structural conditions and sexual vulnerability among African-American transgender women in Detroit. In partnership with youth communities and the Ruth Ellis Center, we conducted 250+ hours of ethnographic mapping, including participant observation and shadowing, 20 semi-structured interviews, and 10 oral life history narratives. Participant observation and shadowing activities took place in bars, clubs, parks, community centers, and sex work locations.
By systematically observing the geographic, social, and behavioral qualities of spaces, and the movement of youth between them, the ethnographic mapping process permits grounded analysis of the ways these contexts affect sexual vulnerabilities. The theoretical sampling matrix used for the interviews included three axis of diversity: gender identity (women, trans, other), life stage (18-20 and 21-24), and residential status (stable residence and homeless). Three hypothesized pathways to sexual vulnerability emerged from data analysis: 1) joblessness \(\rightarrow\) difficulty transitioning \(\rightarrow\) sex work \(\rightarrow\) sexual vulnerability; 2) gender disclosure challenges \(\rightarrow\) sexual vulnerability in the context of romantic relationships; and 3) residential instability \(\rightarrow\) transactional sex for housing or sex work \(\rightarrow\) sexual vulnerability. Primary themes delineated within these pathways include the centrality of gender identity to the lives of transgender youth, transitioning as expensive and complex process, and common current or past participation in sex work.

Findings have implications for institutional, local, and state policies and practices related to employment, housing, and interpersonal relationships.

Exploring "Machismo" and Missed Opportunities for Male Support of Breast Cancer Screening Among Latinas in Rural South Texas Colonias

Presenter: Lucinda Nevarez, University of Texas, MD Anderson Cancer Center

Historically machismo is associated with negative attributes such as aggressiveness, alcohol/substance use, and a chauvinistic view of women. Machismo has also been associated with poor self-rated health and lower rates of breast cancer screening among women. However, recently the literature has begun to examine if there may be another dimension of machismo that may offer some positive attributes. This secondary perspective of machismo called caballerismo has been identified by some as a potential source of familial support and personal responsibility. These positive attributes may be useful in the promotion of breast cancer screening, particularly among Hispanics where family plays a prominent role.

Data for this study was collected through a survey conducted in colonias within the two South Texas border Counties of Maverick and Val Verde. Colonias are defined as chiefly Hispanic communities or settlements and are characterized by their lack of infrastructure and resources, including the absence of running water, sewage, electricity, drainage systems, and maintained roadways. The two counties used in this study hold 78 colonias in Maverick and 19 colonias in Val Verde. The employment and insurance rates found in Maverick and Val Verde counties are significantly lower than what is found regionally for Hispanics. The majority of respondents are of Mexican descent and are of foreign birth and both counties report that more than 20% of the population live below the poverty line. Households were selected from randomly selected colonias from the two Counties.

A total of 2,812 men and women from Maverick and Val Verde counties participated in the survey. This study focused on responses from the 963 male participants. Respondents were surveyed on knowledge, perceived seriousness, susceptibility, benefits, and barriers to women’s breast cancer screening.
Youth Empowered Advocating for Health: Partnering with Youth to Reduce HIV Disparities
Presenter: Briana Woods, University of North Carolina Gillings School of Public Health

African American communities bear the burden of disproportionately high rates of HIV/AIDS and other sexually transmitted diseases (STDs) nationwide. Although African Americans represent only 12% of the United States population, they comprise of 46% of new HIV cases in the United States (CDC, 2010). In North Carolina, the data show striking disparities: 66.5% of the cumulative reported cases of AIDS up to 2008 were among African Americans compared to 28.1% among Whites (CDC, 2010). African American adolescents (ages 13-19) are particularly at risk for HIV/AIDS, accounting for 72% of HIV/AIDS diagnoses, though they represent only 17% of this age group population in the United States (CDC, 2007). This presentation describes partnering with African American youth to address HIV disparities through (1) a photovoice project that aimed to understand the social and community context of HIV vulnerability among African American youth and (2) an advocacy campaign focused on the action steps identified through the photovoice project.

Photovoice methodology was used to engage adolescents in a critical analysis of their experiences to better understand HIV risk and identify specific action steps to reduce HIV vulnerability among African American adolescents. The results from the photovoice project indicated a variety of social and environmental factors impact the lives of African American adolescents including: racial stereotypes, violence, poverty, deteriorating neighborhoods, high exposure to risk behaviors, low social support, and limited opportunities. Hopelessness resulting from these factors translates into low motivation to avoid risk behavior, which in turn puts them at greater risk for HIV.

The findings indicate the importance of mobilizing community action through raising awareness and advocating for increased resources and support for African American youth. This presentation concludes with a description of the advocacy initiatives that grew from this photovoice project and research and practice implications for HIV prevention among African American youth.