

Public Health Research @Maryland Day 2014
Poster Abstracts

This document is a compilation of all research abstracts presented at Public Health Research @Maryland Day 2014. The abstracts are grouped by the categories below. Department/Center and Affiliation are specific to the presenter.

Table of Contents

	Page
Behavioral Health, Mental Health, Substance Abuse.....	2
Cancer Prevention and Control.....	15
Environmental Health, Environmental Justice.....	19
Family Health, Child Health, Adolescent Health.....	25
Health Care, Access, Insurance.....	34
Health Disparities.....	39
Health Literacy, Health Communications, Health Education.....	46
Infectious Disease.....	54
Physical Activity, Exercise Physiology, Movement.....	60
Research Methods.....	70
Surveillance, Community Needs Assessment, Pedagogy.....	76

Coppin State University, Nursing

1. Presenter: Brenda Miles

Title: Stigma of Mental Illness: Personal and Academic Experience influence
College Student Attitudes

Brenda Miles (student), Stephanie Simmons (student), Krystal Roach

**Co-authors: (student) and Dr. Katherine Cameron (assistant professor of
psychology)**

Department/Center: Nursing

Affiliation: Coppin State University

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Negative attitudes and stigma about mental illness on college campuses may discourage students from seeking mental health services. Here we examined influences on stigma ratings of personal or academic experience. We distributed the Day's Mental Illness Stigma Scale to a convenience sample of 349 Coppin students (n=340; 75% female, mean age 24, range 17-62). The Day scale measures 7 stigma factors which varied significantly by illness (ANOVAs, $p < .003$); Depression (n=118), Bipolar Disorder (n=113), and Schizophrenia (n=109). Participants (39%) reported knowing someone with a mental illness. For Depression, one-way ANOVAs revealed this experience led to more positive views of its Treatability [$F(2,115)=3.38, p=.04$] reduced Relationship Disruption [$F(2,115)=9.17, p=.000$], and lowered Anxiety [$F(2,115)=4.91, p=.009$] stigma factors. General mental illness experience also reduced the Anxiety factor [$F(2,106)=3.68, p=.03$] of Schizophrenia, but led to views of reduced potential for Recovery [$F(2,106)=3.77, p=.03$]. Only specific personal experience with Bipolar Disorder reduced Anxiety stigma [$F(3,109)=4.50, p=.005$], and led to more positive views of treatability by mental health professionals [$F(3,109)=2.71, p=.049$]. Specific experience with Bipolar Disorder (48%) and Schizophrenia (12.8%) led to higher ratings of the illnesses' Visibility [$F(2,106)=3.51, p=.033$]. Knowing someone with Depression (49%) significantly reduced views that the illness disrupted relationships [$F(2,114)=6.32, p=.002$].

Most participants were taking their first psychology course (77%), although some (22%) had more academic experience. For a median-split we found academic experience lowered stigma of Relationship Disruption [$F(1,116)=5.42, p=.022$] for Depression and Bipolar Disorder [$F(1,109)=5.04, p=.03$], and led to more positive views on Hygiene [$F(1,116)=7.57, p=.007$] for Depression.

Thus both personal and academic course experience positively influenced mental illness stigma ratings, although for different factors.

UMD - School of Public Health: Family Science

2. Presenter: Anjali Jain

Title: The effects of maternal depressive symptoms on perceived mother-child
relationship quality in an African American sample

Co-authors: 1) Anjali Jain - UMD, 2) Mia Smith Bynum - UMD

Department/Center: Family Science

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Depression is the leading cause of disability and fourth-leading contributor to the global burden of disease. It has an effect on maternal caregiving behaviors such as warmth, sensitivity, and responsiveness, each of which can negatively impact the relationship quality between a mother and child. Although substantial research has been conducted on the effect of maternal depression and depressive symptomatology on children, we know little about African American mothers' perception of the mother-child relationship in the context of maternal depressive symptoms. / / This honors' thesis project examined maternal depressive symptoms as a predictor of perceived mother-child relationship quality in a sample of African American mothers, and investigated whether neighborhood quality moderated such a relationship. A total of 111 mothers (M age = 44.25) completed a battery of self-report measures assessing a variety of domains during a home-based interview. The Centers for Epidemiological Studies- Depression Scale was used to assess maternal depressive symptomatology and the Interaction Behavior Questionnaire was used to assess the maternal perception of the mother-child relationship. Preliminary findings indicate that higher depressive symptoms are negatively associated with the mothers' perception of the relationship quality with their children ($r = -.264, p < .005$). Hierarchical regression analyses will be performed to determine the moderating effects of neighborhood quality. / / Understanding the role of depressive symptoms in African American mother-child relationships needs continued research attention. We will address the implications of these findings in the context of existing research on depression and racial health disparities generally

Morgan State University- Public Health Analysis

3. Presenter: George Anyumba

Title: Parental absence and marijuana use among American youth in the 2010 NSDUH Survey

Co-authors: 1. George Anyumba DrPH (Candidate) Prevention Sciences Research Center & School of Community Health and Policy, Morgan State University, Baltimore, MD / / 2. Dr. Fernando A. Wagner, Prevention Sciences Research Center & School of Community Health and Policy, Morgan State University, Baltimore, MD /

Department/Center: Public Health Analysis

Affiliation: Morgan State University

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

/ Abstract / In the present study, we inquire whether the 50 year and older findings from the 1960's about parental influence on children's risk of substance use hold in this age and stage. / / The main aim of the current study is to explore if there is an association between absence of a parent(s) in a household and early initiation of marijuana in American adolescents ages 12 – 17 years / / Findings / Youth who lived with both

parents had lower odds of marijuana involvement. However, the mechanism through which parental supervision deters initiation of marijuana is not clearly understood and needs further research. // Implication / These findings can inform new research for targeted interventions in which adolescents and parents from single-parent households could be identified and offered necessary support, including mentorship and after school programs. /

UMD - School of Public Health: Behavioral and Community Health

4. **Presenter:** Lauren Crook
Title: Preventing Alcohol and Medication Interactions in Collaboration with Pharmacists
Co-authors: UMD, 4) Richard Clayton - UKY, 5) Nancy Schoenberg - UKY, 6) Catherine Martin - UKY
Department/Center: Kinesiology
Affiliation: University of Maryland
Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Purpose: Adversely combining alcohol and medication can result in problematic medication interactions, exacerbated health problems, poor medication adherence/safety, and increased substance misuse risk. This research aims to reduce alcohol and medication interactions (AMI) among rural older adults through an educational health campaign and behavioral change intervention based in rural pharmacies. // Methods: To obtain pharmacists' perspectives, an online survey was distributed through the Kentucky Pharmacist Association and the Kentucky Pharmacy Registry in tandem with qualitative research interviews in targeted rural counties. // Results/Implications: The survey of 253 pharmacists/techs found that 49% considers that the most important AMI messages is that AMI can be dangerous and life threatening and 27% indicated the importance of AMI communication with doctor/pharmacists. Participants also reported that major barriers to AMI prevention programs are financial costs and stigmatization, while a financial incentive is a major motivator. N=21 qualitative research interviews indicated much interest in working on preventing AMIs in the community among older adults. Ongoing analysis has indicated a need for increased clarity in the community about AMI outcomes knowing that individuals are not easily willing to change their alcohol consumption behaviors. When creating interventions, participants indicated the need to take advantage of the close relationships the community has with pharmacists and understanding the local problem. Interview participants suggested using health improvement messages, flagging high risk clients, and using multimedia and health fair as mediums for distribution. These data will be used to create, test, and implement educational and behavioral change intervention(s) to prevent AMI among older adults in the community.

UMD - School of Public Health: Family Science

5. **Presenter:** Hyeun Chung
Title: The Effects of Marital Satisfaction on Stress of Immigrant Wives in Korea
Co-authors: 1) Hyeun Chung - UMD, 2) Norman Epstein - UMD
Department/Center: Family Science

Affiliation: University of Maryland, SPH
Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Research indicates that immigrant wives in Korea are at risk for poor health due to stresses from discrimination and economic hardship. This study examined marital satisfaction as a moderator of associations between immigrant wives' experiences of (a) perceived discrimination, (b) economic hardship and their levels of self-rated health. Using data from the National Survey on Multicultural Families (NSMF) conducted in Korea, this study focused on female immigrants (n = 65,061) who were married. Hierarchical multiple regression analyses were conducted to assess main effects of perceived discrimination and economic hardship on immigrant wives' subjective health, as well as the moderating effects of marital satisfaction. As hypothesized, greater perceived discrimination and economic hardship were associated with poorer subjective health. Marital satisfaction had a significant positive association with subjective health, and it had buffering effects on the relations of both perceived discrimination and economic hardship with subjective health. Our findings suggest that although immigrant wives reported relatively low levels of perceived discrimination and economic hardship, they need help with adaptation because perceived discrimination and economic hardship may be harmful to their health. Intervention programs should provide education about how to deal with immigration-related stressors. Furthermore, the finding that marital satisfaction buffered negative effects of discrimination and economic hardship on subjective health indicates the importance of couple relationships in immigrant wives' health. Programs designed to assist immigrant wives in Korea mostly focus solely on the wives, such as learning the Korean language and culture. Interventions should be developed to improve marital relationships, including learning about each other's culture and using communication skills to provide each other emotional support.

UMB - School of Nursing: PhD

6. **Presenter:** Megan Doede

Title: Predictors of Occupational Burnout Among Emergency Nurses

Co-authors: Megan Doede, University of Maryland School of Nursing

Department/Center: NA

Affiliation: University of Maryland Baltimore, School of Nursing

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Predictors of Occupational Burnout Among Emergency Nurses / / Purpose: Nurse burnout and poor nurse work environments have been linked to negative outcomes such as high nurse turnover and vacancy rates and decreased nurse and patient reported quality of care. Because of the high patient volumes and stressful work environments of many emergency departments, emergency nurses may be at increased risk of developing occupational burnout. This study sought to answer the question: Which predictors of occupational burnout are most strongly associated with reported burnout in the emergency nurse? / / Participants/Subjects: Fifty-one emergency nurses responded to the survey invitation, which was sent via e-mail. The clinical nurse manager and nursing director were excluded from the study. / / Methods: Nurses were surveyed using the Maslach Burnout Inventory—Human Services Survey (MBI-HSS) and the Caring Factor Survey- Caring for Self (CFS-CF). The demographic data sheet included the nurses' age, length of time spent as an ED nurse, previous shift

US). The demographic data sheet included the nurses' age, length of time spent as an ED nurse, primary shift, and employment status (full or part time) as well as other yes/no questions that address previously identified causes of occupational burnout. // Results: The three variables that predicted 59.0% of emotional exhaustion included perception of workload in the ED (41.2% of the variance), satisfaction with the nurse-physician relationship (10.9% of the variance), and respondents' belief that ED nursing suits them as a profession (6.8% of the variance). These findings were statistically significant using an alpha of .05. Caring for self explained 24.7% of the variance of depersonalization ($p=.001$) and 33.0% of the variance of personal accomplishment. Workload explained 8.0% of the variance for personal accomplishment. // Implications: It may be beneficial for occupational health professionals to offer in-house programs addressing stress management and self-care strategies to nurses, especially those working in the most demanding hospital settings. //

UMD - School of Public Health: Behavioral and Community Health

7. **Presenter:** Marina Claudia Dathe

Title: Influence of the Leader-Followers Relationship on Female Victimization In
The Context Of Heavy Drinking

Co-authors: Marina Dathe, BS

Department/Center: Behavioral and Community Health

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Female victimization is strongly associated with excessive drinking in high drinking environments. Compelled by the need to reduce the incidence of such violence, an intervention was designed and delivered to young Americans patronizing bars along the Mexican-US border. It encouraged the nomination of a group leader in charge of the group's security. // Objective: This study examines whether these leaders differed from their followers in personal characteristics related to past experiences and behaviors, as well expectations, actual victimization, social behavior and alcohol consumption that night. // Method: A total of 1,035 subjects and 277 leaders in 239 groups were assessed in a repeated measures survey at the start and end of a night out. Analysis of Variance (ANOVA) and odds ratios tested for differences between leaders and non leaders. All calculations were performed in SPSS 20.0. // Results: Leaders tended to be older than their friends, were more likely to be males and the designated driver. The sample was homogenous in that there were few significant differences between leaders and non leaders. Leaders tended to drink less alcohol less than their friends, but were more likely to engage in verbal altercations. Group members were more likely to report verbal conflict when their group leader had been victimized. // Conclusion: More research is needed to understand which leader attributes and assets contribute to keeping followers from harm in high risk drinking environments to inform future interventions promoting a broader role as safe-keeper for designated drivers beyond the prevention of DUI. //

UMB - School of Nursing: PhD

8. **Presenter:** Ana C. Duarte

Title: The Use of Electronic Interventions to Improve Medication and Appointment Adherence in the Hispanic Population: A Systematic Review

Co-authors: 1) Ana C. Duarte, MS, PMHNP-BC; 2) Sue A. Thomas, PhD, RN, FAAN

Department/Center:

Affiliation: University of Maryland Baltimore, School of Nursing

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Objective: To systematically review the literature for research on the use of electronic interventions for medication and appointment adherence in the Hispanic population and evaluate these interventions in improving medication adherence, decreasing symptoms, and improving well-being. // Methods: A systematic review was conducted, guided by the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement. Studies published in peer-reviewed, English language journals were searched within EMBASE, PubMed and PsycINFO databases. Other sources included hand-searched articles via review of citations or Google Scholar search engine. Initial screening was based on title and abstract; clearly irrelevant articles, letters to the editor, and one-page articles were excluded. Full-text screening yielded studies eligible for qualitative analysis. Types of studies included randomized and non-randomized controlled, feasibility/pilot, cohort, and no-sampling designs. // Results: Twenty-four articles emerged from the full-text review using the eligibility criteria of (1) cell or smart phone intervention for adherence, (2) specific to the field of psychiatry, or (3) focused on the Hispanic population. Only one study included all criteria and linked the use of a telephone intervention to positive outcomes in adherence and depression in Hispanics, though it did not specify whether cell or smart phone was used. Five studies addressed cell or smart phone technology and adherence in psychiatry, but did not focus on Hispanics. Three of these five suggested a link between the use of the technology in the promotion of medication adherence and improved well-being; one study yielded equivocal evidence as to improved adherence via the use of technology; and one study showed little to no improved adherence as a result of the intervention. Three studies used cell or smart phone technology to increase adherence in Hispanics but the health care focus was not psychiatry. One study supported the use of technology in improvement of the health status of patients with diabetes, while the remaining two studies revealed equivocal results from technological interventions intended to improve attendance at appointments and blood glucose management in diabetes patients, and in adherence to keeping health diaries. Three studies examined the use of cell or smart phone for health outcomes other than adherence in the Hispanic population. All three studies linked a cell or smart phone intervention including increased mammography, self-efficacy and medication adherence, and improved beliefs and attitudes regarding prenatal care and motherhood. Finally, twelve studies focused on other combinations of cell or smart phone use in adherence or other health outcomes, but not in psychiatry and not in Hispanics. Ten of the twelve studies yielded evidence supporting the use of technology for improvements in abstinence from alcohol, decreased depression, increased outpatient appointment attendance and medication adherence, smoking cessation, increase in obtaining mammograms, decrease in use of opioid prescriptions for pain, and improvements in illness and medication beliefs. The remaining two studies did not support technological interventions for decreasing no-show rates for outpatient appointments and adherence to daily oral birth control medication. // Conclusions: The existing literature, though limited, largely supports the use of cell and smart phone interventions for improvement in a variety of health care outcomes, including medication and/or appointment adherence. A gap worthy of further research clearly exists in the literature inasmuch as the use of cell and smart phone technology to address improved outcomes in the field of psychiatry, specifically in the Hispanic population, has not yet been extensively

UMD - College of Education: School Psychology

9. Presenter: Ranga Atapattu

Title: Depression and PTSD Rates in a Refugee School in Malaysia

Co-authors: 1) Ranga Atapattu, B.A. - UMD, College of Education / 2) Colleen O'Neal, PhD - UMD, College of Education

Department/Center: School Psychology

Affiliation: University of Maryland, College of Education

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

A semi-structured psychiatric interview was conducted from 2010-2011 at a predominantly refugee school in Malaysia to diagnose rates of depression and posttraumatic stress disorder (PTSD) among students. The investigators then analyzed the data from these interviews to see whether the rates of depression and PTSD were similar among refugees and non-refugees at the school, as well as how these rates compared to rates of depression and PTSD among U.S. adolescents. Of the analyzed sample of 113 students, approximately 70% were refugees (i.e, Burma). 14.8% (n = 12) of those refugee students received a clinical depression diagnosis, compared to 12.5% (n = 4) of non-refugees. These rates are slightly higher than the estimated 12 month prevalence rate of major depressive disorder among US adolescents, which is 8.2% (Kessler et al., 2012). However, the rates of posttraumatic stress disorder among students (12.3% for refugees and 9.4% for non refugees) are almost 2-3 times than that of the estimated 12 month prevalence rate in U.S. adolescent population (3.9%, Kessler et al., 2012). Some reasons for this may be the additional stressful events refugee students face of leaving a conflict-torn country, acculturating to a new country, and being discriminated or isolated. This study provides support for the need for both better mental health resources and diagnostic screening tools for post-conflict refugee students.

UMD - School of Public Health: Kinesiology

10. Presenter: Julie Maier

Title: "I quit because I was worried about germs": The exercise experiences of women with OCRD

Co-authors: 1) Julie Maier-UMD; 2) Dr. Shannon Jette-UMD

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

In recent decades, there has been an increase in scholarship focused on the mental health benefits associated with physical activity, with researchers from a variety of disciplines promoting physical activity as a natural way to manage the symptoms related to numerous mental health issues. With increasing frequency, and in step with the American College of Sports Medicine and American Medical Association's recent initiative, "Exercise is Medicine"TM, there is a call for exercise to be prescribed as an alternative or complement to psychotropic medications, psychotherapy, or other Western approaches to mental health care. While physical

activity is undoubtedly beneficial to many, its incorporation into mental health treatment plans is in need of the same critical analysis other therapies and medicines have received. Indeed, there is a lack of qualitative work that looks at individuals' experiences living with mental illnesses and their relationship to physical activity as a potential treatment strategy. In order to help fill this gap, we draw on in-depth interviews with women living with Obsessive-Compulsive and Related Disorders (OCD) in order to explore the complex relationship between physical activity and particular mental illnesses that emerge from their life history narratives.

UMD - School of Public Health: Epidemiology

11. Presenter: Graciela Jaschek

Title: Association of life events and depressive symptoms among Puerto Rican Youth

Co-authors: 1) Graciela Jaschek, UMD / 2) Olivia Carter-Pokras, UMD / 3) Sandra L. Hofferth, UMD / 4) Xin He, UMD / 5) Glorisa Canino, UPR / /

Department/Center: Epidemiology

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Little has been published regarding socio-demographic determinants of depression and possible mechanisms for the development of depressive symptoms from childhood to adolescence in Latino populations. This study aims to examine the extent to which life events, place of residence, parental support, youth self-esteem and youth coping are related to the development of depressive symptoms among Puerto Rican youth. Secondary analyses were performed of data from the longitudinal Boricua Youth Study (three annual waves between 2000-2004). The sample consists of 10 to 13 year old Puerto Rican youth and their parents/caregivers residing in New York and Puerto Rico with no depressive symptoms at baseline (n=977). Results indicate that: 1) there is an increase in depressive symptoms with an increase in the numbers of total life events, negative life events, and positive life events; 2) no multiplicative interaction was found for place of residence, youth support from parents, youth self-esteem and youth coping; 3) youth with low coping had a higher number of depressive symptoms than youth with high coping regardless of number of negative or positive life events; 4) a unit increase in the number of total life events resulted in a 20% increase in depressive symptoms; 5) a unit increase in negative life events resulted in a 22% increase in depressive symptoms; 6) a unit increase in positive life events resulted in a 26% increase in depressive symptoms. This study identifies total, negative, and positive life events as risk factors that may be considered in early interventions before depression develops.

UMD - School of Public Health: Kinesiology

12. Presenter: Kyung Koh

Title: Influence of intra-auditory sensory integration in isometric finger force production

Co-authors: 1) Kyung Koh -UMD, 2) Hyung Joon Kwon -UMD, 3) Jae Kun Shim -

Co-authors: UMD

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Sensory information plays a critical role in learning motor skills, adapting to new environments, and maintaining accurate performance of motor activities. The enhancement of motor performance is based in part on the ability to utilize sensory information. Most of sensorimotor studies have been done primarily with respect to the visual modality. The effects of auditory sensory on a fine motor performance are not clearly understood. The purpose of this study was to investigate integration of intra-auditory sensory in sub-maximal isometric finger force production. Fifteen right-handed male adults participated as subjects for this study. A target tone (1000Hz & 70dB) presented to participant's the left ear and a tracking tone presented to their right ear via a headphone. The tracking tone was proportional to total finger force and determined by three conditions: frequency change condition (F), amplitude of sound change condition (M), both frequency and amplitude change condition (F+M) at each low and high feedback resolution. Participants were asked to match the tracking tone with the target tone. Performance error (PE-distance between force output and target), correction error (CE-distance between force output and its mean), estimation error (EE-distance between mean force output and target) were calculated for each subject. PE can be expressed by summation of CE and EE. The results show that participants have lower PE and CE for F+M at low resolution than for either F or M. This indicates that participants were able to integrate two distinct auditory modalities to produce and maintain the required force level with less variation when auditory feedbacks were weak. This supports the inverse effectiveness rule. That is, multisensory enhancement increases as stimulus saliency decreases. All three errors (PE, CE, and EE) were lower at high resolution than at low resolution. It may suggest that participants were less accurate to produce and maintain the required target force when lower amount of auditory feedback information was presented. This result is consistent with previous findings in visuomotor studies. We conclude that intra-auditory integration on finger force output follows the inverse effectiveness rule and the amount of auditory feedback information is associated with the finger force variability.

UMD - School of Public Health: Behavioral and Community Health

13. Presenter: Luciana Assini

Title: Long-term consequences of adolescent births among African American urban youth

Co-authors: **1. Luciana C. Assini, Dept. of Behavioral and Community Health, University of Maryland School of Public Health / 2. Kerry M. Green, Dept. of Behavioral and Community Health, University of Maryland School of Public Health / 3. Catherine Maybury, Dept. of Behavioral and Community Health, University of Maryland School of Public Health**

Department/Center: Behavioral and Community Health

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

The purpose of this study is to identify short- and long-term socioeconomic outcomes associated with teenage parenting for men and women. Compared to their peers who postponed childbearing, adolescent mothers have worse socioeconomic outcomes at adulthood. However, many risk factors for teenage pregnancy overlap with risk factors related to reduced life opportunities in general thus it is unclear if negative outcomes are the result of selection bias. Moreover, few studies have examined SES consequences for men or have considered long-term consequences – i.e., those extending into midlife. Data come from the Woodlawn Study, a prospective study of urban African American first graders from a socially disadvantaged community in Chicago. Data collected at four points: childhood 1966-1967 (N=1,241); adolescence 1975-1976, (N=939); age 32 (N = 952), and age 42 (N = 833). In comparison to non-teen mothers, adolescent mothers, in young adulthood were more likely to: be unemployed, live in poverty, depend on welfare, have earned a GED or not completed high school compared to finishing college, and have lower family income. In midlife, the effect of teen parenting for women remained statistically significant for: welfare dependency, educational outcomes, and income. Teen fathers were more likely to be without a job compared to non-teen fathers in young adulthood. By age 42, there were no statistically significant associations between teen parenting and outcomes for men. While we found significant socioeconomic consequences of teenage parenting for mothers, we found few consequences for fathers. Consequences for mothers included lower educational attainment, greater likelihood of unemployment, lower incomes, and increased risk of welfare dependency. Most of socioeconomic consequences of teenage parenting identified in young adulthood for women persisted into midlife. It is critical to provide programs to occur at early stages in the life course to help teen mothers achieve better long-term socioeconomic consequences. /

UMD - School of Public Health: Center for Health Behavior Research

14. Presenter: Lizette Nkongho

THE INFLUENCE OF ELECTRONIC NICOTINE DELIVERY SYSTEMS
Title: (ENDS) ON ELECTROPHYSIOLOGICAL CORRELATES OF
ATTENTION

Co-authors: George A. Buzzell, B.S., Craig G. McDonald, Ph.D., George Mason
University; Lizette E. Nkongho, B.A., Eva Sharma, M.P.H., Azieb, W.
Kidanu, M.P.H., Pamela I. Clark, Ph.D., University of Maryland

Department/Center: Center for Health Behavior Research

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Background: Despite an increase in the prevalence of electronic nicotine delivery systems (ENDS), or “e-cigarettes”, the neurocognitive effects of this product and its potential for abuse remains unclear. The use of traditional cigarettes is associated with an acute increase in attentional processing which can be detected using event-related potentials (ERPS), a sensitive measure of transient brain activity. Further, this attentional “boost” may be linked to abuse liability. However, it remains unclear whether this attentional enhancement stems from

nicotine administration alone, or is related to other aspects of cigarette smoking. In the present study, this question was investigated by comparing ERP indices of attentional amplification following exposure to either traditional cigarettes or ENDS, with or without nicotine. Methods: During four separate laboratory visits, cigarette smokers used ENDS, ENDS placebo, their own brand cigarette, or “sham” smoked their own brand cigarette in a Latin-square order. During smoking sessions, ERPs elicited by stimuli presented in the context of a two-stimulus oddball task were recorded. ERPs were recorded immediately before and after smoking, as were subjective measures (relief of craving/withdrawal). Results: Whereas the P3 component did not differ across the four conditions, another ERP component associated with attentional amplification, the lateral-occipital N2, was shown to vary across the four conditions. Both sessions involving nicotine administration (ENDS and own brand) resulted in a nominal boost to the N2 component. However, only the effect of the own brand session survived the statistical correction for multiple comparisons. Conclusions: The present results support the notion that properties of cigarettes, other than their capacity to deliver nicotine, contribute to their observed neurocognitive effects. Similarly, differences in the experience associated with ENDS use, compared to traditional cigarettes, may limit their ability to alter neurocognitive functioning. These findings have implications for the abuse liability of ENDS products and their predicted utility as a smoking cessation tool.

UMD- School of Public Health: Behavioral and Community Health

15. Presenter: Robert Feldman

Title: Workplace Smoking Cessation in Costa Rica: An Exploratory Study

1)Robert Feldman, University of Maryland and Universidad de Iberoamérica (Costa Rica), / 2)Alfonso Villalobos P., Caja Costarricense de Segura Social / 3) Roberto Rodríguez B., Universidad de Iberoamérica

Department/Center: Behavioral and Community Health

Affiliation: University of Maryland, SPH

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Objective: The workplace is an excellent site for smoking cessation interventions for adult smokers. Adults spend one-third of their lives at work; the workplace provides channels for promoting programs such as E-mails, newsletters, bulletin boards; meetings can be tailored to workers' schedules; peer and social support can encourage smoking cessation; and workplace no-smoking policies can expedite quitting. **Methods:** With the support of the Director of Employee Health Services of the Department of Justice (Poder Judicial), an exploratory workplace smoking cessation program was conducted utilizing best practices from Costa Rica and US, peer and social support, and consistent with workplace schedules/policies. **Results:** A total of 14 employees enrolled in the 7-session workplace program. At the end of the program 36% had quit smoking with social influence playing an important role in quitting. Employees who quit smoking reported fewer smoking co-workers (20%) than non-quitters (33%). Also employees who quit had fewer smoking friends (40%) than non-quitters (67%). In addition, none of the quitters lived with a smoker, in contrast to 56% of non-quitters who lived with a smoker. The 6-month cessation rate was 14%. **Conclusions:** Since social factors were found to be related to smoking cessation in the workplace, it would be important to consider incorporating additional nonsmoking social support contacts. Recent programs have included the use of mobile phones, texting, and email supports. Additionally, since relapse continues over time smoking cessation

mobile phones, texting, and email supports. Additionally, since relapse continues over time smoking cessation programs should add follow-up social support components.

UMD - School of Public Health: Health Services Administration

- 16. Presenter:** Lori Simon-Rusinowitz
Title: Environmental Scan of Self-Direction in Behavioral Health: Findings and Recommendations
Co-authors: 1) Lori Simon-Rusinowitz - UMD, 2) Bevin Croft - Brandeis University, 3) Dawn M. Loughlin - Boston College, 4) Kevin Mahoney - Boston College
Department/Center: Health Services Administration
Affiliation: University of Maryland, SPH
Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Approximately one in four persons age 55 and over experience behavioral health disorders. Experts project that this number, as well as demand for service, will increase significantly in the future. For example, they expect the need for substance abuse treatment to increase from 1.7 million elders in 2000 and 2001 to 4.4 million in 2020. By 2030, the number of elders with major psychiatric illnesses is expected to reach 15 million, more than double the current prevalence. With health care reform focusing on integration of behavioral health and primary care, and expanded Medicaid coverage, a greater need for services is likely. Self-direction (SD) is based on the premise that people with disabilities can and should make their own decisions about their services. Currently, SD programs help people of all ages and with all types of disabilities maintain independence. However, these programs have not focused on a model that allows participants to direct a budget and manage their services. An environmental scan aimed to understand barriers and facilitators to SD in behavioral health, and ascertain interest among stakeholders. It comprised four components: 1) a literature review examining current knowledge; 2) webinar, surveys, and interviews with state and county agency directors; 3) interviews and focus groups with key stakeholders (i.e. consumers and providers); and 4) recommendations. Results indicate that a majority of project participants are interested in a large-scale demonstration and evaluation of self-directed behavioral health services. The authors will discuss next steps for integrating self-direction into the behavioral health arena.

UMD - School of Public Health: Health Services Administration

- 17. Presenter:** Jie Chen
Title: Incremental Health Care Expenditures related to Depression, Anxiety, Stress, and Substance Abuse among Cancer Survivors
Co-authors: Jie Chen - UMD / Mir Ali - SAMHSA
Department/Center: Health Services Administration
Affiliation: University of Maryland, SPH
Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Objective: There were approximately 13.7 million cancer survivors in the United States in 2012. This number is expected to increase to 18 million by 2020. Racial and ethnic minority survivors continue to face worse health care access and receive less timely health treatment compared to the whites. Behavioral health, such as psychological stress, and drug abuse, are common comorbidities of cancer. Unfortunately, racial and ethnic minorities also have substantial barriers to mental health care services. The delayed or neglected mental health care among cancer survivors might reduce the cost efficiency of cancer treatment and increased overall health care cost, especially among the racial and ethnic minorities. The objective of this study is to estimate the incremental health care expenditures related to depression, anxiety, stress, and substance abuse among cancer survivors, with a focus on racial and ethnic disparities. // Method: This study used national representatively data set Medical Expenditure Panel Survey (MEPS) from 2008-2011, the linked data sets of Consolidated and Medical Component Files of MEPS. ICD9 codes were used to identify patients with cancer, depression, anxiety, stress, substance abuse, and other up to 10 chronic diseases, such as diabetes and heart diseases. Health care costs were defined as the total health care expenditures, including the expenditures from the health insurance, out-of-pocket payment, and/or government subsidy. All the costs were adjusted using 2011 Consumer Price Index Medical Care Component. The associations of behavioral health disorders with health care expenditures might be different along the distribution of the expenditures. Hence, quantile multivariate regressions were employed to measure the different incremental health care expenditures associated with behavioral health disorders. // Population Studied: Our final sample included 8,368 cancer survivors aged 18 and above. // Results: Having depression, anxiety, and/or stress could significantly increase health care expenditures among the cancer survivors, and the incremental costs were more substantial at the lower end of the health care expenditures. Having substance abuse could also increase health care expenditures, especially at the higher end of the distribution. Among cancer survivors, incremental costs related to disorders of depression, anxiety, stress, and substance abuse were the highest compared to other cancer comorbidities, including diabetes, heart diseases, etc. We also found that African Americans had significantly higher health care expenditures at the 75th-95th percentile of the distribution, even after controlling all the social economic and demographic characteristics. // Conclusion: This study showed evidence that behavioral health disorders were the “most expensive” comorbidities associated with cancer. Compared to the whites, African American cancer survivors had lower health care expenditures at the lower end of the distribution. However, they encounter significantly higher health care expenditures compared to other race and ethnicity, at the higher end of the health care expenditures. // Implications for Policy and Practice: Our results indicated the urgency to provide timely behavioral health services among the cancer survivors. Depression screening test is free under the Affordable Care Act. This screening test should be highly recommended among the cancer survivors. Racial and ethnic disparities in health care have been well identified. Compared to the whites, minorities usually have worse health care access, lower health care utilization and expenditures. Our study showed the disproportionate ratios of racial disparities along the distribution of the health care expenditures, which suggested that the extremely high health care expenditures among African American cancer survivors might be caused due to the delaying or forgoing effective treatment at the cancer prevention period. /

Title: Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention (SAMHSA/CSAP) Prevention Fellowship Program: A promising paradigm for strengthening the behavioral health workforce

Co-authors: 1) Commander Daniel Bailey, MHA, MBA - SAMHSA/CSAP 2) Sabrina Roundtree, MPH, CPS - Synergy Enterprise Inc. 3) Tia Younger, MPH, ICPS - Synergy Enterprise Inc.

Department/Center: Center for Substance Abuse Prevention

Affiliation: U.S. Department of Health and Human Services (HHS), Substance

Poster Category: Behavioral Health, Mental Health, Substance Abuse

Abstract:

Learning Objectives / - Explain how the CSAP Prevention Fellowship Program responds to the demands of the behavioral health workforce. / - Describe the Prevention Fellowship Program components and strategies for developing prevention professionals. / - Analyze the Prevention Fellowship Program's outcomes and impact on the behavioral health field after 6 years of operation. / - Discuss how the Prevention Fellowship Program acts as a model for strengthening the behavioral health workforce. / / Abstract / / The challenges facing the behavioral health workforce are well documented in recent literature. While the behavioral health field has benefitted from recent improvements in workforce development, much work remains to sustain a workforce with the abundance and competence to consistently meet the demands of the field. / Recent health policy reforms place heavy emphasis on prevention in all areas of health, and further challenge the substance abuse and mental illness prevention communities to adopt a more integrated approach to prevention, and prepare for a future of more integrated prevention funding. The evolving state of health care reform results in increasing demands for a workforce which is more adept at collaborating across disciplines. / Since 2006, the Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention (SAMHSA/CSAP) Prevention Fellowship Program has worked to contribute an influx of highly-trained, diverse substance abuse prevention leaders into the behavioral health workforce. The Prevention Fellowship Program acts as a paradigm for developing a highly qualified and sustainable behavioral health workforce. In this light the program is discussed, with emphasis on the program's components and innovative strategies, its outcomes and impacts on the field, and its successes and challenges as they relate to the potential of this model to translate to other areas of the behavioral health workforce. /

Cancer Prevention and Control

UMD - A. James Clark School of Engineering: Civil Engineering

19/20. Presenter: Joe Dong, Christopher Giromini, Woojin Han, Sonja Hatten, Ki Kim, Autusa Pahlavan, Rajan Patel, LeAnne Young, Ani Ufot
Title: Promoting A Novel Approach to Cellular gene Expression Alteration
Co-authors: 1) Joe Dong - UMD / 2) Christopher Giromini - UMD / 3) Woojin Han - UMD / 4) Sonja Hatten - UMD / 5) Ki Kim - UMD / 6) Autusa Pahlavan - UMD / 7) Rajan Patel - UMD / 8) LeAnne Young - UMD / 9) Ani Ufot - UMD / Everyone attributed evenly

Department/Center: Civil Engineering

Affiliation: University of Maryland, A. James Clark School of Engineering

Poster Category: Cancer Prevention and Control

Abstract:

Gene therapy is a promising new technology that has the potential to treat virtually all genetic diseases and facilitate research for cures. However, conventional methods of gene therapy are limited because they are extremely harmful to cells, and thus can only be used on immortalized cell lines that are treated with chemicals to be more durable (Yao & Eriksson, 2000). Furthermore, these methods lack specificity, targeting all cells without regard for cell type (Sharma & Sharma, 1997). A novel method for delivering silencing RNA (siRNA) to alter cellular gene expression was recently developed at the NIH. This method utilizes a modular system consisting of a specific ligand coupled to a Hepatitis B Virus-derived RNA binding domain. This enables researchers to deliver siRNAs to specific cell types through cell-specific interactions between receptors on cells and ligands, proteins that fit into those receptors. Because this technique is so practical, it can be applied to virtually any disease or assist research for these diseases. The method is also gentle enough to alter gene expression on primary cells directly from the body more efficiently than conventional methods and targets specific cells. Our project aims to produce a modular siRNA delivery vehicle protein, expose specific cells to the delivery vehicle coupled to siRNAs, and quantify specific changes in gene expression. This technology has vast implications for how patient care methods develop, as its ability to target specific cell types can take personalized treatment to the next level.

Department of Health and Human Services

21. Presenter: Rachel Paterno

Title: Hybrid to Predict the Carcinogenicity of Chemical Compounds

Co-authors: 1-Rachel Paterno, RSC / 2- Ron Brown, FDA / 3- Prachi Pradeep, Marquette University

Department/Center:

Affiliation: Department of Health and Human Services

Poster Category: Cancer Prevention and Control

Abstract:

The ability of chemical compounds to produce a carcinogenic response in humans or experimental animals is largely dependent on the structure of the compound. It is possible to predict the likelihood that a compound will be carcinogenic by determining if the compound contains structural alerts associated with carcinogenicity. Although the accuracy of computational models to identify structural alerts is typically quite good, a hybrid approach that combines in vitro biological data with the in silico methods has recently been proposed to improve the predictive ability of the models. The goal of this study is to use in vitro genotoxicity data in a hybrid approach to improve the ability of computational models to predict carcinogenicity. The results of 10 high throughput in vitro mutagenicity data were identified in the open literature for a set of 62 compounds. In addition, the online computational programs, Toxtree and Lazar, were used to determine whether the compounds in this data set contained structural alerts for genotoxic carcinogenicity. The accuracy of each in vitro biological data set was evaluated individually with respect to its ability to predict the carcinogenic response of the compound and then determined in combination with the model-derived predictions of

response of the compound and then determined in combination with the model-derived predictions of carcinogenicity. The accuracy of the Toxtree and Lazar models was 62.1% and 84.5%, respectively, for this data set. Consideration of in vitro genotoxicity data modestly improved the predictive ability of the Toxtree model, but not the Lazar model, since it already exhibited better predictive performance than any of the in vitro assays. From a public health perspective, these results suggest that computational models have the ability to identify chemical carcinogens with accuracy comparable to well accepted in vitro genotoxicity assays and can therefore serve as useful tools to improve our ability to identify and control exposure to potentially cancer-causing compounds.

UMD - School of Public Health: Department of Behavioral and Community Health

22. Presenter: Erin K. Tagai

Title: Increasing cancer early detection in African American churches: Feasibility of employing an online system for training peer Community Health Advisors

1) Erin K. Tagai - UMD, 2) Sherie Lou Z. Santos - UMD, 3) Cheryl L. Holt - UMD, 4) Janice Bowie - JHU, 5) Muhiuddin Haider - UMD, 6)

Co-authors: Mary Ann Scheirer - Scheirer Consulting, 7) Jimmie L. Slade - Community Ministry of Prince George's County, 8) Min Qi Wang - UMD, 9) Tony Whitehead - UMD

Department/Center: Behavioral and Community Health

Affiliation: University of Maryland, SPH

Poster Category: Cancer Prevention and Control

Abstract:

Purpose: This presentation will introduce an online system used to train peer community health advisors (CHAs) and discuss feasibility and process evaluation data from an ongoing implementation trial. / **Methods:** Project HEAL (Health through Early Awareness and Learning) is a community-based implementation trial in 15 African American churches located throughout Prince George's County, MD. Seven churches (14 CHAs) were randomly assigned to complete the online training (versus a traditional in-person training). The online training system provides CHAs with a curriculum consisting of: informed consent, memorandum of understanding, 13 content-specific presentation videos, and a certification after the CHAs pass a knowledge exam. Once certified, the CHAs receive Project HEAL workshop intervention materials and lead a 3-part cancer education workshop series in his/her church. / **Results:** Usability and pilot testing demonstrated feasibility of the online training system. This was further supported by successful training and certification of 14 CHAs from the 7 different churches assigned to this training modality. However, several challenges were experienced including initial dropout of 3 CHAs, greater than anticipated technical support needs, and difficulties relating to technical aspects of the online training system (e.g., implementation of tracking logins). / **Conclusions:** Use of an online approach is a novel way to train peer community health advisors and has implications for wider scalability and reach. We discuss lessons learned and implications for future use of technology in this context. / / This research is funded by the National Cancer Institute (#R01CA147313). /

23. **Presenter:** Daisy Le
Men's Prostate Awareness Church Training (M-PACT): Intervention
Title: Development and Preliminary Baseline Results for a Faith-Based CBPR Project

Co-authors: 1) Daisy Le, MPH, MA - UMD / 2) Katherine Rosales-Garcia - UMD / 3) Cheryl L. Holt, PhD - UMD / 4) Darlene Saunders, PhD, MPH, CHES - UMD / 5) Bettye Muwwakkil, PhD - Access in Wholistic and Productive Living Institute Inc. / 6) Ralph Williams, BS - Access in Wholistic and Productive Living Institute Inc. / 7) Jimmie Slade, MA - Community Health Ministry of Prince George's County / 8) Min Qi Wang, PhD, MS - UMD / 9) Tony L. Whitehead, PhD, MsHyg - UMD / 10) Emily Schulz, PhD - A. T. Still University / 11) Michael Naslund, MD, MBA - Johns Hopkins University

Department/Center: Department of Behavioral & Community Health (BCH)

Affiliation: University of Maryland, SPH

Poster Category: Cancer Prevention and Control

Abstract:

African American men are 60% more likely to develop prostate cancer and are twice more likely to die from this disease than European-American men. At the same time, more than half of African Americans (53%) reported attending religious services at least once a week in a recent study conducted by Pew Forum on Religion & Public Life (2010). The objective of the Men's Prostate Awareness Church Training (M-PACT) project is evaluate a spiritually-based 4-part workshop series focused on informed decision-making for prostate cancer screening among African American men. Following a community-based participatory research (CBPR) approach, the M-PACT project actively worked with members from the community to develop program activities and educational materials for the intervention. The project frames health messages with spiritual themes, involves female health partners, and incorporates health information technology. Forty peer community health advisors from 20 participating Prince George's County churches were trained and certified to implement a 4-part men's health workshop series for participants in their congregations. Churches were randomized to receive the workshops in an all-male format, or in mixed groups including women "Health Partners". Preliminary findings for the baseline data from this group randomized trial will be discussed, as well as lessons for designing culturally relevant interventions for African American men.

UMD - School of Public Health: Department of Behavioral and Community Health (BCH)

24. **Presenter:** Daisy Le
Title: The role of social support in post-treatment surveillance among African American colorectal cancer survivors

1) Holt C - UMD / 2) Le D - UMD / 3) Martin MY - University of Alabama at Birmingham / 4) Brown-Galvan A - University of Alabama at Birmingham / 5) Fairley TL - Centers for Disease Control and

Co-authors: Prevention (CDC) / 6) Smith JL - Centers for Disease Control and Prevention (CDC) / 7) White A - Centers for Disease Control and Prevention (CDC) / 8) Hall I - Centers for Disease Control and Prevention (CDC) / 9) Oster R - University of Alabama at Birmingham / 10) Pisu M. - University of Alabama at Birmingham

Department/Center: Department of Behavioral and Community Health (BCH)

Affiliation: University of Maryland, SPH

Poster Category: Cancer Prevention and Control

Abstract:

Objectives: African Americans are less likely than other groups to receive appropriate surveillance after colorectal cancer (CRC) treatment. The objective of this study is to understand what motivates or hinders surveillance behaviors in a sample of African American CRC survivors. Issues explored included knowledge about surveillance protocols, economic barriers, support from family, friends and church, and the role of faith. / Methods: Interviews were conducted with 60 African American CRC survivors recruited from the Alabama Cancer Care Outcomes Research and Surveillance (CanCORS) study and the Alabama Statewide Cancer Registry. Interviews were recorded and transcribed. Transcripts were reviewed and coded independently by the authors. The NVivo software package was used to facilitate coding and data management. / Results: Survivors were from 4 to 6 years post diagnosis, 57% female, 60% older than 65 years, 57% from rural Alabama, 30% with stage 1, 32% with stage 2, and 38% with stage 3 disease. Material and emotional support from family and from one's faith community were cited as playing an important role in coping with the disease and post-treatment follow-up. Patients who reported being compliant with post-treatment surveillance recommendations (according to stage of disease based on self-report of colonoscopy, CT scans and blood work) reported more religious material and non-material support, and support from other CRC survivors. / Conclusions: In these African American CRC survivors, support from family, other cancer survivors and the faith community is important. Interventions to increase post-treatment surveillance in this population may be enhanced by including components that emphasize familial, other cancer survivor, and religious support.

Environmental Health, Environmental Justice

UMD - College of Computer, Mathematical and Natural Sciences: Marine Estuarine Environmental Sciences

25. **Presenter:** Crystal Romeo Upperman
Title: Exposure to an Aggregate Climate Change Metric and Respiratory Health Outcomes in the Continental US
Co-authors: Crystal Romeo, University of Maryland School of Public Health, College Park, MD. Amir Sapkota, University of Maryland School of Public Health, College Park, MD
Department/Center: Marine Estuarine Environmental Sciences (MEES)
Affiliation: University of Maryland, College of Computer, Mathematical and Natural Sciences
Poster Category: Environmental Health, Environmental Justice

Abstract:

Background: Climate Change is an emerging public health issue. Studies have examined how change may affect acute hospitalizations, mortality, and infectious diseases, but its potential impacts on chronic diseases, such as asthma, are poorly understood. Objectives: We explored the association between exposures to increased frequency of unusually hot days and the risk of asthma exacerbation (asthma attack and hospitalization for asthma) and hay fever using nationally representative sample of US population from the National Health Interview Survey (NHIS 2008-2010). Methods: We computed county level exposure metrics to identify counties with high numbers of unusually hot days in a given year relative to a baseline period (1960-1980). "Exceedence days" were defined as the number of days within a given month that exceeded the 95th percentile of the distribution of the maximum temperature for a baseline period for the county. E95 and E99 for NHIS respondents were defined by summing the county-specific monthly counts for 1 year prior to quarter of interview. We used logistic regression to obtain odds ratios (OR) and 95% confidence intervals (CI) for the association between these metrics and asthma exacerbation (asthmatics only) and hay fever (adults). Results: Asthmatics living in counties with high numbers of hot days using E95 had increased risks of hospitalization (OR 3.26, CI: 1.90-5.57). No associations with asthma attacks were found. Among all adults, those living in counties with high numbers of hot days had higher risks of hay fever using both E99 (OR: 11.09, CI: 1.01-1.19) and E95 (OR: 1.28, CI: 1.12-1.48). Conclusion: Preliminary results suggest that exposure to excessive heat may be associated with increased risk of asthma hospitalization among asthmatics and hay fever among adults. Further analysis is being conducted to explore how these associations across sub-population and geographical area.

UMD - School of Public Health: PhD Environmental Health and Toxicology

26. **Presenter:** Greg Raspanti

Title: Ethnic Variation in Consumption of Traditional Tobacco Products and Risk of Lung Cancer in Nepal

1) Greg Raspanti - UMD, 2) Amir Sapkota - UMD 3.) Mia Hashibe - University of Utah 4.) Bhola Siwakota - BP Memorial Cancer Hospital Nepal, 5) Mei Wei- University of Utah, 6) Binay Kumar Thakur- BP

Co-authors: Memorial Cancer Hospital Nepal, 7) Chin Bahadur Pun - BP Memorial Cancer Hospital Nepal, 8) Bhakta Man Shrestha- BP Memorial Cancer Hospital Nepal , 9) Zachary Burningham- University of Utah, 10) Yuan-chin Amy Lee- University of Utah

Department/Center: MIAEH

Affiliation: University of Maryland, SPH

Poster Category: Environmental Health, Environmental Justice

Abstract:

Lung cancer is the top contributor to cancer deaths in the developing world. Limited information is available on the role of specific traditional tobacco products that are commonly used in the low income countries. In this study, we compared the influence of traditional tobacco products commonly used in Nepal on lung cancer

risk. We recruited a total of 606 lung cancer cases and 606 controls from the B.P. Koirala Memorial Cancer Hospital in Nepal between 2009 and 2012. All lung cancer cases were either histologically or cytologically confirmed. We computed odds ratios (ORs) and 95% Confidence Intervals (CI) using unconditional logistic regression, adjusting for demographic and socioeconomic variables (age, race, income level, education, and region of the country) as well as other known confounders. Overall, the highest risk of lung cancer was observed in the groups that smoked multiple types of tobacco, with the highest risk of those who reported smoking more than 3 products (OR 7.0; 95% CI 4.3-11.4) compared with nonsmokers. Among those who only smoked one type of product, choor/hash/hookah consumers had the highest lung cancer risk (OR 10.2; 95% CI 6.2-16.6) followed by bidi (OR 5.6; 95% CI 3.6-8.7), unfiltered cigarettes (OR 4.9; 95% CI 3.4-7.2), and filtered cigarettes (OR 3.4; 95% CI 2.2-5.3). A clear dose-response relationship was observed between increased frequency of smoking and lung cancer risk across all ethnic subgroups for all tobacco products considered. These results highlight the important role of traditional tobacco products on lung cancer risk in the low income countries, especially within ethnic subgroup.

UMD - School of Public Health: Environmental Health

27. Presenter: Rianna Murray

Title: The Anacostia River, Recreation, and Health: Is there an Association between Limited-Contact Recreation and Adverse Health Outcomes?

1.) Rianna Murray (Corresponding Author) - Maryland Institute for Applied Environmental Health at The School of Public Health, University of Maryland, College Park, / 2.) Sacoby Wilson - Maryland Institute for Applied Environmental Health at The School of Public Health, The School of Public Health, University of Maryland, College Park / 3.) Janet Phoenix - Department of Environmental &

Co-authors: Occupational Health, The School of Public Health and Health Services, George Washington University / 4.) Victoria Chanse - The Department of Plant Science and Landscape Architecture, College of Agriculture and Natural Resources, University of Maryland, College Park / 5.) Amir Sapkota - Maryland Institute for Applied Environmental Health at The School of Public Health, The School of Public Health, University of Maryland, College Park / 6.) Laura Dalemarre - Maryland Institute for Applied Environmental Health at The School of Public Health, The School of Public Health, University of Maryland, College Park /

Department/Center: Environmental Health

Affiliation: University of Maryland, SPH

Poster Category: Environmental Health, Environmental Justice

Abstract:

Purpose of Research: The Anacostia River, a tributary of the Chesapeake Bay and located in close proximity to the University of Maryland campus, is highly contaminated with raw sewage, heavy metals, trash, pathogens, excessive sediments and organic chemicals. Many people use regularly use this river for limited-contact recreation, such as kayaking, canoeing, rowing and sport fishing. The contaminants in the river potentially

pose threats to the health of recreational users. While there has been some study of the exposure to subsistence fishers in this region there is currently little information available on the risks faced by recreational users. This study examines adverse health outcomes associated with limited contact recreational exposure to the Anacostia River. / Methods: 197 recreational users of the Anacostia River were surveyed regarding general demographic information, recreational behavior on the river and specific health outcomes. Basic descriptive statistics and logistic regression were used to investigate health risks. / Results: Approximately 30.9% of recreational users reported having symptoms associated with gastrointestinal (GI) illness within the last 12 months. Logistic regression analysis yielded statistically significant associations, including recreational users without a college education having higher odds of experiencing vomiting (OR= 3.73; 95% CI, 1.27-10.92). Male participants who recreate also had higher odds of experiencing dizziness (OR= 2.50; 95% CI, 1.10-5.69) and nausea (OR=2.50; 95% CI, 1.10, 5.69) compared to female users. / Implications for public health: This pilot research investigated important features of limited-contact water recreational user exposure and health outcomes. While statistically significant associations were detected between some socio-demographic variables and incidence of certain symptoms associated with GI illness, further investigation is required to determine their true meaning. Given the high level of contamination known to be present in the river and the popularity of its use for recreation, this work has important implications for the health of river recreationalists. /

UMD - School of Public Health: MPH Environmental Health Science

28. Presenter: Priti Patel

Title: In vitro assessment of aflatoxin toxicity in a human intestinal cell line Caco-2

Co-authors: 1) Murphy Wan - University of Hong Kong, 2) Hani El-Nezami - University of Hon Kong, 3) Paul C Turner - UMD

Department/Center: MPH Environmental Health Science

Affiliation: University of Maryland, SPH

Poster Category: Environmental Health, Environmental Justice

Abstract:

Background: Aflatoxins are toxic secondary metabolites of *Aspergillus* that contaminate maize and groundnuts in tropical regions. Approximately four billion persons live in at risk regions and for children with chronic high levels of exposure; growth faltering is strongly associated with aflatoxin exposure. Aim: This in vitro study investigated the effects of three aflatoxins (AFB1, AFG1 and AFB2) on a human intestinal cell model, Caco-2, that forms stable monolayers, in an attempt to identify whether disruption of gastrointestinal integrity was a possible mechanism. Methods: Time and dose response relationships were examined on Trans Epithelial Electrical Resistance (TEER) on the cell model, for all three toxins. Result: In the absence of treatment the TEER varied by less than 4% once cells were confluent. At the highest concentration of AFB1 a significant decrease in TEER was observed at 24 hours ($p < 0.001$). A dose dependent decrease in TEER was observed for AFB1 ($p < 0.001$) and AFG1 by 48 hours. Dose dependent decreases were observed for both AFB1 ($p < 0.001$) and AFG1 ($p = 0.016$) by 72 hours. AFB2 had no effect. Discussion: Growth faltering in tropical regions is frequently associated with gastrointestinal enteropathy or “leakiness”. These in vitro studies are suggestive that AFB1 and AFG1 may cause gastrointestinal toxicity by this route. AFB1 and AFG1 are readily metabolized to a reactive and toxic intermediate, whilst AFB2 is structural less able to form this metabolite, suggesting this intermediate metabolite is important for the toxicity observed here. Conclusion: It will be

suggesting this intermediate metabolite is important for the toxicity observed here. Conclusion: It will be important to examine the relationship between exposures to toxin, gut integrity and child growth to better understand this public health issue on subsistence peasant farmers in tropical regions.

UMD - School of Public Health: Master of Public Health (MPH)

29. **Presenter:** Meleah Boyle

Title: Seasonal fluctuation in serum aflatoxin-albumin levels in children from Guinea, West Africa

1) Meleah Boyle - Maryland Institute for Applied Environmental Health, School of Public Health, University of Maryland, College Park, MD 20742, USA, 2) Abdoulaye Sylla - Institut Pasteur de Guinée, Kindia, Republic of Guinea, 3) Mamadou S. Diallo - Institut Pasteur de

Co-authors: Guinée, Kindia, Republic of Guinea, 4) Christopher Wild - International Agency for Research on Cancer Centre, Lyon France , 5) Paul C Turner - Maryland Institute for Applied Environmental Health, School of Public Health, University of Maryland, College Park, MD 20742, USA /

Department/Center:

Affiliation: University of Maryland, SPH

Poster Category: Environmental Health, Environmental Justice

Abstract:

Background: Aflatoxins are toxic and carcinogenic fungal metabolites that frequently contaminate maize and groundnuts in West Africa. Globally they are the second leading cause hepatocellular carcinoma, and are suspected to adversely affect growth and immune systems of children. As aflatoxins are a storage issue it is critically important to understand the variability in exposure by village and by season. // Methods: In this study serum aflatoxin-albumin (AF-alb) biomarkers were assessed in Guinean children (n=318, aged <6 years) from 10 villages at three time points (T1, T2 and T3 were for July/Aug 2003 (1st harvest), Mar 2004 (prolonged storage), July/Aug 2004 (2nd harvest), respectively) covering a 12 month period. Geometric mean AF-alb adduct concentrations are presented throughout. // Results: At T1 208/276 (75%) were positive (mean 6.3 pg/mg; range ND to 90.4pg/mg), at T2 283/305 (93%) were positive (mean 15.2 pg/mg; range ND to 104.2 pg/mg), at T3 237/317 (75%) were positive (mean 5.2 pg/mg; range ND to 169.5pg/mg). For four villages AF-alb adduct concentrations were low at each time point (approximately the limit of detection), whilst for six villages AF-alb were positive more frequently and varied by season. AF-alb in these six villages were significantly lower at T1 (mean 9.2ng/mg: 95%CI 8.0, 10.3) and T3 (mean 10.9pg/mg: 95%CI 9.7, 12.0) compared to T2 (mean 16.3pg/mg: 95%CI 15.2, 17.4), p<0.01 after adjustment for sex. // Conclusions: This was the first study to assess multiple AF-alb bio-measures in children over a 12 month period. These data indicate the importance of conducting longitudinal pilot studies to understand the temporal nature of exposure; data that will inform study design aimed to better understand the health impacts of exposure and the efficacy of longitudinal intervention strategies. /

30. Presenter: Kimberly Stinchcomb
Title: A comparison of 24 hour versus first morning void urinary deoxynivalenol

Co-authors: 1.) Kimberly Stinchcomb - UMD, 2) Kay White - LIGHT laboratories, School of Medicine, University of Leeds, UK, 3) Paul C Turner - UMD

Department/Center: Environmental Health Sciences

Affiliation: University of Maryland, SPH

Poster Category: Environmental Health, Environmental Justice

Abstract:

The mycotoxin deoxynivalenol (DON) is a frequent contaminant of cereal crops. Suggested health effects of DON include gastroenteritis, growth faltering, and immune toxicity. A strong quantitative relationship between DON ingestion and urinary DON was recently demonstrated. In these pilot studies, (1) the relationship between first morning void (FMV) and 24 hour urinary DON was further assessed for 14 individuals on two days; (2) a longitudinal examination of cereal intake using food diaries and the associated fluctuation in urinary DON was assessed in two individuals over 13 days. / / Study 1: Urinary DON was detected in 27/28 (96%) of FMV (mean 9.2 ng/mg creatinine; range nd-32.2ng/mg) and 28/28 (100%) of 24 hour urines (mean 10.0ng/mg; range 0.6-21.8ng/mg). Linear regression revealed a strong relationship between the two measures (adjusted R²=0.66, p<0.001). Study 2: In both of the monitored volunteers, urinary DON concentrations were modestly associated with the previous 12 hour cereal intake (volunteer 1: R² = 0.24, p = 0.05; volunteer 2: R² = 0.22, p = 0.05). / / Whilst 24 hour urines are regarded as ideal for biomonitoring and exposure assessment, many epidemiological studies are unable to capture this. Despite the sample size limitation, the strong relationship between FMV and 24 hour samples supports the use of this former measure in DON analysis. The modest association between 12 hour urinary DON levels and cereal intake suggest that the urinary measure reflect recent consumption of at risk foods, thus multiple measures may better inform epidemiological surveys. /

UMB - School of Nursing: PhD student, Center for Health Outcomes Research

31. Presenter: Knar Sagherian

Title: Factors associated with drowsy driving in hospital nurses

Co-authors: 1)Knar Sagherian- UMB-SON, 2) Clark J Lee- UMCP- SPH, 3) Jeanne Geiger Brown- UMB-SON

Department/Center: Center for Health Outcomes Research

Affiliation: University of Maryland, Baltimore. School of Nursing.

Poster Category: Environmental Health, Environmental Justice

Abstract:

Background: Nurses are at risk for drowsy driving because of rapid shift rotations, extended working hours, night shifts and overtime. Most often, nurses commute to work without achieving adequate sleep between shifts. More than 25% of nurses reported drowsy driving on one of every four shifts they worked. / Problem statement: What are the work related, non-work related and personal factors that are associated with drowsy

driving in hospital staff nurses? / Method: Baseline data from a pilot study designed to reduce fatigue in nurses was collected between January 2012 and May 2012 in a tertiary care hospitals in a middle Atlantic state. The questionnaires were the General Sleep Disturbance scale, Occupational Fatigue Exhaustion / Recovery scale, Epworth Sleepiness scale, and Cleveland Sleep Habits survey. Nurses were typical of hospital nurses in the US by age and gender. / Results: Almost 27% (22/83) of nurses reported at least one episode of drowsy driving in the past month. Increased odds of drowsy driving were seen with shiftwork (OR=8.5, 95% CI 1.8, 37.4) , trait sleepiness (OR=6.0, 95% CI 2.1-17.5), and race (increased odds in African Americans compared to whites, OR=8.2, 95% CI 1.8, 37.4). We expected to find more drowsy driving with sleep disorder symptoms, acute and chronic fatigue, and nonwork demands such as student or childcare. / Conclusion: Drowsy driving is prevalent, but fewer factors were associated with drowsy driving than expected. Possible reasons include under-reported drowsy driving, mixed risk groups and a small sample size. / Public Health Implications: Additional research is needed to understand and reduce the risk of drowsy driving in nurses, as this occupational group represents more than 3 million U.S. workers, and the risk to both nurses and others on the highway is considerable. /

UMB - School of Nursing, Family and Community Health

32. Presenter: Robyn Gilden

Title: Assessing possible health effects related to athletic field maintenance practices, including the use of pesticides

Co-authors: Robyn Gilden, PhD, RN. UM School of Nursing.

Department/Center: Family and Community Health

Affiliation: University of Maryland, Baltimore: School of Nursing

Poster Category: Environmental Health, Environmental Justice

Abstract:

Objectives: Children come in contact with athletic fields on a daily basis. How / these fields are maintained may have an impact on children's potential exposure to pesticides / and associated health effects. **Design and Sample:** This is a cross-sectional, descriptive study that / utilized a survey to assess playing field maintenance practices regarding the use of pesticides. Athletic / fields (N = 101) in Maryland were stratified by population density and randomly selected. / **Measures:** A survey was administered to field managers (n = 33) to assess maintenance practices, / including the use of pesticides. Analysis included descriptive statistics and generalized estimating / equations. **Results:** Managers of 66 fields (65.3%) reported applying pesticides, mainly herbicides / (57.4%). Managers of urban and suburban fields were less likely to apply pesticides than managers of / rural fields. Combined cultivation practice was also a significant predictor of increased pesticide use. / **Conclusions:** The use of pesticides on athletic fields presents many possible health hazards. Results / indicate that there is a significant risk of exposure to pesticide for children engaged in sports activities. / Given that children are also often concurrently exposed to pesticides as food residues and from home / pest management, we need to examine opportunities to reduce their exposures. Both policy and practice / questions are raised.

Family Health, Child Health, Adolescent Health

UMD - School of Public Health: Health Service Administration

- 33. Presenter:** Theresa Kim
Title: Determinants of Use of Mental Health Counseling and Postpartum Office Visits among U.S. Mothers
Co-authors: Rada Dagher*, Ph.D., Assistant Professor; Theresa Kim*, Ph.D student
Department/Center: Health Services Administration
Affiliation: University of Maryland, SPH
Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

Objectives: Scarce research has investigated the determinants of access to postpartum mental healthcare. Moreover, there is no national reporting system on postnatal healthcare utilization in the U.S. In this study, we examine the predisposing, enabling, and need factors associated with postpartum utilization of mental health counseling and office visits. Methods: We utilized cross-sectional data from the Listening to Mothers II Survey, a national survey of 1573 U.S. mothers, collected from January 20 through February 21, 2006. The woman had to be 18-45 years old, spoke English, and had given birth in 2005 to a live singleton baby in a U.S. hospital. The dependent variables were mental health counseling utilization and use of office visits three to eight weeks postpartum. Results: Logistic regression analyses showed that mothers with scores ≥ 14 on the PDSS-SF had higher odds of using mental health counseling. Latinas and mothers of other races were less likely to utilize counseling than Whites. Women who were employed prenatally were less likely to use counseling than non-employed women. Mothers with household incomes of \$50,000-\$74,999 or \geq \$100,000 were more likely to utilize mental health counseling than those with incomes less than \$25,000. Poisson regression analyses showed that the rate of postpartum office visits was greater for mothers with cesarean deliveries than those with vaginal deliveries and lower for mothers in the age group 25-34 years than those younger than 25 years. Conclusions: This study identified inadequate access to mental health counseling among Latinas, low income, and employed mothers.

UMB - School of Nursing: PhD Nursing

- 34. Presenter:** Kristen Rawlett
Title: Effect of a Nurse Led Intervention with At-Risk Adolescents
Co-authors: 1) Kristen Rawlett- UMB
Department/Center: School of Nursing, PhD Nursing
Affiliation: University of Maryland, Baltimore
Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

Abstract: / Purpose: The primary aim of this comparative effectiveness study is to test the feasibility of a 6 week Nurse Led Peer Group for at-risk adolescents in a school setting. Aims include evaluating coping, affect and mindfulness before and after a nurse led mindfulness curriculum as compared to a nurse led attention only program. Additional intents of the interventions are to teach the participants techniques of mindfulness to use as life skills in the mindfulness group and core values along with health education in the attention only group. /

/ Design: The proposed research design is a quasi-experimental, two group, comparative effectiveness study. / / Methods: The participants will be evaluated on measures of coping (Responses to Stress Questionnaire), affect (10 item Positive and Negative Affect Scale), and Mindfulness (Mindful Attention Awareness Scale) on week one of the MC or AO group sessions. The same measures will be re-administered on week six at the end of interventions and again at 3 months post interventions. The intervention will occur one time, and the groups will participate simultaneously. / / Results: Feasibility will be based on 80 percent participant completion of at least 4 of the 6 (66%) sessions. It is also hypothesized that coping strategies, positive affect and mindfulness will increase following the MC intervention.

Morgan State, Public Health

- 35. Presenter:** E. Amaka Nwankwo-Igomu
How much village does it take to raise an HIV-positive child?: the role of
Title: family and community support on pediatric HIV medication adherence in
two PEPFAR-supported programs
Co-authors: Evonne Amaka Nwankwo-Igomu Morgan State University, School of
Community Health and Policy, Baltimore, MD
Department/Center: Public Health
Affiliation: Morgan State
Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

BACKGROUND: / Globally, over 2.5 million children under 15 years of age live with HIV in 2010 (UNAIDS, 2011). Adherence to complex treatment options is crucial in achieving optimal HIV care. In Kenya and in Nigeria, the University of Maryland provides HIV care and treatment services in several faith-based hospitals and clinics through funding from PEPFAR. The study objective is to determine the impact of support systems (family and community) and self-reported medication adherence on pediatric adherence to antiretroviral therapy (ART) and treatment. / **METHODS:** / Using the PEPFAR AIDSRelief Program Pediatric Youth Adherence Survey (2007 and 2009) administered to HIV-infected children and their caregivers receiving care and treatment in faith-based clinical institutions in Kenya and Nigeria, the data provides evaluation measures of treatment success among pediatric cases. Crude and adjusted logistic regression models will be estimated for examining the relationship of family and community support with adherence. / **RESULTS:** / During the study period, 385 and 503 patients were included for the pediatric adherence survey in Kenya and Nigeria, respectively. Patients with adherence >90% had fewer missed clinic appointments in the past 3 months in Kenya. In both Kenya (95%) and Nigeria (93%), adherence was achieved and fewer missed doses in the last week. In both countries, pediatric patients reported almost always having some level of community support (100% in Kenya and 95.2% in Nigeria). / **CONCLUSIONS:** / Additional analysis will be conducted to ascertain the significance of the data with respect to the impact of family and community support on pediatric adherence to ART. /

UMD - School of Public Health: Family Science

- 36. Presenter:** Ashley Munger

Title: Food Insecurity, Maternal Depression, and the Role of Social Support
Co-authors: 1) Ashley L. Munger - UMD, 2) Sandra L. Hofferth - UMD, 3) Stephanie K. Grutzmacher - UMD

Department/Center: Family Science

Affiliation: University of Maryland, SPH

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

In the U.S., approximately 14.5% of households experience food insecurity (USDA, 2013). The hardship of food insecurity is often compounded by depression. Research has demonstrated a relationship between food insecurity and depression, particularly among women (e.g., Casey et al., 2004); however, most studies of the topic have been cross-sectional and thus unable to examine causality. Additionally, factors that influence the relationship between food insecurity and depression are not well understood. Social support may be an important factor to consider, as it has been shown to ameliorate the impact of stress on health, including the impact of food insecurity on mental health among specific populations (e.g., Kollannoor-Samuel et al., 2011). / To address these gaps, the present study investigated whether 1) change in food security status predicts change in depression severity over a two-year period, 2) forms of social support – emotional support from a partner, instrumental support from friends/family, and instrumental support from the Supplemental Nutrition Assistance Program (SNAP) – predict depression, and 3) forms of support moderate the relationship between food insecurity and depression. Data came from 1,447 female participants in the Fragile Families and Child Wellbeing Study and were analyzed using multiple regression. / Findings supported the hypothesized relationship between food insecurity and depression. Additionally, findings indicated that SNAP may buffer mental distress brought on by food insecurity. For those who had become food insecure over the two-year period, losing SNAP benefits was associated with increased depression, while gaining benefits was associated with reduced depression. This suggests that the SNAP program helps to offset emotional hardship for those who have recently become food insecure. However, for those who were chronically food insecure, SNAP did not reduce distress. Further research is needed to evaluate the most efficient and efficacious means to reduce food insecurity and improve wellbeing among vulnerable families. /

UMB - School of Nursing: Community Public Health Nursing

37. **Presenter:** Rachael Parran

Title: Socio-cultural Influences on Breastfeeding Initiation and Duration in Low-Income African American Women

Co-authors: 1) Rachael Parran, BSN, RN-UMB

Department/Center: Community Public Health Nursing

Affiliation: University of Maryland, Baltimore

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

The World Health Organization, the Office of the United States Surgeon General and many other organizations have called for targeted interventions to improve breastfeeding initiation and duration for all women, particularly those who suffer from health disparities. Breastfeeding has well-known benefits, including a

decreased risk of breast and ovarian cancer and type 2 diabetes among women and protection from gastrointestinal and lower respiratory illnesses and otitis media in children. According to the CDC, African American mothers and their infants have the lowest prevalence of breastfeeding amongst all US racial/ethnic groups. // The purpose of this focus group project was to examine the socio-cultural factors that influence low-income African American women's ideas and opinions about breastfeeding from the perspective of the breastfeeding peer counselor. In addition, this project explored the challenges to successful breastfeeding that low-income African American women experience. Breastfeeding peer counselors identified a range of challenges that low-income African American women report, including an inability to access timely and adequate professional support, employment that is unsupportive of breastfeeding, lack of positive family influences, poor self perception and lack of faith in their ability to succeed. These findings support current evidence of the importance of socio-cultural factors on breastfeeding decisions. The implications of this work for public health practice suggest the need for culturally inclusive breastfeeding promotion and support targeted towards African American women and their families. Interventions directed towards improving breastfeeding initiation and duration in low-income African American women may lead to improved maternal and child health outcomes in this community. //

UMD - School of Public Health: Maternal and Child Health

38. Presenter: Yassaman Vafai

Title: Follow the leader: Parental influence on child nutrition in a school and text based nutrition education program

Co-authors: 1) Deirdre Quinn - UMD / 2) Yassaman Vafai - UMD / 3) Dr. Stephanie Grutzmacher - UMD

Department/Center: Maternal and Child Health

Affiliation: University of Maryland, SPH

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

Background: In low income communities access to healthy foods is often scarce; for these parents, the common problem of convincing children to eat their fruits and vegetables can be a daunting task. Program evaluation data for a school based Supplemental Nutrition Assistance Program (SNAP) intervention for 4th and 5th grade students suggests that certain parent nutrition behaviors directly influence children's fruits and vegetables consumption. Objective: to analyze the extent to which parent nutrition behaviors influence children's fruit and vegetable consumption. Methods: we examined parent fruit and vegetable snacking, parent fruit and vegetable consumption at meals, and parent fruit and vegetable variety as predictors of their children's fruit and vegetable consumption using regression analysis. Results: With respect to parental nutrition behaviors, 28% of children's snacking on fruits and vegetables is attributable to that of the parents ($F=41.25$, $p<0.0001$). Fifty-two percent of children's consumption of more than two fruits and vegetables at a meal is explained by parents' eating of two or more vegetables at a main mealtime (Adjusted $R^2=0.52$, $p<0.001$). Conclusion: Given the influence of parent nutrition behaviors on children's fruit and vegetable consumption, it is important to educate parents about their important role in children's development of healthy eating habits. //

UMB - School of Medicine: Public Health

39. Presenter: Shannon Fitzmaurice
Title: Evaluating the Effectiveness of a Primary Care-based Weight Management Program

**1) Shannon Fitzmaurice (UMB), 2) Diane Marie St. George, PhD
Co-authors: (UMB), 3) Verlyn Warrington, MD (UMB), 4) Vivienne Rose, MD (UMB)**

Department/Center: Public Health

Affiliation: University of Maryland, Baltimore. School of Medicine

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

PURPOSE: Obesity continues to be a major public health concern in the United States. Primary care providers have the opportunity to play a key role in the prevention, early detection, and treatment of obesity; however, relatively few studies have been conducted within the primary care setting. The Medical Weight Loss Program (MWLP) is one such primary care clinic-based program. Participation in the MWLP requires intensive diet and lifestyle change, supported by clinic-based education, behavioral counseling, and medication management. Therefore, effectiveness of the MWLP may rely heavily on program retention. This study assesses the impact of program retention on weight loss among MWLP enrollees. **METHODS:** Data were abstracted from the medical records of 335 MWLP enrollees during the period of 1/1/2010-3/21/2013. The mean % change in body mass index (BMI) compared to the baseline visit was computed for each follow-up visit. **FINDINGS:** 42% of the participants attended more than one MWLP session. Those who completed one follow-up visit had a 1.7% decrease in BMI; those with two follow-ups had a 2.9% decrease in BMI; and those with three follow-ups experienced a 4.2% decrease in BMI. **IMPLICATIONS:** There is a dose-response relationship between the number of visits completed and the amount of change observed such that individuals who completed more visits lost a higher percentage of their baseline weight. Further analyses comparing individuals who returned for follow-up visits versus those who did not should be conducted to uncover possible predictors of program retention and to eliminate other potential confounders of the relationship between program retention and weight loss success. Together, these findings would yield more insight into the unique role of primary care providers in patient weight loss.

UMD - School of Public Health: Behavioral and Community Health

40. Presenter: Donna Howard
“Communicating makes a relationship healthy because without
Title: communication, you can’t tell what’s wrong”: Minority Males Perceptions of Healthy Teen Dating Relationships

**1) Claude John- UMD, 2) Anthony Berner- UMD, 3) Brian Gilchrist- LI
Co-authors: University , 4) Irwin Royster- Planned Parenthood of Metropolitan
Washington, DC, 5) Nancy Aiken- Counseling, Helpline and Aid
Network for Abused Women (CHANA)**

Department/Center: Behavioral and Community Health

Affiliation: University of Maryland, SPH

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

Purpose: The perspectives of males are critically needed for the development and implementation of policies and programs to promote healthy teen dating relationships and prevent Teen Dating Violence (TDV). Yet the voices of adolescent males are largely missing from scientific discourse; except in the context TDV perpetration. This study explored young minority male's perceptions of healthy dating relationships. / / **Methods:** This cross-sectional study involved semi-structured in-depth interviews conducted with 20 minority males recruited from schools and community youth groups in greater Washington, DC. The research received IRB approval; participants were provided with a \$20 incentive. Interview were digitally recorded, transcribed verbatim, reviewed for accuracy and analyzed by trained staff through an iterative process involving reading and extraction of recurrent concepts and themes. / / **Findings:** The sample was 90% African American, 5% Asian, 5% Hispanic/Latino; mean age was 16 years (range: 13-21). Communication, trust and honesty were all interwoven into the fabric of males' narratives of healthy dating dynamics. Participants were expressive and descriptive in articulating what they value in a dating relationship. Sub-themes addressed loyalty, respect, the ability to resolve conflicts in a healthy way, a sense of connectedness (physical and emotional), and balance between attachment to the relationship and pursuit of personal goals. / / **Conclusion/Implications:** Adolescent minority males had a strong sense of the characteristics that make dating relationships healthy. More needs to be learned about the socialization factors that shape males perceptions and influence their dating dynamics. Programs of positive youth development must resonate with the lived experiences of adolescent males. /

UMD - School of Public Health: Health Service Administration

41. Presenter: Rada Dagher

Title: Determinants of breastfeeding initiation and cessation among employed women

1) Rada Dagher, Ph.D., Assistant Professor at UMD, 2) Patricia McGovern, Ph.D., Professor at University of Minnesota, 3) Jesse

Co-authors: Schold, Ph.D., Assistant Staff at Cleveland Clinic Research Institute; 4) Xian Randall, MHA alumni of UMD, Management Analyst at U.S. Department of Housing and Urban Development

Department/Center: Health Services Administration

Affiliation: University of Maryland, SPH

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

Research Purpose: Maternal employment following childbirth is associated with non-initiation and early cessation of breastfeeding. We investigated the personal and employment factors associated with both breastfeeding initiation and cessation in the first 6 months after childbirth. / / **Methods:** A prospective cohort study design was utilized to recruit women while hospitalized for childbirth. The population included Minnesota women ages 18 and older and admitted to the hospital for childbirth in 2001; the sample criteria included English-speaking, employed mothers with a singleton birth. / / **Findings:** On average, women were

30 years old; 86% were Caucasian, and 73% were married. Breastfeeding rates were 81% (N=580) at childbirth; 67% (N=480) at 6 weeks, 49% (N=340) at 12 weeks, and 33% (N=230) at 6 months. Logistic regression revealed the odds of initiation of breastfeeding were higher for women who: were primiparas, earned graduate (versus high school) degrees, held professional jobs (versus blue collar or clerical), did not smoke, and lacked physical problems precluding breastfeeding. / / Cox proportional hazards regression showed the hazard for breastfeeding cessation was: 1) higher among single (HR= 2.3) and partnered (HR= 1.6) than married women, and 2) higher for clerical (versus professional) workers (HR=1.3), and for women who returned to work (versus those who did not) (HR=1.8), at any time during the 6 months postpartum. / / / Public Health Implications: These mothers exceeded Healthy People goals 2010 (75%) of ever breastfeeding, but fell below HP 2010 goals for any breastfeeding at 6 months after childbirth (50%). Workplace interventions that support breastfeeding are warranted. /

UMD - School of Public Health: Family Science

42. **Presenter:** Marian Moser Jones
Title: Tourism and Place-specific Challenges for Homelessness Service Providers: A Mixed-Methods Approach
Co-authors: 1) **Marian Moser Jones, Ph.D., M.P.H. - UMD;** 2) **David Curtis, M.S. - UMD/Auburn University**
Department/Center: Family Science
Affiliation: University of Maryland, SPH
Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

This mixed-methods study explored associations between tourism and the response to homelessness-related services in the United States. While researchers have generally assumed that location does not matter in the response to homelessness, providers of homelessness-related services located in U.S. tourist destinations have recently reported place-specific challenges related to tourist economies and cultures. We systematically examined the experiences of these providers to: 1) determine whether those in tourist destinations differed from other providers in services offered and problems encountered; and; 2) understand any identified differences and their implications for behavioral health services and programs addressing homelessness. In this study, 423 providers in 50 states, the District of Columbia, and U.S. territories were surveyed about services, programs, and connections between tourism and local homelessness. Logistic regression analysis revealed significantly greater provision of emergency shelter, substance abuse services, services for homeless families and youth; and a higher perceived mobility of clients among providers in tourist areas than in non-tourist areas. Qualitative analysis highlighted location-specific economic and cultural challenges specific to tourist area providers. These challenges included "push factors" - economic pressures that the high-cost, low-wage, seasonal tourist economy places on workers in these areas. These factors may drive families and individuals into tourist motels, emergency shelters, and living on the beach or in the wilderness. Additionally several place-specific "pull" factors were identified, including the attraction of these areas to people seeking escape from economic and/or behavioral health crises who are lured by the promise of life and employment in a tourist area. Two place-based subcategories of tourist providers were also identified: beach community providers and retirement community providers. These represented extremes within the tourist area provider groups. This study highlights the need for further research on tourism-related homelessness in order to improve behavioral health services, as well as overall health care and housing/shelter interventions for populations experiencing

homelessness.

UMD - School of Public Health: Department of Family Science

43. Presenter: Mitch Mokhtari

Title: Evidence from the Panel Study of Income Dynamics on the Intergenerational Transmission of Obesity Risk

Co-authors: 1) Mitch Mokhtari, School of Public Health, University of Maryland - College Park / 2) Lisa Benson, School of Public Health, University of Maryland - College Park / 3) Edmond Shenassa, School of Public Health, University of Maryland - College Park

Department/Center: Department of Family Science

Affiliation: University of Maryland, SPH

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

Using the Child Development Supplement (CDS) of the Panel Study of Income Dynamics (PSID) we examine the underlying hypotheses that parental body mass index, employment status (hours of work), time spent with children (joint activities) influence children's body mass index. Our investigation reveals that fathers and mothers Body Mass Index (BMI) are significant determinant of children's percentile body mass index (pBMI). We also find that shared parent-child activities such as building or repair work, reading, talking, and playing board games reduce childhood obesity rates. However, our investigation show that, while parental work hours may impact both the quality and quantity of time that parents spend with their children, parental employment status are not significant determinant of children's pBMI when we control for fathers and mothers BMIs in our model.

UMB - School of Medicine: Pediatrics and Epidemiology & Public Health

44. Presenter: Erin Hager

FACTORS ASSOCIATED WITH SCHOOL-LEVEL IMPLEMENTATION

Title: OF WELLNESS POLICIES AND PRACTICES: A STATE-WIDE ANALYSIS

Co-authors: 1) Erin Hager-UMSOM 2) Rachel Troch-UMSOM 3) Diana Rubio-UMSOM 4) Annette Piotrowski- UMSOP 5) Stewart Eidel- MSDE 6) Erin Penniston- DHMH 7) Kendall Bustad- UMSOM 8) Brit Saksvig-UMD 9) Maureen Black- UMSOM

Department/Center: Pediatrics and Epidemiology & Public Health

Affiliation: University of Maryland, Baltimore. School of Medicine

Poster Category: Family Health, Child Health, Adolescent Health

Abstract:

Purpose: Written local wellness policies (LWP) that focus on healthy eating and physical activity are mandated in schools. LWPs are only effective if implemented. The purpose of this cross-sectional study is to determine factors associated with school-level LWP implementation, hypothesizing that schools are more likely to implement LWP when (1) school system has a strong/comprehensive written LWP, (2) school system provides support for LWP implementation/evaluation, and (3) school has a school health council (SHC). / / Methods: Written LWP strength/comprehensiveness evaluated using WellSAT, score 0-100. Two surveys were developed, piloted, and sent via e-mail to system representatives (n=24) and school administrators (n=1351). System Survey: support for LWP implementation (21 items). School Survey: presence of SHC; LWP implementation (17 items, primary outcome). Analyses: multi-level multinomial logistic regression models, adjusting for clustering of schools within school systems and %free/reduced-priced meals. Hypotheses were examined in separate models and one comprehensive model. / / Results: Written LWP scores (n=24): comprehensiveness (mean=56.8)/strength (mean=27.6). System support for LWP implementation (n=24, 100% response rate): Cronbach's alpha=0.87, mean=10.8. School survey response rate 55.2% (746/1351). SHCs in 43.9% of schools. School-level LWP implementation: Cronbach's alpha=0.92, categorical implementation variable- none=0(36.2%); low=1-5(36.5%); high=6-17(27.3%). Written LWP comprehensiveness/strength not associated with LWP implementation (p>0.05). For each system support item endorsed, schools were 10% more likely to implement LWP (none versus low, odds=1.1 (95%C.I.:1.06,1.14); none versus high, odds=1.1 (95%C.I.:1.04,1.18)). Having a SHC: 2.8x increased odds of low implementation (95%C.I.:1.85,4.17) and 9.3x increased odds of high implementation (95%C.I.:5.88,14.74). In a comprehensive model, both system support and having a SHC remained associated with school-level implementation. / / Implications for Public Health: Schools were more likely to implement LWPs when having system-level support and a SHC. School systems should encourage the establishment of SHCs. School systems can enhance likelihood of LWP implementation in schools through actions (versus written policy).

Health Care, Access, Insurance

UMD - A. James Clark School of Engineering- Neurobiology and Physiology:

45. Presenter: Kristen Langan

Title: Team CLOT: Catalyzing Localized Onset of Thrombosis

May Bayomi-UMD, Katerina Christodoulides-UMD, Yoon Sun Choi-UMD, Parinaz Fathi-UMD, Anjali Ghodasara-UMD, Jocelyn Knazik-

Co-authors: UMD, Kristen Langan-UMD, Benjamin Miller-UMD, Michael Sikorski-UMD, Hemi Thaker-UMD, Michael Titcomb-UMD, Omasiri Wonodi-UMD

Department/Center: Neurobiology and Physiology

Affiliation: University of Maryland, A. James Clark School of Engineering

Poster Category: Health Care, Access, Insurance

Abstract:

Zeolite Loaded Chitosan-Alginate Polymer Hydrogel Beads for Hemostatic Application / / May Bayomi, Katerina Christodoulides, Yoon Sun Choi, Parinaz Fathi, Anjali Ghodasara, Jocelyn Knazik, Kristen Langan, Benjamin Miller, Michael Sikorski, Hemi Thaker, Michael Titcomb, Omasiri Wonodi / / Mentors: Dr. Peter

Kofinas Fischell Department of Bioengineering, Mr. Adam Behrens / / Hemorrhage is the leading cause of preventable death post trauma. Commercial hemostatic agents exist, but have / various disadvantages leading to limited use. These disadvantages include high costs and short shelf lives for / biologically active surgical hemostats, and reduced hemostatic efficacy and the occurrence of exothermic reactions / in common military hemostats. Polymer hydrogels are promising alternatives for promoting hemostasis and / controlling hemorrhage. This project aims to develop a hydrogel that stops blood loss by using both biological and / mechanical mechanisms. This will be achieved by the utilization of components that serve as a mechanical barrier / to blood loss in addition to activating the coagulation cascade to augment primary and secondary hemostasis. To / accomplish this, microparticles composed of chitosan and alginate and loaded with a procoagulant, zeolite, were / synthesized and characterized. Chitosan and alginate are naturally occurring polysaccharides that were chosen / because of their biocompatibility and electrostatic properties. Zeolite is an absorbent aluminosilicate that can absorb / water from the wound site, concentrating clotting factors and decreasing time to hemostasis. Swelling studies were / conducted to validate the efficacy of mechanical hemostatic mechanisms. Bead composition was verified through / the use of both an amine dye and FTIR analysis. In addition, the hemostatic ability of the hydrogel was confirmed / by in vitro coagulation studies. Cytotoxicity assays and Scanning Electron Microscopy will be used to verify in / vitro biocompatibility and bead porosity respectively. In vivo hemostatic efficacy will then be assessed in a sheep / model. The results may translate into a safe, cheap, and effective hemostatic agent with potential use in the military, / surgery, and emergency medicine.

UMD - School of Public Health: Family Science

46. Presenter: Allison Schroeder

Title: Improving the Health Care of Women Veterans: Barriers and Strategies

Co-authors: 1) Allison Schroeder - UMD / 2) Katie Hrapczynski - UMD / 3) Leigh Leslie - UMD / 4) Sally Koblinsky - UMD

Department/Center: Family Science

Affiliation: University of Maryland, SPH

Poster Category: Health Care, Access, Insurance

Abstract:

Although women veterans of Iraq and Afghanistan face numerous war-related health challenges, they under-utilize Veterans Administration health care relative to men. Addressing this gap, our qualitative study of 25 women veterans of OEF/OIF examined their barriers to health care and their recommended strategies for improving healthcare access, use, and quality. Barriers included: concerns about deserving care, financial challenges, logistical problems, lack of gender-specific care, and treatment over-reliance on prescription drugs. Strategies included: focusing on women's strengths, treating women with respect/sensitivity, peer support groups, alternative therapies, gender-sensitive facilities, individualized treatment plans, and recruiting women veterans to healthcare professions. Among the implications are that the VA should continue aggressive outreach to women veterans, increase gender-sensitive care, and offer women a wider range of therapies. Both VA and civilian practitioners should provide health services that enable women veterans to balance family, parenting, and work responsibilities as they reintegrate into civilian life. /

UMD - School of Public Health: Health Services Research

47. **Presenter:** Craig Holden
Title: Healthcare experiences of Medicaid enrollees in Florida
Co-authors: 1) Rada Dagher - UMD / 2) Allyson Hall - University of Florida / 3) Craig Holden - UMD
Department/Center: Health Services Research
Affiliation: University of Maryland, SPH
Poster Category: Health Care, Access, Insurance

Abstract:

Objective: To examine the health care experiences of Medicaid enrollees under the Florida Medicaid Reform. / **Design:** This study employed purposive sampling of Medicaid enrollees in Broward and Duval Counties. The first wave included 10 interviews and three focus groups (27 enrollees) between October 2006 and May 2007. Interviewees constituted mainly of African Americans (60%) and were primarily female (80%). Focus group participants were mostly African Americans (63%) and Hispanics (26%). The second wave included 24 interviews with Medicaid enrollees and four focus groups (31 enrollees) between October 2007 and June 2008. Interviewees were divided between African Americans (37.5%) and Caucasians (37.5%) and were mostly males (62.5%). Focus group participants were mostly Caucasians (52%) and African Americans (39%) and primarily male (81%). In-depth interviews and focus group findings were coded using NVivo 10 software. The study team reviewed transcripts and identified eight global themes including Medicaid Experience and General Experience with Care. / **Population:** The population consisted of all current Medicaid enrollees eligible to participate in Medicaid Reform in Florida. / **Findings:** Study participants reported a number of problems experienced as enrollees. These included difficulty with access and referral to specialists, having to switch primary care providers, inadequate prescription drug coverage, transportation barriers, and perceptions of discrimination. However, they also reported positive experiences including being thankful for Medicaid services and satisfaction with their doctors. These experiences did not change over the course of the study. / **Conclusions:** Pervasive problems with Medicaid continue to exist regardless of the changes implemented through Florida state reform efforts. Key issues of access to care remain such as difficulty accessing specialists, problems maintaining continuity of care, and inadequate prescription drug coverage. / **Policy Implications:** Study findings suggest a need for policymakers to address the underlying issues that prevent Medicaid patients from having access to timely and quality health care. /

UMB - School of Nursing: PhD

48. **Presenter:** Dzifa Dordunoo
Title: Thirty-day all cause hospital readmission among patients with heart failure: the impact of patient to nurse ratio and specialized nursing units
Co-authors: Dzifa Dordunoo MSN -UMB / Erica Friedmann, PhD - UMB / Sue Thomas, PhD - UMB
Department/Center:
Affiliation: University of Maryland Baltimore, School of Nursing
Poster Category: Health Care, Access, Insurance

Abstract:

Background / Heart failure (HF) is a leading cause of morbidity, affecting 5.7 million Americans. The 30-day readmission rate for patients hospitalized with HF among Medicare beneficiaries is 26.9%. Attention has focused on elucidating patients' factors that are predictive of all-cause 30-day readmission; however, little is known about how within hospital characteristics, defined as the events occurring within the index hospitalization, impact 30-day readmission. Patients hospitalized in nursing units that are specialized with lower patient to nurse ratios had shorter lengths of stay. A patient to nurse ratio greater than 3 was associated with an increase of seven percent in odds of readmission. Patients treated by cardiologist were more likely to receive care based on evidence-based guidelines than those treated by other specialties. Patients who received guideline-based care also had lower one-year risk-adjusted mortality and lower composite outcomes. The influence of these factors on 30 day hospital readmission is unknown. / / Objective / To determine the association between institutional characteristics including the type of discharging nursing unit, patient to nurse ratio and patient characteristics to 30-day all cause hospital readmission among patients with HF. / / Hypothesis / Controlling for discharging medical service and insurance type, lower patient to nurse ratio and specialized nursing units will be associated with lower all cause 30-day readmission. / / Design / This is a retrospective cohort study to determine the impact of within hospital care characteristics on all-cause 30-day hospital readmission among patients with HF. / / Method / Inclusion: Patients 18 years old or older discharged home January 1 to December 1, 2011 from Department of Medicine at a tertiary academic medical center with primary diagnosis of HF. / Exclusion: Patients with unknown 30-day follow up status. / Data: All variables were extracted from the electronic medical records. Data will be analyzed using the statistical package for social science (SPSS) version 21. Generalized estimating equations with logistic outcome will be used to test the main hypothesis. / / Implication / Examining within hospital care characteristics will assist hospitals improve care and decrease cost. / /

UMD - School of Public Health: Family Science

49. Presenter: Bonnie Braun

Title: Health Insurance Literacy: Smart Choice Health Insurance Pilot Test

Bonnie Braun, UME, Teresa McCoy, UME, Amanda Ginter, UME,

Co-authors: Lynn Little, UME, Virginia Brown, UME, Mia Russell, UME and Maria Pippidis, UDEL

Department/Center: Family Science

Affiliation: University of Maryland, SPH

Poster Category: Health Care, Access, Insurance

Abstract:

The University of Maryland Extension launched a Health Insurance Literacy Initiative in 2012. The Initiative was created to respond to the Affordable Care Act demands on consumer decision-making. After a thorough review of theories and literature and existing health insurance curriculum (published in 2013), the Initiative team created Smart Choice Health Insurance© a consumer education program. The program was pre-tested in the spring of 2013 by educators in 6 states with 131 consumers. All materials were reviewed by educators from 6 different states using a modified version of the Suitability of Materials assessment tool. After revisions,

educators in five states, certified to teach the program, conducted workshops for 433 consumers in the fall of 2013. Twelve questions, created by the American Institutes for Research, plus demographic data were used for pre and post workshop data collection. Data was collected using clicker technology. Analysis of data produced statistically significant evidence of increased health insurance literacy, confidence and capacity to make a smart choice health insurance choice. Additional workshops and data collection will continue through 2014. Research demonstrates that access to health care, especially preventive care, can reduce health care costs. Health insurance increases access. As the results demonstrate, public health professionals could teach, or make available, Smart Choice workshops to facilitate health insurance decision-making and enrollment. /

UMB - School of Nursing: Family and Community Health/ UMCP Behavioral & Community health Student

50. Presenter: Susan Antol

Title: Creating A Sustainable Nurse Managed Mobile Primary Care Clinic As an Extension of a Rural Health Delivery System

1) Susan M. Antol, PhD(c), MS, RN, UMD doctoral student; UMB SON

Co-authors: faculty / 2) Carole Staley Collins, PhD, MSN, PHCNS-BC: UMB SON staff

Department/Center: Family and Community Health

Affiliation: University of Maryland, Baltimore. School of Nursing

Poster Category: Health Care, Access, Insurance

Abstract:

The overarching goal of the UMSON's Governor's Wellmobile Program strategic plan is partnership creation with health delivery systems that result in establishing mobile nurse managed primary care clinics as extensions of regional primary care practices. The Patient Protection and Affordable Care Act (PPACA) (2010), which targets health delivery system reform through transformation of primary care to improve the "triple aim" of 1) quality patient care, 2) decreased chronic disease morbidity and mortality, and 3) control of health care utilization and costs is the impetus. Willingness between funding and institutional partners to pilot mutually beneficial collaboration models resulted in agreement with Chester River Health System, a newly affiliated UMMS rural regional delivery system, to explore ways that a mobile clinic asset could augment its fragile primary care infrastructure. The expected outcome of the three-year CareFirst BlueCross BlueShield funded Upper Eastern Shore Primary Care and Service Linkages Project is the development of a fiscally sustainable nurse-managed mobile clinic primary care model aligned with vertically integrated health delivery systems serving three rural Maryland eastern shore counties. Activities undertaken and progress towards accomplishing the three project aims: 1) Case-finding and care managing uninsured clients, 2) Reverse referrals from health systems' inpatient units and emergency departments, and 3) Developing a business relationship to supplement the capacity of health system primary care are framed within the context of Bronfenbrenner's Ecological Systems Theory, adapted to management of health delivery services systems. System forces, potential partners, collaborative efforts, strategies, and relevant outcomes are illustrated at the corresponding ecological system levels relevant to the goal of aligning a nurse managed clinic with a health system, to enhance primary care access. Associated accomplishments, progress, barriers, and revisions of approaches encountered at each level and next steps are described. Tactics used to promote collaboration at the discrete system and clinical practice levels of an integrated health system have public health implications for replication.

Health Disparities

UMD - School of Public Health: Community Health

51. Presenter: Katherine Garcia

Title: Comparing Participants Satisfaction and Recommendation of Text Message Usage in Intervention Faith-Based CBPR Project

1) Katherine Garcia-Rosales- UMD 2) Daisy Le, MPH, MA- UMD

Co-authors: 3)Cheryl L. Holt, PhD- UMD 4)Darlene R. Saunders, PhD, MCHES- UMD

Department/Center: Community Health

Affiliation: University of Maryland, SPH

Poster Category: Health Disparities

Abstract:

African American men are more likely to be diagnosed and die of prostate cancer than their White male counterparts. The mortality rate of prostate cancer in African Americans (53.1 cases per 100,000) is almost double the rate for White males (21.7 cases per 100,000) (American Cancer Society, 2013). Technological approaches, such as the use of short messaging systems (SMS), have been used in the effort to raise awareness and modify health beliefs in the African American community (Nundy, Dick, Solomon & Peek, 2012). Recent studies show that African Americans [87%] are more likely to own a cellphones compare to Whites [80%] and text double on average than White (Lenhart, 2010). / The M-PACT (Men's Prostate Awareness Church Training) project is a faith-based educational intervention on prostate cancer screening that follows a community-based participatory research (CBPR) approach. The project includes 20 participating Prince George's County churches that implement a 4-part workshop series on informed decision making around prostate cancer screening for African American men age 40-69. Each participant provides their contact information such as full name, phone number and phone carrier for text messaging delivery. In the text messages they receive information on workshop reminders, spiritual messages, prostate cancer, and men's health. / This presentation will focus on the descriptive statistics of the text messaging feedback collected from the follow-up surveys collected on our fourth workshop (N= 150). It will determine if the text messages kept the participant engaged, informed, and feeling enjoyment compared to their recommendation of text message use in future similar programs. These finding will help further explore the feasibility and acceptability of text messaging in preventative care studies in faith-based health interventions for older African American men. /

UMD - School of Public Health: Multidisciplinary - Gemstone Team

52. Presenter: Andrea Bajcsy

Title: Multimodal Math Instruction for Visually Impaired Children

1) Andrea Bajcsy - UMD, 2) Amelia Bateman - UMD, 3) Alexa Cohen - UMD, 4) Emily Horton - UMD, 5) Matthew Jennings - UMD, 6) Anish

Co-authors: UMD, 4) Emily Horton - UMD, 5) Matthew Jennings - UMD, 6) Anish Khattar - UMD, 7) Ryan Kuo - UMD, 8) Felix Lee - UMD, 9) Meilin Lim - UMD, 10) Laura Migasiuk - UMD, 11) Ramkesh Renganathan - UMD, 12) Bryan Toth - UMD, 13) Amy Zhang - UMD, 14) Oliver Zhao - UMD, 15) Marcio Oliveira - UMD /

Department/Center: Multidisciplinary - Gemstone Team

Affiliation: University of Maryland, SPH

Poster Category: Health Disparities

Abstract:

Educators in public primary schools face unique challenges when facilitating special education for blind children. Instructors generally rely on tactile tools to deliver visual mathematical topics such as equations, data, graphs, and geometric drawings to their students. Currently, tactile media, such as embossed paper and 3D-printed objects, are used to convey graphical information. Although these tools are easy to use and relatively inexpensive, they are based solely on touch and are not easily modifiable. Dynamic and interactive technologies such as the Phantom Omni are also available but tend to be more expensive and less intuitive. This study aims to bridge the gap between easy-to-use tactile tools and dynamic, interactive technologies to facilitate the haptic learning of mathematical concepts. Specifically, the team will develop and validate an assistive haptic device (built of an electrostatic touchscreen display) that provides the user with multimodal (auditory, tactile, and visual) output. Three methodological steps have been carefully designed for this study: (1) construction of an electrostatic touchscreen display and corresponding image-to-touch and audio conversion software; (2) development of a pilot study to assess tool-usability and; (3) testing of the device effectiveness through a learning protocol. The main outcome is the development of an effective multisensory haptic device that can be easily used by teachers in a classroom to teach mathematical concepts to visually impaired students. /

UMD - School of Public Health: Behavioral and Community Health

53. Presenter: Bina Ali

Title: What Predicts Intention to Pursue Health Careers in High-Achieving Low-Income Minority Students?

Co-authors: 1) Bina Ali - UMD, 2) Erin K. Tagai - UMD, 3) Bradley O. Boekeloo - UMD, 4) Min Qi Wang - UMD

Department/Center: Behavioral and Community Health

Affiliation: University of Maryland, SPH

Poster Category: Health Disparities

Abstract:

Background: Research shows that increasing the percentage of ethnic and racial minorities in health professions may be beneficial for reducing the racial/ethnic health disparities in the United States. Despite a dire need to recruit minority students to enter health careers, there is a lack of research examining factors influencing minority high school students' intentions to pursue health careers. Therefore, the objective of the study was to examine the potential influences of personal interest in health, subjective norm toward pursuing health sciences in college, and social support in sciences from adults in high-achieving low-income minority

students' intentions to pursue health careers. Methods: Utilizing baseline data from Climbing Up & Reaching Back (CURB), a project aimed at identifying factors influencing pursuit of health science careers, a cross-sectional analysis of high-achieving low-income minority 10th graders was performed (n = 134). Results: Multiple linear regression analysis indicated that subjective norm toward pursuing health sciences in college was significantly associated with intention to pursue a health career (b = 0.72, t = 4.85, p < 0.001), above and beyond demographics, personal interest in health, and social support in sciences. Conclusions: Findings suggest that perceived expectations from relevant individuals or groups is a significant indicator of intention to pursue health careers in high-achieving low-income minority students. While further research is needed to confirm the predictive nature of subjective norm in this population, the current findings provide valuable insight for the future development of interventions targeting recruitment of high-achieving minorities for health careers.

Morgan State University- Doctor of Public Health

- 54. Presenter:** Kevon-Mark Jackman
Title: Intervention in the Classroom! Project AHEAD: A Middle-School Obesity Prevention Program
Co-authors: Kevon-Mark Jackman, MPH - Morgan State University
Department/Center: Doctor of Public Health
Affiliation: Morgan State University
Poster Category: Health Disparities

Abstract:

Background: Children living in low-income, urban communities face a disproportionate burden of the obesity epidemic. Methods: Project AHEAD (Approaches to Healthy Exercise Activities and Diet), a classroom-based obesity prevention program, was piloted among 7th graders at a Baltimore City public school. Local public health graduate students facilitated the program's exercise and nutrition curriculum over a 6-week period, during which the school was provided sporting equipment, healthy food items, and educational materials. A total of 65 students participated in the program. BMI measurements and behavioral surveys were collected pre- and post-intervention. Incomplete surveys were excluded from the final analysis. Findings: At baseline, 20.0% of participants were overweight and 30.0% were obese; yet, 62.1% perceived themselves to be normal weight. While mean BMI scores increased post-intervention (24.4 to 24.9), several self-reported behavioral outcome measures significantly improved: 17.6% increase in exercising to lose weight (p = 0.05) and 16.3% decrease in soda consumption more than 4 times the previous week (p= 0.02). Non-significant behavioral improvements included: 10% increase in dietary fruit, 8.2% increase in salad intake, 14.3% decrease in television watching, 12.3% decrease in playing video games more than 4 hours per school day, and 10.2% increase in 3 or more active days during the previous week. Participants identified neighborhood-level barriers to healthy living: lack of recreational spaces (79.6%), litter (57.1%), and crime (28.6%). Implications: Study findings demonstrate that despite the small increase in mean BMI score, students improved certain dietary and physical activity attitudes and practices over the course of the program. Neighborhood level concerns highlight community need for improving accessibility to cleaner and safer streets and recreational spaces. Future activities should involve families of participants in order to investigate how knowledge and skills attained through Project AHEAD impacts household attitudes and approaches to obesity prevention. / /

UMD - School of Public Health: Maternal and Child Health

- 55. Presenter:** Andrew Williams
Title: Poverty, Race, and Birth Outcomes: An Ecologic Study in Maryland
Co-authors: 1) Andrew Williams - UMD, 2) Sandra Hofferth - UMD
Department/Center: Maternal and Child Health
Affiliation: University of Maryland, SPH
Poster Category: Health Disparities

Abstract:

Background: Current research suggests that birth outcomes are influenced by area-level poverty and the racial/ethnic composition of the community. Few studies examined this relationship in Maryland, with studies mainly focused on Baltimore. This study examines the relationship between Census tract-level poverty, racial/ethnic background, and rates of preterm birth (PTB) and low birth weight birth (LBW) in Maryland. / Methods: Tract-level birth outcomes were drawn from 2010-2012 aggregate vital statistics, and demographic data of tracts were drawn from American Community Survey 2008-2012 data. Poverty rates in the top quartile (13.7% poverty and above) were considered “high poverty.” Racial/ethnic background of tracts were grouped by dominant racial/ethnic population: White non-Hispanic, Black non-Hispanic, and Mixed (Other races/ethnicities combined). Regression analysis was used to test hypotheses. / Results: High poverty tracts increased rates of low birth weight birth ($\beta=2.54$, $p<.0001$) and preterm birth ($\beta=1.97$, $p<.0001$). Adjusted for race, coefficients are reduced for LBW ($\beta =1.49$, $p<.0001$) and PTB ($\beta=1.22$, $p<.0001$). Compared to White tracts, Black tracts increased rates of LBW ($\beta =4.12$, $p<.0001$) and PTB ($\beta =2.95$, $p<.0001$). Adjusted for poverty, increased rates of LBW ($\beta = 3.71$, $p<.0001$) and PTB ($\beta = 2.60$ $p<.0001$) remain significant for Black tracts compared to White tracts. Compared to White tracts, Mixed tracts had no significant findings. / Conclusion: In unadjusted results, high poverty increases rates of LBW and PTB. When adjusted for race, the relationships are reduced. Independent of race, high poverty remains associated with increased rates of LBW and PTB in Maryland. Initial results suggest that Black tracts have higher rates of LBW and PTB compared to White tracts. When adjusted for poverty, coefficients for both outcomes decrease yet remain high. This study suggests that the racial/ethnic makeup of a Census tract is responsible for the majority of the birth outcomes disparities seen across Census tracts in Maryland. /

UMD - School of Public Health: Epidemiology

- 56. Presenter:** Maria Demarco
Title: Health disparities in Human Papillomavirus vaccine completion among Hispanic and non-Hispanic White adolescent girls
Co-authors: 1) Maria Demarco - SPH-UMD, 2) Xin He - SPH-UMD, 3) Woodie Kessel - SPH-UMD, 4) Olivia Carter-Pokras - SPH-UMD
Department/Center: Epidemiology
Affiliation: University of Maryland, SPH
Poster Category: Health Disparities

Abstract:

Introduction: Human Papillomavirus (HPV) is the most common sexually transmitted infection in the United States, and can lead to cervical cancer. Despite ACIP recommendations of 3 HPV vaccine shots for all adolescent girls, only 26.7% of all adolescents in the U.S. complete the series. There are significant disparities in completion based on race/ethnicity, with 29.1% of Whites and 23.4% of Hispanics achieving completion. This study describes factors associated with completion of the HPV vaccine series among Hispanic and non-Hispanic White girls who initiated the series. // Methods: A secondary analysis was performed of the cross-sectional 2009 National Immunization Survey – Teen for 3,292 girls (560 Hispanics and 2,732 non-Hispanic Whites) ages 13 to 17 that had at least one dose of the HPV vaccine. All the data were assigned sampling weights and necessary adjustments were made to account for the effect of clustering in complex sample designs. A logistic regression model was used to examine the independent effects of race/ethnicity on HPV vaccine series completion. // Findings: Despite similar initiation rates (one in five), Hispanic girls who had initiated the series (59.9%, n=560) were less likely to complete the series than non-Hispanic whites (76.4%, n=2,732). After accounting for poverty status and home ownership, Hispanics were less likely to complete the HPV vaccine series (AOR=0.540, 95% CI: 0.371-0.785). Age at interview and age at HPV vaccine series initiation were associated with completion for Hispanics. Continuous health insurance since age of 11, mother's marital status, and number of children in the household were associated with HPV series completion for non-Hispanic whites. // Conclusion: This study confirms previous findings that Hispanic adolescent girls have lower overall completion rates of the HPV vaccine series than non-Hispanic Whites despite similar initiation rates. This paper contributes to the knowledge of factors associated with completion of the series among Hispanics. /

UMD - School of Public Health: Department of Epidemiology and Biostatistics

57. Presenter: Olivia Carter-Pokras

Title: Racial and ethnic disparities in utilization of physical therapy among working age adults with chronic low back pain

Co-authors: 1) Olivia Carter-Pokras - UMD, 2) Jie Chen - UMD

Department/Center: Department of Epidemiology and Biostatistics

Affiliation: University of Maryland, SPH

Poster Category: Health Disparities

Abstract:

State of research purpose: / To examine cost-effectiveness of physical therapy among working age adults with chronic low back pain, and identify racial and ethnic disparities in utilization of physical therapy. // Methods: / We used data from the 2000-2010 Medical Expenditure Panel Survey. An initial analysis implemented a means comparison of the likelihood of receiving any physical therapy by race and ethnicity (Whites, African Americans, and Latinos). Subsequently we implemented the Blinder-Oaxaca decomposition technique to identify factors associated with the racial and ethnic disparities in receiving the physical therapy. Longitudinal analyses were employed to estimate the impact of physical therapy on other health care utilization. The population studied were working age adults (18-64 years old), with diagnosis of back pain (ICD9=724), who self-reported having pain for more than 12 months. Our sample included 5,019 Whites, 1,085 African Americans, and 1,088 Latinos. // Findings: / Descriptive statistics showed that on average, 16% of females

Americans, and 1,288 Latinos. / / Findings: / Descriptive statistics showed that on average, 16% of working age Whites with chronic low back pain had received physical therapy. This percentage was significantly higher than that for African Americans (12%), and Latinos (14%). The decomposition results showed that poverty (measured by lower family income) was the major reason associated with disparities among Whites vs. African Americans. Fewer years of education and less health insurance coverage were the two main reasons associated with disparities among Whites vs. Latinos. Longitudinal analyses suggest that receipt of physical therapy can reduce prescription drug use for low back pain. / / Implications for Public Health: / These findings directly address gaps in the literature identified by the Institute of Medicine's report "Relieving Pain in America," and add disparities in referrals to physical therapy to the existing literature regarding persistent disparities in pain treatment. These findings have important cost-saving implications for implementation of the Affordable Care Act, particularly treatment of workers with low back pain. In addition to reducing prescription drug use found in our study, moderate evidence exists that post-treatment exercises can reduce both number and rate of back pain recurrences (Choi, Verbeek, Tam, Jiang, 2011). Disparities in physical therapy referrals may therefore partly explain higher levels of occupational disability for African-American worker's compensation claimants with low back pain compared to whites (Chibnall & Tait 2009).

Advancing Synergy, LLC

58. Presenter: Arti Patel Varanasi

Title: Empowering Patients Through Innovative Technologies

Co-authors: 1) Arti Patel Varanasi - Advancing Synergy, LLC, 2) Susan Appling - Johns Hopkins University School of Nursing, Baltimore, MD, 3) Susan Scarvalone - Prevention and Research Center, Mercy Medical Center, Baltimore, MD, 4) Ryan MacDonald - Prevention and Research Center, Mercy Medical Center, Baltimore, MD, 5) Shannon Manocheh - Prevention and Research Center, Mercy Medical Center, Baltimore, MD, 6) Kathy J. Helzlsouer - Prevention and Research Center, Mercy Medical Center, Baltimore, MD /

Department/Center: NA

Affiliation: Advancing Synergy, LLC. Baltimore MD

Poster Category: Health Disparities

Abstract:

Hormone therapy, chemotherapy and radiation are the pillars of adjuvant breast cancer therapy and key to long-term survival following breast cancer treatment. Yet treatment delays and failure to take medication regularly can result in poorer survival from breast cancer. This is more likely to happen among poor, underserved women, including racial and ethnic minorities. Further, visit cancellations, missed appointments, and poor symptom management result in poor adherence to all forms of breast cancer treatment. To address these health disparities, we have developed a web-based knowledge and communication portal, the Technology Enhanced Nurse Navigation (TENNSM) Portal, designed especially for breast cancer patients and their care providers. The TENNSM Portal employs a virtual outreach program of nurse and social support designed to bridge the gap in breast cancer treatment and care for all individuals, with special attention paid to racial and ethnic minorities, poor and underserved women. The application was developed with ongoing input and feedback from breast

poor and underserved women. The application was developed with ongoing input and feedback from breast cancer survivors. The application provides access to vetted websites, tailored documents, brief instructional videos by the study team, and regular navigator visits via Skype™ or telephone. We are evaluating the efficacy of the TENN Program and Portal to improve adherence, symptom management and quality of life among low-income women undergoing breast cancer treatment in a randomized controlled trial of 100 breast cancer patients. The outcomes of the trial will be assessed through improved treatment adherence, health outcome measures, such as fatigue and symptom management, improved patient-reported quality of life, and ultimately decreased mortality.

Mercy Medical Center, The Prevention and Research Center

59. Presenter: Lisa Gallicchio

Title: Cardiovascular health among black and white breast cancer patients

1) Lisa Gallicchio - Mercy Medical Center, Baltimore, MD; 2) Carla

Co-authors: Calhoun - Mercy Medical Center; 3) Kathy Helzlsouer - Mercy Medical Center

Department/Center: The Prevention and Research Center

Affiliation: Mercy Medical Center, Baltimore, MD

Poster Category: Health Disparities

Abstract:

Purpose: To examine racial differences in cardiovascular health and co-morbid conditions among breast cancer patients initiating aromatase inhibitor (AI) therapy. / **Methods:** Baseline data were analyzed from 62 white and 38 black women participating in an ongoing cohort study of the cardiovascular health of breast cancer patients over the first year of AI therapy. Prior to initiating AI therapy, women enrolling in the study completed a questionnaire and had a cardiovascular health evaluation that included a carotid intimal medial thickness (cIMT) ultrasound. Cardiovascular disease risk percentile was assigned using the cIMT data; category assignment was based on published age- and race-specific percentile risk categories from the ARIC study. / **Results:** The mean ages of the white and black breast cancer patients were similar (62.9 years versus 61.1 years; $p=0.3$). Approximately equal percentages of white and black breast cancer patients received prior chemotherapy (32.3% versus 39.5%; $p=0.5$) or radiation therapy (25.8% versus 23.7%; $p=0.7$). In terms of cardiovascular disease risk factors, the black breast cancer patients were more likely than their white counterparts to report having been diagnosed with hypertension (age-adjusted odds ratio (aOR) 5.7; 95% confidence interval (CI) 2.0, 16.6) and diabetes (aOR 2.4; 95% CI 0.8, 7.2). Further, the black breast cancer patients had a significantly higher mean body mass index (BMI) (mean 32.3 kg/m² versus 29.1 kg/m²; $p=0.02$) and weight circumference (96.7 cm versus 89.8 cm; $p=0.02$) than the white breast cancer patients and were more likely to be considered obese (BMI > 30 kg/m²) (aOR 2.3; 95% CI 1.01, 5.3). Despite these differences, the distribution of patients in the cardiovascular disease risk percentile categories did not differ significantly by race. / **Implications for Public Health:** Black breast cancer patients have a higher prevalence of certain cardiovascular co-morbid conditions compared to their white counterparts. The presence of these cardiovascular co-morbidities at diagnosis may affect treatment choices if continued follow-up demonstrates an adverse impact of estrogen deprivation therapy on cardiovascular outcomes. Enrollment into this study is currently ongoing. This research is supported by a Susan G. Komen for the Cure grant. /

National Institute on Aging, National Institutes of Health, Intramural Research Program

60. Presenter: Angedith Poggi-Burke

Title: Association of Racial Discrimination and Kidney Function Decline among African Americans and Whites

Co-authors: 1) Angedith Poggi-Burke - National Institute on Aging (NIA) / 2) May A. Beydoun - NIA / 3) Alan B. Zonderman - NIA / 4) Michele K. Evans - NIA / 5) Deidra C. Crews - Johns Hopkins University /

Department/Center: Intramural Research Program

Affiliation: National Institute on Aging, National Institutes of Health

Poster Category: Health Disparities

Abstract:

Chronic kidney disease affects more than 20 million Americans and is more severe among minority populations. Modifiable psychosocial factors such as perceived racial discrimination may contribute to kidney function decline, particularly among African Americans. We examined whether perceived racial discrimination was associated with a change in kidney function over 5 years of follow-up in the Healthy Aging in Neighborhoods of Diversity across the Life Span study conducted in Baltimore, Maryland. A total of 1,440 participants (whites = 597; African Americans = 843) aged 30 to 64 years at baseline were included in our study. We used mixed-effects regression models with random intercepts and slopes to compare linear trends in mean estimated glomerular filtration rate (eGFR). Models were adjusted for (1) socio-demographics (age, sex, race, education and poverty status), (2) health behaviors (tobacco and alcohol use), and (3) comorbidities (systolic blood pressure, body mass index, hypertension and diabetes status). We found that the percentage of African Americans represented increased across racial discrimination categories (Not at all: 34%, A little/Some: 63%, A lot 85%) with the opposite pattern observed among whites. Overall, perceived racial discrimination was associated with kidney function decline over follow-up after adjustment for covariates. Gender and race stratified models revealed that racial discrimination was only associated with decline in eGFR among African American women (P for interaction = 0.098) before and after adjustment for covariates. Fully adjusted mixed models indicated that having perceived “a lot” of discrimination compared to “not at all”, was associated with a decline in eGFR by 4.66 ml/min per 1.73m² (95%CI: -9.31 to -0.02) among African American women. These findings demonstrate that racial discrimination may impact risk of kidney function decline, particularly among African American women. Stressors such as racial discrimination, are worthy of further study regarding their potential contributions to disparities in kidney disease.

Health Literacy, Health Communications, Health Education

UMD - School of Public Health: Behavioral and Community Health

61. Presenter: Audrey Faison

Title: Best practices and lessons learned from a CBPR cancer early detection project: M-PACT through the eyes of an undergraduate capstone intern

Co-authors: 1) Audrey Faison-UMD

Department/Center: Behavioral and Community Health

Affiliation: University of Maryland, SPH

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

Men's Prostate Awareness Church Training (M-PACT) is a community-based participatory research project that aims to decrease racial disparities in prostate cancer mortality through a church-based intervention in Prince George's County, Maryland. The objective of this project is to evaluate M-PACT, through the eyes of an undergraduate capstone intern. Field notes and photographs were taken at three M-PACT workshops held at three different churches. The workshops covered prostate cancer informed decision making, prostate cancer treatment information and local resources, and 12-month follow-up assessments. The field notes and photographs include documentation of the workshop structure, community health advisors, participants, and project staff, and volunteers. An analysis was done on written field notes and photographs to evaluate best practices and lessons learned. Visual representation of lessons learned from M-PACT workshop implementation will be presented.

UMD - School of Public Health: Family Science

62. Presenter: Ashley Munger

Title: Lessons Learned for Enrolling Parents in a Text Message-based Nutrition Education Program

Co-authors: 1) Stephanie Grutzmacher, 2) Katherine E. Speirs, 3) Ashley Munger, and 4) Lauren Messina

Department/Center: Family Science

Affiliation: University of Maryland, SPH

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

Text2BHealthy is a text-based nutrition and physical activity promotion program for parents of elementary school children. / While text messages have been effective in promoting health behaviors such as weight loss (Patrick, et al., 2009), physical activity (Fjeldsoe, et al. 2010), and smoking cessation (Free, et al., 2011, Rodgers, et al., 2011), other text message-based health promotion programs, such as Text4Baby, have had mixed success with outreach strategies and have struggled to meet their recruitment goals in some target populations (Whittaker et al., 2012). This poster will present several lessons learned about recruiting and retaining participants in Text2BHealthy. Recruitment and retention efforts were evaluated using administrative data collected by the online platform used to send text messages and focus groups conducted with both participants and non-participants. Program changes that increased the number of Text2BHealthy participants from 203 in the first year to 1101 in the second will be shared. This presentation will provide practical information for individuals planning text message-based programs or adding a text message component to existing programs. /

UMD - School of Public Health: Health Services

63. Presenter: Robin Bloodworth
Title: Physician-Patient Relationships among Latino Subgroups: Differences and Policy Implications
Co-authors: 1) Robin Bloodworth - UMD, 2) Jie Chen - UMD
Department/Center: Health Services
Affiliation: University of Maryland, SPH
Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

Background: Over 16% of the U.S. population was Latino in 2011, which is expected to increase to 30% by 2050. In addition to health disparities, Latinos also experience poor physician-patient relationships (PPR). Latino subgroups differ in outcomes and may differ in their physician-patient relationships. Improving PPR for these groups could improve outcomes. / Research Objective: The goals of this project are to determine whether Latino subgroups differ in PPR, and to examine factors associated with these differences. / Study Design: Medical Expenditure Panel Survey (MEPS) data (2007-2011) were used to examine how often physicians listened, explained, respected, and spent enough time with subjects (n = 39,619) during the past year. Dichotomous variables compared always or usually versus otherwise, and each subgroup (Puerto Rican, Cuban, Dominican, Mexican, Central/South American, and Other) versus Whites. An overall healthcare rating (0-10) was also used to measure PPR. / Multivariate regressions examined the effects of subgroup on measures of PPR, controlling for demographic, geographic, socioeconomic, healthcare access, health status, residency, and language variables. Survey weights were used to estimate population effects in all five models. / Principal Findings: In unadjusted models, Mexicans and Central/South Americans scored lower on all measures, and Other Latino Groups scored lower on the four categorical measures. In adjusted models, only Central/South Americans scored lower in all 5 measures. Age, usual source of care, insurance status, and physical and mental health were significant predictors in all models. / Implications for Policy, Delivery, or Practice: These findings suggest that access to primary care and expansion of insurance coverage could improve PPR among Latino subgroups. This study confirms the impetus of the PPACA to expand access and coverage to improve outcomes, as well as strengthens the argument behind PCORI, which emphasizes patient-centered care to improve outcomes. /

UMB - School of Medicine: Masters of Science- Epidemiology

64. Presenter: Rebekah Brown
Title: Predictors of Attempted Smoking Cessation among Diabetics Aged 40 Years and Older
Co-authors: 1) Rebekah Brown, MD- University of Maryland School of Medicine, 2) Eileen K. Steinberger, MD, MS- University of Maryland School of Medicine, 3) John D. Sorkin, MD, PhD- Baltimore VA Medical Center, University of Maryland School of Medicine
Department/Center: Masters of Science- Epidemiology
Affiliation: University of Maryland Baltimore, School of Medicine
Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

BACKGROUND / Among adults with diabetes, smokers have an increased morbidity and mortality than do non-smokers. We aim to determine predictors of smoking cessation attempts in the last year among current diabetic smokers. / **METHODS** / We used data from the 2011 Behavioral Risk Factor Surveillance System (BRFSS). The outcome variable was self-reported smoking cessation attempt for one day or longer in the past 12-months. The independent variables included demographic data, presence of heart disease, mental and physical health, healthcare access, and lifestyle factors. Multivariable logistic regression was used to estimate adjusted odds ratios (OR) and 95% confidence intervals (CI), stratified by sex. / **RESULTS** / Of the 506,467 respondents to the survey, 59,539 were ≥ 40 years old and reported having diabetes. Of the 59,539, 26.4% were current smokers, 57.5% of whom tried to quit smoking in the past year. Women, blacks, and people with heart disease were more likely to report cessation attempts. Among men, but not women, the odds of attempted smoking cessation decreased with increasing age, adjusted OR 0.6 (95% CI 0.5, 0.8) for men ≥ 71 years compared to men 40-49 years (ref). In both sexes, black diabetics were more likely to report attempted smoking cessation than white diabetics (OR_{male}= 1.9, 95% CI 1.4, 2.4 OR_{female}= 1.9, 95% CI 1.5, 2.3). People with heart disease had higher odds of attempted cessation- (OR_{male}= 1.5, 95% CI 1.2, 1.7 OR_{female}= 1.5, 95% CI 1.3, 1.8) compared to those without heart disease. / **CONCLUSION** / Sex, age, race and heart disease are statistically significantly associated with smoking cessation attempts. Knowing these associations with smoking behaviors can help practitioners target counseling. /

UMD - College of Information Studies: Ph.D. in Information Studies

65. Presenter: Natalie Taylor

Title: From eye rolls to “I can!” - Understanding the Health Literacy of Disadvantaged Tweens

1) Mega Subramaniam, University of Maryland, mmsubram@umd.edu / 2) Beth St. Jean, University of Maryland, bstjean@umd.edu / 3) Rebecca Follman, University of Maryland, rfollman@umd.edu / 4)

Co-authors: Natalie Greene Taylor, University of Maryland, ngreenetaylor@gmail.com / **5) Faith Ambrosini, University of Maryland, andkings@umd.edu / 6) Christie Kodama, University of Maryland, ckodama@umd.edu / 7) Dana Casciotti, National Library of Medicine, dana.casciotti@nih.gov /**

Department/Center: Information Studies

Affiliation: University of Maryland, College of Information Studies

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

In this poster, we report preliminary results from our NLM-funded after-school program HackHealth (for more information, see <http://hackhealth.umd.edu/>) with school librarians in three mid-Atlantic middle schools. In this program, we work with approximately 7 to 12 youth per school, encouraging them to identify personally relevant health issues, and then assisting them in investigating these health concerns throughout the program.

Participating schools are designated with Title 1 status, with a high percentage of students who come from low-income families and high participation rates in the Free and Reduced Meals (FARMS) program. Using ethnographic methods, we collect data on the students' various stages of information seeking using pre- and post-surveys, card-sorting exercises, participant observation, search logs, interviews, and focus groups. // We focus in this poster on the experiences of two tween participants in our program. Despite their similar backgrounds (in terms of socio-economic status, traditional literacy levels, and degree of family and social support), they showed divergent health-related information behaviors and levels of health literacy while participating in HackHealth. We share the changes that occurred (or did not occur) in these two tweens' levels of health literacy and degree of interest in the sciences and health by presenting salient interactions and events that emerged from our data analysis. We further explore how their experiences in the program may have helped to contribute to their interest in a future career in health sciences or in science, technology, engineering, or mathematics (STEM) more generally. // Health literacy helps youth to understand how their choices affect their health, and encourages them to take responsibility for their own health behaviors. This research informs the importance of literacy development in increasing health-related self-efficacy among youth, and improving their understanding of the crucial link between their daily health-related behaviors and their ability to maintain their health and prevent disease. /

UMD - School of Public Health: Epidemiology

66. Presenter: Lisa Bowen

Title: Improving Health Literacy and Cultural Competency of FDA Consumer Materials

Co-authors: 1) Lisa Bowen - UMD / 2) Olivia Carter-Pokras, Ph.D. - UMD / 3) Robin Bloodworth, MPH - UMD / 4) Brie Kohrt, Ph.D. - UMD

Department/Center: Epidemiology

Affiliation: University of Maryland, SPH

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

STATEMENT OF RESEARCH PURPOSE / In June 2013, the U.S. Preventive Services Task Force recommended that adults born between 1945 and 1965 be screened for Hepatitis C virus (HVC). Many adults seek HVC information online, with smart-phone usage now surpassing computers to access the Internet. Low health literacy is associated with medication errors, low treatment compliance, and increased mortality. Racial/ethnic minorities are more likely to have hepatitis C, low health literacy, and access the Internet with a smart-phone. This project assessed the health literacy and cultural competency of Food and Drug Administration (FDA) web pages for patients regarding HVC. / METHODS / A sample of 43 webpages from the "For Patient and Patient Advocates" section on Hepatitis B and C on FDA's website was identified. Webpages were analyzed using a rubric drawn from the Cultural Sensitivity Assessment Tool (CSAT), the Cultural Sensitivity Assessment Checklist (CSAC), the Suitability of Materials (SAM) analysis, the Toolkit for Making Written Material Clear and Effective, and Flesch Reading Ease and Flesch-Kincaid Grade level readability measures. Inter-rater reliability showed acceptable agreement among reviewers (.69). / FINDINGS / Only 21% of pages presented treatment options in a manner that was appropriate and understandable to the intended audience. The median grade level was 14.5 (inconsistent with average reading level of Americans), and the median Flesch Reading Ease score was 29.1 (scores range from 0-100; lower scores reflect higher

and the median Flesch Reading Ease score was 27.1 (scores range from 0-100, lower scores reflect higher difficulty). / IMPLICATIONS FOR PUBLIC HEALTH / Consistent with our previous assessment of FDA's webpages for consumers on HIV/AIDS, hepatitis C consumer materials on FDA's website need to be updated to be more appropriate, understandable, and accessible via smart-phones

UMB - School of Nursing: Nursing Informatics

- 67. Presenter:** Bu Kyung Park
Title: Development and Heuristic Evaluation of Facebook-based Health Educational Program for Korean American Adolescents
Co-authors: 1) Bu Kyung Park, MSN, RN - UMB / 2) Eun-Shim Nahm, PhD, RN, FAAN- UMB
Department/Center: Nursing Informatics
Affiliation: University of Maryland, Baltimore. School of Nursing
Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

Background: The prevalence of adolescent obesity has more than tripled during the past three decades. Although current obesity prevalence among Korean American (KA) adolescents is relatively lower than the national average, acculturation increases the risk for obesity in the second and third generations of KA immigrants compared to the first generation. Currently, using Facebook has become popular among adolescents, thus obesity prevention education via Facebook can be an innovative and promising approach. / Purpose: The purpose of this study was to develop and evaluate a Facebook-based health educational program (Healthy Teens) using heuristic evaluation. / Method: The Healthy Teens program was developed to provide health information about healthy eating and physical activity. The content of the Healthy Teens was developed based on the U.S. and Korean national physical activity and dietary guidelines by experts in adolescent health, healthy eating and physical activity, and the KA population. The program was developed four learning modules, discussion forums, and useful resources. / Four experts who have expertise in Web usability and adolescent health evaluated the program based on the modified Nielsen's heuristics. The qualitative data from the heuristic evaluation was analyzed employing content analysis. / Results: Content analysis of heuristic evaluation revealed 13 themes. The experts found that the learning content was easy to understand and age appropriate to KA teenagers. They also reported that the program was easy to navigate through the content. The usability issues identified were too much information on one page, inflexibility in navigation for the first time user, and issues with Facebook platform (e.g., distracting ads and inverse chronological order). / Conclusion: Facebook has both advantages and limitations to deliver health education for adolescents. A further study will be conducted to test the effects of Facebook-based obesity prevention program for KA adolescents. /

UMD - College of Agriculture and Natural Resources, Avian and Animal Sciences

- 68. Presenter:** Cindy Driscoll
Title: Maryland One Health - and Interagency Communications Approach
**Cindy P. Driscoll¹ Katherine A. Feldman² N. Jo Chapman³ /
¹Maryland Department of Natural Resources, Oxford, MD 21654 /**

Co-authors: 2Maryland Department of Health and Mental Hygiene, Baltimore, MD 21201 / 3Maryland Department of Agriculture, Annapolis, MD 21401 /

Department/Center: Avian and Animal Sciences

Affiliation: University of Maryland, College of Agriculture and Natural Resources

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

One Health: Interagency Development of the Maryland One Health Bulletin / Cindy P. Driscoll¹ Katherine A. Feldman² N. Jo Chapman³ Sally Ann Iverson² / ¹Maryland Department of Natural Resources, Oxford, MD 21654 / ²Maryland Department of Health and Mental Hygiene, Baltimore, MD 21201 / ³Maryland Department of Agriculture, Annapolis, MD 21401 / / **ABSTRACT:** / The MD Department of Agriculture, MD Department of Health and Mental Hygiene and the MD Department of Natural Resources developed a biweekly Maryland One Health Bulletin in 2011. As defined by the American Veterinary Medical Association, “One Health” is the collaborative effort of multiple disciplines – working locally, nationally, and globally – to attain optimal health for people, animals and our environment. This bulletin is intended to provide reports of zoonotic and other animal diseases of concern in Maryland, whether in domestic livestock, poultry, companion or exotic animals, native wildlife, or humans, for the purpose of promoting rapid detection, evaluation and control of these diseases in our state. We depend on the vigilance and information sharing of veterinarians, health care workers and wildlife biologists to achieve the goal of animal, human and environmental health protection. These reports are intentionally brief, with links and references to more detailed discussions for further information. Rabies updates are provided in each edition of the bulletin, as this is of interest to all providers and users of animal and human health data. The Maryland One Health Bulletin is a biweekly effort sent to all Maryland veterinarians with available email addresses, as well as interested public health and wildlife health colleagues. After nine months we sent a feedback survey to our distribution lists and determined that our bulletin is well-received and shared beyond our initially intended audience. This bulletin will hopefully serve as a template for other states to reach out to more One Health partners. / **ACKNOWLEDGEMENTS:** / The authors thank Dianne Dorsey, Maryland Department of Agriculture and Mary Armolt, Maryland Department of Health and Mental Hygiene for their continued assistance with formatting and distributing the MD One Health Bulletin. / /

UMD - College of Agriculture and Natural Resources: Family and Consumer Sciences

69. Presenter: Amanda Ginter

Title: Smart Choice Health Insurance: Results of a Multi-State Health Insurance Literacy Program

Bonnie Braun- UMD and Lynn Little- UMD, Virginia Brown- UMD,

Co-authors: Amanda Ginter- UMD, Teresa McCoy- UMD, Mia Baytop Russell- UMD, Maria Pippidis- University of Delaware

Department/Center: Family and Consumer Sciences

Affiliation: University of Maryland, College of Agriculture and Natural Resources

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

The Affordable Care Act became law in March 2010, expanding access to affordable health insurance to most Americans. However, research shows most people cannot calculate their share of health insurance costs using a descriptive table, which contributes to the mismanagement of disease and high health care costs. University of Maryland Extension brought together an interdisciplinary, interstate team of health and finance educators to develop and pilot a health insurance literacy program called Smart Choice Health Insurance©. Participants were recruited via community locations, current Extension clientele, local partners and through media outreach for the two-hour workshop. Analysis was run on electronic data received from 443 participants in five pilot states' workshops occurring between September-December 2013. Results indicate that consumers who participated in the workshops experienced both a) a decrease in confusion and b) an increase in capability when making a health insurance decision. Discussion and results will center on the differences by health insurance status at time of the program, the gap in audience reach and ways the team is working to ensure more people have access to Smart Choice Health Insurance© education. / / Objectives: / Examine or discuss the guiding hypothesis of the Smart Choice Health Insurance© program. / / Demonstrate or Describe how the program was effective in increasing confidence and reducing confusion in a health insurance purchasing decision. / / Discuss or identify ways the program can be expanded into new communities and audiences for the 2014 open enrollment. /

Howard University- College of Nursing, Nursing

70. Presenter: Nkechi Enwerem

Title: The effect of years of experience on the knowledge and awareness of food and drug interactions (FDI): a survey among nurses

Nkechi M.Enwerem¹, Pricilla Okunji¹, Samuel Ndubuisi² and Magnus Azuine² / ¹Department of Nursing, College of Nursing and Allied

Co-authors: Health, Howard University, Washington, DC / ²TransWorld Development Initiatives, Inc. P.O. Box 105, Brentwood, MD. 20772, USA. /

Department/Center: College of Nursing

Affiliation: Howard University

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

/ / ABSTRACT / Food and drug interactions (FDI) contribute to treatment failure, resulting in frequent hospital visits and high cost to the tax payer. Interactions between drugs occur when more than one drug are administered together orally. Interactions between drug and food occur when both are taken concurrently. Drug interaction, occurs at the pharmacokinetic level (absorption, distribution, metabolism and elimination) and pharmacodynamics level. Comorbidity is one of the reasons why drugs are taken concurrently. FDI is more common with the adult population who practice poly-pharmacy. Nurses play a major role in the administration of drugs at the individual, family and community levels. / OBJECTIVES: The goal of this study, is to evaluate the effect of years of experience on the knowledge, attitude and awareness of nurses about some common food and drug interactions. / MATERIALS AND METHODS: A modified food and drug interaction questionnaire of Imani et al. 2012 was used in this pilot study. The questionnaire comprises 26

interaction questionnaire of Jyoti et al., 2012 was used in this pilot study. The questionnaire comprises 26 questions including dichotomous, multiple choice and open ended questions. The questionnaire was distributed among nurses in the DC/VA/MD metropolitan area. / RESULTS: The mean percentage scores (mean \pm SD) on the overall test was 66.10 \pm 20.20, with 100 being a perfect score. Nurses with 0-4 years and 5-9 years of experience, had mean percentage scores of 68.70 \pm 27.0 and 75.0 \pm 24.6 respectively. 28.6% of nurses with 0-4 years of experience had witnessed drug and food interaction while 66.0% with 5-9 years of experience, had come across FDI during their practice years. / CONCLUSION: Food and Drug interactions, should be incorporated in the annual in-service training for nurses. / Key words: Drug interactions, food and drug interactions, questionnaire, Nurses /

Providence Hospital

71. Presenter: Ankita Saxena

Title: Expansion of a diabetes prevention and management program to underserved populations in Washington, DC

Co-authors: 1) Ankita Saxena, BS, CHES- Providence Hospital, 2) Felicia Hugee, MPH- Providence Hospital, 3) Whitney Carrington, BSW- Providence Hospital, 4) Crystal Granados, BS- Providence Hospital

Department/Center:

Affiliation: Providence Hospital

Poster Category: Health Literacy, Health Communications, Health Education

Abstract:

Providence Hospital. The OTR program utilizes trained community health advocates (CHAs) to provide diabetes and lifestyle information classes in conjunction with point-of-care (POC) A1C and blood pressure (BP) testing to help participants “know their numbers” as they relate to diabetes. CHAs deliver the OTR program in a variety of non-medical settings in DC where underserved people are already gathered. The OTR program uses a model where CHAs are reimbursed for delivering the program in a community setting, at a rate of between \$200 and \$300 per participant. The goal is to demonstrate an effective and cost-savings model for reimbursement. We plan to enroll 1,800 participants in Washington, DC through June 2015. The primary outcome measure is improvement in A1C and BP results at three-month follow-up, specifically shifting participants from a higher-risk category to a lower-risk category. Secondary outcome measures include increased understanding of A1C and BP, re-engagement with the healthcare system, and improvement in medication adherence. Data analysis is ongoing. Since March 2013, the OTR program has been delivered to 704 participants in DC. Ultimately, we believe our findings will validate the OTR program as an evidence-based intervention that can easily be expanded in different geographic areas and delivered to diverse populations, while having substantial impact on quality of care and lowering overall medical costs.

Infectious Disease

UMD - School of Public Health: Department of Epidemiology and Biostatistics

72. **Presenter:** Jennifer Guida
Title: Collectivism Culture, HIV Stigma and Social Network Support: A Path Analytic Model
Co-authors: (1) Hongjie Liu - UMD, (2) Chunpeng Zang - UMD, (3) Jennifer Guida - UMD, (4) Yehuan Sun - Anhui Medical University - China

Department/Center: Department of Epidemiology and Biostatistics

Affiliation: University of Maryland, SPH

Poster Category: Infectious Disease

Abstract:

Background: HIV stigma is rooted in culture and therefore, it is essential to investigate it within the context of culture. The objective of this study was to examine the interrelationships among individualism-collectivism, HIV stigma, and social network support. / Methods: A social network study was conducted among 118 people living with HIV/AIDS in China. The Individualism-Collectivism Interpersonal Assessment Inventory (ICIAI) was used to measure cultural norms and values in the context of three social groups: family members, friends, and neighbors. / Results: The results of path analyses revealed: (1) a higher level of family ICIAI was significantly associated with a higher level of HIV self-stigma ($\beta= 0.32$); (2) a higher level of friend ICIAI was associated with a lower level of self-stigma ($\beta= -0.35$); (3) neighbor ICIAI was associated with public stigma ($\beta=-0.61$); (4) self-stigma was associated with social support from friends ($\beta= -0.21$) and from neighbors ($\beta=-0.25$); and (5) public stigma was associated with social support from neighbors ($\beta=-0.18$). / Conclusion: This study documents that HIV stigma may mediate the relationship between collectivist culture and social support, providing an empirical basis for interventions to include aspects of culture into HIV intervention strategies. /

District of Columbia Health Dept; Walden University, Doctor of Nursing Practice

73. **Presenter:** Yvonne Washington-Turay
Title: A Retrospective Analysis of Latent Tuberculosis Medication Adherence: District of Columbia Department of Health TB Chest Clinic
Co-authors: Yvonne Washington-Turay-Walden University
Department/Center: Doctor of Nursing Practice
Affiliation: Walden University; District of Columbia Health Dept
Poster Category: Infectious Disease

Abstract:

Abstract / Tuberculosis is a population health problem that has had widespread and far reaching impact on our world over the past century. The World Health Organization created The STOP TB Strategy with a major emphasis in decreasing the incidence of Tuberculosis in the World to 50% of 1990 levels by the year 2015. As the millennial goals for decreasing the death rate and prevalence of Active Tuberculosis Disease are at hand the focus is now shifting toward the assess on treat of Latent Tuberculosis. (WHO, 2013). / Latent Tuberculosis Infection (LTBI) is a precursor to Active Tuberculosis Disease (ATD). (World Health Organization (WHO), 2013). The treatment of LTBI is the single most effective means of preventing ATD. While the current standard regime of Isoniazid for nine months is highly effective studies have shown that the

adherence rate to this current therapy is between 50% and 64%. In addition Isoniazid toxicity is also a major concern. (Sterling et al., 2011). Medication Adherence rates can be affected by many factors; some of which are patient-centered and others which include clinical or provider centered issues. / Purpose / The purpose of this project is to examine LTBI medication adherence rates at an inner city health department clinic located in Washington, District of Columbia, / Project Question / Does length of Latent Tuberculosis Infection therapy impact medication adherence? / Project Design / The project design is a retrospective cohort analysis that will assess LTBI medication adherence rates at this clinic from January 2011 to March 2014. / Implications / The implications of this project include evaluation of LTBI adherence rates, improved patient outcomes, potential for decreased incidence of Active Tuberculosis, long-term cost saving to the community as a whole, as well as the decreased incidence, prevalence, morbidity and mortality related to Active Tuberculosis as a result of treatment of at risk individuals and improve overall community health. /

UMB - School of Medicine, Epidemiology

74. Presenter: Lindsay Croft

Title: Effect of Contact Precautions on frequency of hospital adverse events

1) Lindsay Croft, MS - UMB, 2) Preeti Mehrotra, MD - UMB and Maryland VA Healthcare System, 3) Hannah R. Day, PhD - UMB and Maryland VA Healthcare System, 4) Elizabeth Lamos, MD - UMB, 5)

Co-authors: Ryan Arnold, MD - UMB, 6) Eli Perencevich, MD, MS - University of Iowa Carver College of Medicine, 7) Anthony D. Harris, MD, MPH - UMB, 8) Daniel Morgan, MD, MS - UMB and Maryland VA Healthcare System

Department/Center: Epidemiology

Affiliation: University of Maryland Baltimore, School of Medicine

Poster Category: Infectious Disease

Abstract:

Background: Contact Precautions are commonly used for methicillin-resistant Staphylococcus aureus and other organisms and have been reported to decrease healthcare worker visits and increase the number of medical harms such as pressure ulcers or falls. Our objective was to determine the association between Contact Precautions and patient adverse events as measured by an electronic Institute for Healthcare Improvement (IHI) trigger tool (“unintended physical injury resulting from or contributed to by medical care”). / / Methods: Prospective cohort study of inpatients followed through discharge from January 2010 to November 2010 at the University of Maryland Medical Center (UMMC). Patients were enrolled at admission and matched by hospital unit and length of stay. Three physician reviewers performed patient chart reviews to identify adverse events using an electronic IHI trigger tool. Each chart was reviewed by one to three physicians. Preventability of each adverse event was also recorded. Logistic regression analysis was used for our primary analysis of Contact Precautions and patient adverse events. / / Results: Of 296 matched patients, 84 patients (28.4%) had adverse events. Contact Precautions were not associated with more frequent adverse events (OR 1.30, 95% confidence interval (CI) 0.76-2.21, p=0.33) after adjusting for age greater than 51 years (OR 1.95, 95% CI 1.13-3.35), length of stay greater than 4 days (OR 2.57, 95% CI 1.50-4.41), and Charlson comorbidity score (OR 1.04, 95% CI 0.90-1.19). Among 84 adverse events, 43 (51.2%) were preventable. Preventable adverse events were also no more common among patients on Contact Precautions (OR 1.09, 95% CI 0.56-2.14, n=0.80) / /

were also no more common among patients on Contact Precautions (OR 1.05, 95% CI 0.55-2.11, p = 0.88). /
Conclusions: Patients on Contact Precautions do not appear to be more likely to experience adverse events than patients not on Contact Precautions.

UMB - School of Medicine: Public Health, Global Health

75. **Presenter:** Yvonne Abuto
Title: EVALUATION OF PEDIATRIC HIV RAPID DIAGNOSTIC TEST RESULTS INTERPRETATION IN NAIROBI, KENYA
Co-authors: Yvonne Abuto - UMB
Department/Center: Public Health, Global Health
Affiliation: University of Maryland, Baltimore
Poster Category: Infectious Disease

Abstract:

INTRODUCTION: With a significant number of infants born exposed to Human Immunodeficiency Virus (HIV) in Kenya's capital city, it is critical to properly diagnose or exclude HIV infection and provide appropriate clinical care and follow-up of these infants to avoid risk of infection or disease progression. Rapid diagnostic tests (RDT) are used as a quick diagnostic tool in resource-limited settings and may have a positive, negative or indeterminate result. This evaluation will analyze the systematic process of how site personnel in the Nairobi clinics describe RDT results within the existing testing program in order to determine any discrepancies or challenges in proper diagnosis of infants exposed to HIV. / **METHODOLOGY:** This will be a descriptive data analysis of 9 month patient RDT results and the clinical management of these patients. Healthcare worker knowledge and practice will also be analyzed through the results of a brief, self-administered survey pertaining to pediatric HIV diagnostics. Data on eligible infants has been collected from selected clinic sites in Nairobi, Kenya and will be analyzed to determine the occurrence of indeterminate RDT results. Comparisons will also be done on the clinical outcomes of these patients with the knowledge and compliance of the healthcare workers. Basic statistical descriptors will be utilized to summarize the data. Comparison of data will be done through a group analysis using a Chi Square test. / **ANTICIPATED RESULTS:** With a determined sample size of 145 infants and completed surveys from 12 healthcare workers, results post-analyses are expected to detail the common patterns and correlations in the interpretation, clinical management and level of compliance of the healthcare workers with regards to HIV diagnostics in the HIV-exposed infant population. It is hypothesized that there will be significant results showing improper diagnostic interpretation and clinical management of HIV-exposed infants. /

UMB - School of Medicine, Institute of Human Virology

76. **Presenter:** Jamie Mignano
Title: Preparing the Future for an AIDS-Free Generation
1) Jamie Mignano - the JACQUES Initiative of the Institute of Human Virology at the University of Maryland / 2) Derek Spencer - the
Co-authors: JACQUES Initiative of the Institute of Human Virology / **3) Alexandra Reitz, BS - the JACQUES Initiative of the Institute of Human Virology**

at the University of Maryland
Department/Center: Institute of Human Virology
Affiliation: University of Maryland, Baltimore. School of Medicine
Poster Category: Infectious Disease

Abstract:

Research Purpose/Question: In 2010 the US Government released the National HIV/AIDS Strategy (NHAS). High incidence and prevalence with low rates of effective engagement in care prompted the JACQUES Initiative (JI) of the Institute of Human Virology at the University of Maryland School of Medicine to create the Preparing the Future (PTF) program in 2011. Scientific data indicates that suppression of HIV is not only good for the patient but has public health implications. PTF's goal is to mobilize the University of Maryland's (UMD) academic and clinical campus to address NHAS by reducing new infections, increasing access to care, reducing HIV-related health disparities and creating a more coordinated response to the epidemic. Researchers examined the impact of the PTF academic program on the knowledge, attitudes and behaviors of emerging professionals from six schools at UMD related to the HIV epidemic and HIV testing during the 2012-2013 academic year: Medicine, Nursing, Pharmacy, Law, Social Work and Dentistry. / Methods: Each student enrolled in PTF completed a pre- and post-test evaluation. The PTF experience included an interprofessional didactic and service-learning curriculum. 129 students completed the pre- and post-test during fall and spring 2012-2013. / Findings: Pre- and post-test data revealed statistically significant improvements in 20 of 29 areas of quantitative assessment ($p < 0.001$) including: 1) knowledge about HIV to have an informed conversation with patients/clients; 2) ability to discuss HIV in a culturally competent way with patients/clients; 3) comfort talking about sensitive topics to patients/clients; 4) comfort in disclosing results of an HIV positive test to a patient/client. / Implications for Public Health: Over 600 students have been trained through PTF. An additional 450 current health professionals have been trained. By preparing the workforce to address the HIV epidemic there is potential for earlier diagnosis, increased access to care due to availability of more entry points and decreased HIV-related health disparities due to provider cultural competence. /

UMD - School of Public Health, Department of Epidemiology and Biostatistics

77. **Presenter:** Chunpeng Zang

Title: Selective disclosure of HIV status in egocentric social networks of people living with HIV/AIDS

Co-authors: (1) Chunpeng Zang - UMD / (2) Xin He - UMD / (3) Hongjie Liu - UMD

Department/Center: Department of Epidemiology and Biostatistics

Affiliation: University of Maryland, SPH

Poster Category: Infectious Disease

Abstract:

The objective of this study was to investigate HIV disclosure activities in HIV positive individuals' social networks. An egocentric social network study was conducted in Nanning, China. A sample of 147 HIV positive individuals (egos) nominated 922 network members (alters). All egos disclosed their HIV status to at least one alters in their social network, and 26.5% disclosed to all alters. Among network alters, 95.7% of

spouse alters, 59.9% of other family member alters, and 29.7% of friend alters were aware of egos' HIV status. HIV positive egos were more likely to disclose their status to / their spouse and other family members, frequently-contacted alters, and alters who provided social support. In addition, older egos or unmarried egos were more likely to disclose their HIV status. HIV disclosure was not associated with network size. The findings indicate that network-based HIV intervention programs should take into consideration selective disclosure in social networks.

UMD - School of Public Health: Epidemiology and Biostatistics

78. Presenter: Fei Wu

Title: Network stigma toward people living with HIV/AIDS and their caregivers

Co-authors: 1. Wu F, 2. Guida JG, & 3. Liu H

Department/Center: Epidemiology and Biostatistics

Affiliation: University of Maryland, SPH

Poster Category: Infectious Disease

Abstract:

HIV stigma has been identified as a major obstacle to HIV/AIDS treatment access and adherence worldwide. However, the features of social networks that drive HIV stigma are not well understood. This study aims to explore HIV stigma within two social support networks of people living with HIV/AIDS (PLWHA) (n=147) and their caregivers (n=148). Survey data were collected in Guangxi, China during 2010-2011. Older caregivers perceived more stigma. Middle aged PLWHA's network members demonstrated more stigma. Network members who were married and had lower education tended to be more stigmatizing toward caregivers. Being in a closer relationship with PLWHA or caregivers (e.g. a spouse or other family member) was associated with less perceived stigma. Less frequent contact between network members and caregiver participants were more likely to indicate stigma. Findings may shed light on innovative stigma reduction interventions at the social network level and therefore improve HIV/AIDS treatment utilization.

UMD - School of Public Health: Maryland Institute for Applied Environmental Health

79. Presenter: Michael Grantham

Title: Characterization of Respiratory Droplets from Community Acquired Influenza Infection in Humans

1) Jovan Pantelic-UMD, 2) Jing Yan-UMD 3) Barbara Albert-UMD 4)

Co-authors: Michael Grantham-UMD 5) Fengjie Liu-JHMI 6) Sheryl Ehrman-UMD, 7) DonaldK Milton-UMD

Department/Center: Maryland Institute for Applied Environmental Health

Affiliation: University of Maryland, SPH

Poster Category: Infectious Disease

Abstract:

We characterized the shedding of influenza virus into respiratory droplets by volunteers with community

Co-authors: 1) Brooks F. Leimer - UMD, 1) Ryan A. Toledo - UMD, 2) Lauren R. Weiss - UMD, 3) Theresa J. Smith - UMD, 4) Alfonso J. Alfini - UMD, 5) Katy Eslami - UMD, 6) Danielle C. Kauffman - UMD, 7) Steven A. Saheb - UMD, 8) Kyle H. Schiller - UMD, 9) J. Carson Smith - UMD

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Prior evidence suggests that after low and moderate intensity exercise, there is an increase in positive affect and decrease in negative affect. Further evidence also suggests that decreased heart rate variability (HRV) is associated with depression and anxiety. It has been theorized that changes in HRV are related to changes in affective states, however it is not known how changes in affect after exercise relate to changes in HRV. / PURPOSE: To examine changes in affect before and after low and moderate intensity exercise, and how these changes relate to indices of heart rate variability. METHODS: Ten healthy participants (5 male, 5 female) between the ages of 18-30 with no clinical anxiety or depression diagnoses were tested across a three-day period. On day 1, trait anxiety (STAI Y2) and self-reported physical activity history (7-day recall) was assessed. Testing days 2 and 3 consisted of a 37-minute aerobic exercise session on a stationary cycle ergometer, at a low and moderate intensity on alternate days. Participants completed the PANAS and STAI Y1 before and after each session. The Self-Assessment Manikin (SAM), RPE, and HR were measured in 5-minute increments during exercise. HRV was measured before, during, and after exercise with a Polar RS800CX heart rate monitor. HRV was analyzed using a 10-minute window before and after exercise, and during minutes 15-25 during exercise. RESULTS: Preliminary data analysis shows that participants reported less pleasantness during moderate compared to low intensity exercise. Participants reported decreased negative affect after the moderate intensity exercise session (12.6 + .85 vs. 11.2 + .63, $p < 0.05$) but not after the low intensity condition. HRV, while significantly reduced during exercise, did not change from pre- to post- exercise. Changes in mood were unrelated to changes in HRV. CONCLUSION: This study suggests that exercise that is unpleasant may actually provide improvements in mood and affect after exercise, and that these changes are unrelated to changes in HRV. /

UMD - School of Public Health: Toxicology and Environmental Health

82. Presenter: Jessica Montresor-Lopez

Title: Physical Activity: Does environment make a difference for tension, stress, emotional outlook, and perceptions of health status?

Puett RC - UMD / Teas J - University of South Carolina / España-Romero V - University of Cadiz / Artero EG - University of Almería /

Co-authors: Lee DC - Iowa State University / Baruth M - Saginaw Valley State University / Sui X - University of South Carolina / Montresor-Lopez J - UMD / Blair SN - University of South Carolina

Department/Center: Maryland Institute for Applied Environmental Health, Toxicology and Environmental Health

Affiliation: University of Maryland, SPH
Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Background: The importance of physical activity for health is well-established. Questions remain whether outdoor exercise additionally benefits overall mental and physical well-being. / Methods: Using cross-sectional data from the Aerobics Center Longitudinal Study (ACLS), we examined relationships of physical activity environment (PAE) with reported tension, stress, emotional outlook, and health. / Results: 11,649 participants were included. 18% exercised indoors, 54% outdoors, and 28% in both. Participants who exercised partially or entirely outdoors exercised more. In fully-adjusted models, for women combined PAE was protective for worse emotional outlook (OR: 0.72; 95%CI: 0.52, 0.98). Combined PAE was also protective for reported poor health (OR for women:0.63; 95%CI: 0.44,0.91; OR for men: 0.75; 95%CI: 0.61,0.92). Amount of physical activity modified PAE relationships with outcomes. Combined and outdoor PAE were more consistently protective for worse outcomes among high activity participants. Regardless of PAE, better outcomes were observed in active versus inactive participants. / Conclusion: The current study suggests addition of outdoor PAE may be linked with better stress management, outlook and health perceptions for more active populations, whereas indoor PAE may be more important for low active populations. Further research should examine the order of causation and whether type of outdoor PAE (e.g.,urban, natural) is important. /

UMD - School of Public Health: Kinesiology/Exercise Physiology

83. Presenter: Rian Landers-Ramos

Title: Effects of training status on circulating angiogenic cell paracrine activity in young men and women

Co-authors: 1) Rian Q. Landers-Ramos-UMD, 2) Nathan T. Jenkins-University of Missouri, 3) Anna E. Roth-UMD, 4) Lucile Cancre-UMD, 5) Espen E. Spangenburg-UMD, 6) James M. Hagberg-UMD

Department/Center: Kinesiology/Exercise Physiology

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

PURPOSE: To determine if a relationship exists between physical fitness and the ability of CD34+ or CD34-/CD31+ circulating angiogenic cells (CAC) to influence angiogenic function through paracrine activity. **METHODS:** Peripheral blood was drawn from healthy inactive (n = 7), active (n = 10) and endurance-trained (n = 7) men and women aged 25-39. Mononuclear cells were isolated by density centrifugation and CD34+ and CD34-/CD31+ fractions were purified by immuno-magnetic selection. Conditioned media (CM) from cultured CACs was retrieved and used for a HUVEC-based angiogenesis tube formation assay. Tube length and complexity were imaged and quantified. **RESULTS:** CM from CD34+ CACs of endurance-trained subjects resulted in 21% greater tube length (P<0.05) and 48% greater complexity (P<0.05) than inactive subjects, and 22% greater complexity than active subjects (P<0.05). CD34+ CM from active subjects produced greater length and complexity than inactive subjects (P<0.05, 18% and 33%, respectively). Tube length was 22% greater and complexity was 42% greater (P<0.05 each) with CD34-/CD31+ CAC CM of endurance

22% greater and complexity was 42% greater ($P < 0.05$ each) with CD34-/CD31+ CACs in endurance-trained subjects compared to inactive individuals. CONCLUSIONS: These preliminary data provide promising support for a chronic exercise-induced increase in paracrine-mediated angiogenic function of CD34+ and CD34-/CD31+ CACs. / Support: NIH AGT3200068 and UMD KNES Graduate Research Initiative Fund

UMD - School of Public Health: Kinesiology

84. Presenter: Theresa Smith

Title: Effects Of A 12-week Exercise Intervention On Default Mode Network Connectivity In MCI Patients

Co-authors: 1) Theresa J. Smith - UMD, 2) Lauren R. Weiss - UMD, 3) Hyuk Oh - UMD, 4) Kristy A. Nielson - Marquette University 5) Piero Antuono - Medical College of Wisconsin 6) Jeri-Annette Lyons - University of Wisconsin, Milwaukee, 7) Ryan J. Hanson - University of Wisconsin, Milwaukee 8) Alissa M. Butts - Marquette University 9) Nathan C. Hantke - Marquette University 10) Matthew D. Verber - Medical College of Wisconsin, 11) Alfonso J. Alfani - UMD 12) J. Carson Smith - UMD

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Mild Cognitive Impairment (MCI) is considered an early stage of Alzheimer's Disease (AD). Thus, it is important to identify effective treatments to improve cognition and brain function in MCI. It has been suggested that cortical regions of the brain's Default Mode Network (DMN) are preferentially vulnerable to amyloid plaque deposition in MCI, which may hasten AD pathogenesis and disrupt functional connectivity. Recently, exercise has been shown to improve efficiency of task-related activation within semantic memory networks that overlap with the DMN. Purpose: To determine the effects of a 12-week treadmill walking intervention on functional connectivity within the DMN in older adults diagnosed with MCI and healthy controls. Methods: Sixteen MCI and 16 healthy controls, ages 60-88, volunteered for a supervised 12-week treadmill walking exercise intervention. Functional MRI (fMRI) data were acquired at rest while the participant focused on a fixation cross. Functional connectivity analysis was performed using the left precuneus as a seed. Results: A 2 (Group) x 2 (Time) analysis revealed significant Group x Time interactions in several regions of the DMN (all $p < .01$). Controls demonstrated decreased connectivity over time in the right superior frontal gyrus, the right angular gyrus, and the right posterior cingulate cortex, whereas the MCI did not. The MCI group showed increased connectivity over time in the right posterior cingulate cortex compared to the controls. At baseline, the patient group had greater connectivity in the right insula, but there were no differences between groups post intervention. These preliminary findings suggest 12-weeks of exercise resulted in decreased DMN functional connectivity in healthy controls. The patient group, on the other hand, showed relative preservation of DMN connectivity, and increased connectivity in DMN hub regions such as the right posterior cingulate cortex.

85. Presenter: Alfonso J. Alfini

Title: Exercise alters cerebral blood flow; A MRI analysis

Co-authors: Alfini, AJ, Oh, H, Weiss, LR, Leitner, BP, Smith, TJ, Eslami, K, Kauffman, DC, Saheb, S Schiller, KH, Toledo, R, and Smith, JC.

Department/Center: Kinesiology, Cognitive Motor Neuroscience

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Introduction: Cognitive impairment affects 8.6 million Americans over age 65, during the last decade the diagnosis of Alzheimer's disease has increased ~1.5 fold to become the sixth leading cause of death in U.S. Emerging evidence suggests exercise may protect against cerebrovascular damage, mitigate depressive symptoms, and postpone cognitive decline. Acute exercise positively effects memory, reaction time, and goal-oriented behavior, and exercise training is related to better long-term cognitive outcomes. However, the biology behind this improved brain health remains mysterious. Few studies have used magnetic resonance imaging (MRI) to assess blood flow changes in response to exercise. Arterial Spin Labeling (ASL) is a unique and non-invasive MRI technique, which provides a means to quantify localized and total cerebral blood flow (CBF). // Purpose: The purpose of this study was to measure CBF before and after an acute bout of low and moderate intensity exercise using ASL analysis. // Methods: Participants included ten young healthy adults (women=5), ages 18-30. Using a within subjects, counterbalanced design, participants performed an acute 30-minute bout of cycle ergometry at low and moderate intensity. Each exercise condition was performed on one of two experimental days. CBF was measured before and immediately after the exercise session using interleaved, multi-sliced, pseudo-continuous ASL. // Results: Using a 2 x 2 (Time x Intensity) repeated measures ANOVA, preliminary analysis showed cerebral blood flow was significantly affected by 30 minutes of acute exercise. A significant main effect of time showed decreased CBF in the medial temporal gyrus (P=0.01), cerebellum (P=0.01), and thalamus (P=0.025) after both exercise conditions. A significant interaction of intensity and time showed increased CBF in the precuneus region (P=0.05) after low but not moderate intensity exercise. // Conclusions: Our findings show acute exercise significantly altered CBF. Further research is needed to help elucidate the mechanisms by which exercise may treat/prevent cognitive decline. / / / /

86. Presenter: Isabelle Shuggi

Title: Adaptive Human-prosthesis interface for arm reaching movements

Co-authors: 1) Isabelle M. Shuggi, 2) Hyuk Oh, 3) Jeremy C. Rietschel, 4) Bradley D. Hatfield, 5) James A. Reggia, 6) Rodolphe J. Gentili

Department/Center: System Engineering

Affiliation: University of Maryland, A. James Clark School of Engineering

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

In most existing human-prosthesis interaction schemes, the human user has full control of the prosthetic limb which is generally considered as a passive device without any adaptation capabilities. In most of these approaches, only the human has the capability to adapt in order to enhance its control of the prosthetic device. However the design of collaborative and adaptive human-prosthesis interfaces could improve the user performance while decreasing the ergonomic burden and cognitive load. Thus, in this work we investigated arm reaching movements using an adaptive human-prosthesis interface. Specifically, by using limited head motion, healthy users guided a simple simulated prosthetic upper-limb through a computer interface in order to reach visual targets placed in a 2D workspace. While the user operated the device, an adaptive neurocontroller learned gradually to drive the arm by processing the user data recorded online. The findings revealed that when this neurocontroller was engaged, an adaptive collaborative shared control progressively emerged resulting in a gradual assistance to the user to reach the targets with the prosthetic arm. As a consequence, user's performance and cognitive load were improved and reduced, respectively. The long term goal of this work is to develop a symbiotic intelligent human-prosthesis system for individuals having very limited movement capabilities.

UMD - School of Public Health: Kinesiology / Neuroscience and Cognitive Science P

87. Presenter: Hyuk Oh

Title: A neural architecture for actual and mental performance of bimanual arm reaching movements

Co-authors: 1) Hyuk Oh, 2) Di-Wei Huang, 3) Garrett E. Katz, 4) Ross H. Miller, 5) James A. Reggia, 6) Rodolphe J. Gentili

Department/Center: Kinesiology / Neuroscience and Cognitive Science Program

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Dexterous reaching play is a critical component of the human motor repertoire for manipulating tools as well as allows individuals to interact with one another in social settings. Specifically, the development of neurally inspired systems that incorporates mental simulation and imitation learning capabilities appear to be a promising approach to further understand the mental simulation networking human, to improve robot performance as well as to develop and examine enhanced social interactions between humans and robots. In this work we present a neurally inspired model that captures some important visuo-spatial transformations that are needed for the cognitive processes of mental simulation and learning by imitation. The findings suggested that this neural architecture was able to perform accurate, flexible and robust 3D unimanual and bimanual overt/covert reaching movements while avoiding uncomfortable arm position and producing similar kinematics to those observed in humans. Also, by using visuo-spatial transformation, the neural architecture could observe/imitate bimanual arm reaching movement independently of the viewpoint, distance and anthropometry between the demonstrator and imitator. The long term goal of this work is to develop a hierarchical neural architecture that incorporates a simulation network to coherently combine high cognitive and low sensorimotor levels for actual/mental execution as well as observation/imitation of dexterous bimanual arm reaching movements. This would allow to better understand the overt and covert cognitive-motor human processes as well as to develop an efficient human-robot interaction framework for cognitive-motor rehabilitation.

88. Presenter: Yue Du
Title: Age And Stimulus Interval Effects On The Motor Sequence Learning Process

Co-authors: 1) Yue Du - UMD / 2) Jill Whitall - UMB / 3) Jane E.Clark - UMD

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Multiple interactive processes contribute to learning in a serial reaction time (SRT) task as well as other motor tasks. Procedural and declarative learning may be responsible for different properties, such as susceptibility to interference and faster subsequent learning. It has been suggested that procedural and declarative knowledge learned from a sequence depends on the amount of time for stimulus processing (i.e. stimulus interval). However, the learning processes within short time scales (i.e. minutes) have not been investigated under different stimulus interval conditions. In a first study, we found that 6-year-old children and young adults differed in their explicit sequence knowledge while performing a sequential foot stepping task (a modified SRT task). Indeed, this knowledge difference corresponded to distinct learning processes. Adults showed decreased reaction time (RT) within learning blocks, but this decrease was not observed in children. However, children improved RT performance during short breaks between the learning blocks, while adults did not. Unlike children, a novel sequence interfered with the adults' performance, but rapid subsequent learning compensated for this interference and maintained the overall learning effect. We hypothesized that the stimulus interval effect underlies this age-related difference because the temporal interval used in our study may have a different effect on the processing of the stimulus information in adults and children. To examine this effect, in a second study, young adults performed the sequential foot stepping task under different stimulus interval conditions. No effect of stimulus interval was found on with the online learning process in adults. These results suggest that the age-related difference on the learning process underlying the acquisition of motor sequences is not due to the effect of stimulus interval. Future research is required to elucidate the mechanisms underlying the development of motor sequence learning process.

89. Presenter: Dovin Kiernan
Title: Sensitivity of vertical ground reaction force parameters in normal and amputee running to filter design

Co-authors: 1) Dovin Kiernan - UMD / 2) Kyung Koh - UMD / 3) Hyun Joon Kwon - UMD / 4) Ross H. Miller - UMD / 5) Jae Kun Shim - UMD

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Several studies have examined possible links between the characteristics of vertical ground reaction forces (GRF) in running and lower limb injuries. Studies examining GRF variables, however, have used a variety of methods. Critically, the different methods used in these studies may: (1) lead to different, possibly erroneous, results and conclusions, and (2) make comparison of results across studies difficult. The need for clear guidelines is further reinforced when examining different populations. In amputees the residual limb is composed of materials that have higher frequency components than the intact limb, or the limbs of controls. Thus, alternative methods may be needed to examine this population. The present study analyzes the relationship between different methods and populations and their respective impacts on GRF variables.

UMD - School of Public Health: Kinesiology

90. Presenter: Shikha Prashad

Title: The importance of sequence structure in motor sequence learning

Co-authors: 1) Shikha Prashad - UMD, 2) Stephanie Youlios - UMD, 3) Catherine Robinson - UMD, 4) Yue Du - UMD, 5) Jane E. Clark - UMD

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Motor sequences are acquired both explicitly and implicitly throughout our activities of daily living. Both learning types are essential to learning complex motor skills throughout our lifespan. Implicit sequence learning has traditionally been examined using a serial reaction time (SRT) task in which participants respond by pressing the button that corresponds to the location of the stimulus. However, the participant is unaware that the stimuli are occurring in a fixed sequence. Learning is assessed by decreasing reaction times during the practice blocks and increases in reaction times to stimuli occurring in a random order. Fixed sequences can be problematic as participants may become consciously aware of the sequence, thus changing the learning from implicit to explicit. Probabilistic sequences can be used to ensure that the learning is implicit throughout the experiment. In a preliminary study, we investigated whether probabilistic sequences whose transitional probabilities are similar to that of a random sequence can be learned in the conventional four practice blocks. We found that participants continue to improve their response times even when the stimuli are occurring in a random order. In the current study, we examined differences in performance patterns between fixed, probabilistic, and random sequences to investigate if the decrease in response times was due to the learning of the sequence or simply due to faster motor performance at the task. Thirty healthy female adults (mean age 20.4 years, SD 1.30) completed a modified SRT task in one of the three conditions. The results suggest that there is a continued decrease in response time due to faster motor performance at the task, as evaluated by the random sequence condition. These studies suggest that the probabilistic structure can be learned indicating that probabilistic sequences are an effective alternative to fixed sequences to assess implicit motor sequence learning. This is significant as probabilistic learning more accurately reflects the learning acquired in daily life and thus provides ecological validity to the SRT framework.

UMD - School of Public Health: Neuromechanics

91. Presenter: Qingjian Chen

Title: Vertical loading rate using running-specific prostheses in transtibial amputees

1) Hiroaki Hobara-Japan Society for the Promotions of Science; / 2)

Co-authors: Brian S Baum-UMD; / 3) Hyun Joon Kwon-UMD; / 4) Qingjian Chen-UMD; / 5) Jae Kum Shim-UMD. /

Department/Center: Neuromechanics

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

Recent development of carbon fiber running-specific prostheses (RSPs) has allowed individuals with lower extremity amputation (ILEA) to regain the functional capability of running. However, their potential injury risks due to abnormal loading have not been thoroughly investigated. Loading rate of the vertical ground reaction force (vGRF) has been associated with running injuries in able-bodied runners but not for ILEA. The purpose of this study was to investigate loading rates of the vGRF in ILEA runners using RSPs at a range of running speeds. Eight ILEA with unilateral transtibial amputations and eight control subjects performed overground running at three speeds (2.5, 3.0, and 3.5 m/s). From vGRF, we measured vertical average loading rates, defined as the change in force divided by the time of the interval between 20 and 80% of the first impact peak. We found that loading rate both in ILEA and control limbs increases with an increase in running speed. Further, the loading rates in ILEA intact limbs were 45% and 30% greater than their prosthetic limbs and control limbs for this range of running speeds, respectively. These results suggest that 1) risk of running related injury may increase with running speed not only in able-bodied runners, but also in ILEA runners, and 2) the intact limb in ILEA may be exposed to a greater risk of running related injury than the prosthetic limb and control limbs. This study would provide important information for designing better prosthetic devices.

UMD - School of Public Health: Kinesiology

92. Presenter: J. Carson Smith

Title: Physical activity reduces hippocampal atrophy in elders at genetic risk for Alzheimer's disease

J. Carson Smith¹, Kristy A. Nielson^{2,3}, John L. Woodard⁴, Michael Seidenberg⁵, Sally Durgerian³, Kathleen E. Hazlett², Christina M. Figueroa², Cassandra C. Kandah⁵, Christina D. Kay⁵, Monica A. Matthews⁵, and Stephen M. Rao⁶ / / 1 Department of Kinesiology,

Co-authors: School of Public Health, University of Maryland, College Park / 2 Department of Psychology, Marquette University / 3 Department of

Neurology, Medical College of Wisconsin / 4 Department of Psychology,
Wayne State University / 5 Department of Psychology, Rosalind
Franklin University of Medicine and Science / 6 Schey Center for
Cognitive Neuroimaging, Neurological Institute, Cleveland Clinic /

Department/Center: Kinesiology

Affiliation: University of Maryland, SPH

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

We examined the impact of physical activity (PA) on longitudinal change in hippocampal volume in cognitively intact older adults at varying genetic risk for the sporadic form of Alzheimer's disease (AD). Hippocampal volume was measured from structural magnetic resonance imaging (MRI) scans administered at baseline and at an 18-month follow-up in 97 healthy, cognitively intact older adults. Participants were classified as High or Low PA based on a self-report questionnaire of frequency and intensity of exercise. Risk status was defined by the presence or absence of the apolipoprotein E-epsilon 4 (APOE-ε4) allele. Four subgroups were studied: Low Risk/High PA (n = 24), Low Risk/Low PA (n = 34), High Risk/High PA (n = 22), and High Risk/Low PA (n = 17). Over the 18 month follow-up interval, hippocampal volume decreased by 3% in the High Risk/Low PA group, but remained stable in the three remaining groups. No main effects or interactions between genetic risk and PA were observed in control brain regions, including the caudate, amygdala, thalamus, precentral gyrus, caudal middle frontal gyrus, cortical white matter, and total grey matter. These findings suggest that PA may help to preserve hippocampal volume in individuals at increased genetic risk for AD. The protective effects of PA on hippocampal atrophy were not observed in individuals at low risk for AD. These data suggest that individuals at genetic risk for AD should be targeted for increased levels of PA as a means of reducing atrophy in a brain region critical for the formation of episodic memories.

UMD - College of Agriculture and Natural Resources: University of Maryland Extension - 4-H Youth Development:

93. Presenter: Sandy Corridon

Title: Walk MD

**1. Sandy Corridon - UME - State 4-H Office - UMCP / 2. Victoria Stone
Co-authors: - UME - Cecil County Extension Office - UME / 3. Cindy Morris -
UME - Worcester County Extension Office - UME**

Department/Center: University of Maryland Extension - 4-H Youth Development

Affiliation: University of Maryland, College of Agriculture and Natural Resources

Poster Category: Physical Activity, Exercise Physiology, Movement

Abstract:

This poster is an announcement of the launch of a new website featuring collaborations across Maryland - University, community, extension outreach, Parks and Planning, as well as resources to encourage physical activity, promote healthy lifestyle, and collect demographic info with the goal of documenting behavioral

change for youth and adults.

Research Methods

Pharmerit International; UMD - School of Public Health: Epidemiology and Biostatistics

- 94. Presenter:** Congyu Li
Title: INTERPRETING BUDGET IMPACT ANALYSES IN THE UNITED STATES: CAN WE DO BETTER?
Co-authors: 1) S. Corman, 2) C. Li, 3)X. Gao, 4) M. Botteman / / All from Pharmerit International, Bethesda, MD, United States
Department/Center: Epidemiology and Biostatistics
Affiliation: University of Maryland, SPH; Pharmerit International-Bethesda/Montgomery County, MD
Poster Category: Research Methods

Abstract:

Background: Budget impact analyses (BIAs) are valuable tools to estimate the financial consequences of the adoption of new healthcare technologies and help inform formulary decision-making. However, limited guidance is available to interpret BIA results. For instance, BIAs frequently estimate the per-member per-month costs (PMPMC) associated with a new formulary inclusion; however, benchmarks defining an “acceptable” PMPMC are lacking. As such, it is unclear whether conclusions about the PMPMC acceptability should be judged by BIA authors or their payer audience, and what criteria should be used. In addition, BIA results should be interpreted within the context cost-effectiveness analyses (CEA) results, as BIA should be viewed as complementary—and not as a variant or replacement—to CEA. For instance, if a therapy is found to be cost-ineffective, it should logically not be reimbursed, regardless of its PMPMC. / / Objective and Purpose: To systematically review published US BIAs of pharmacological interventions to establish the range of reported PMPMC, their interpretation by the respective authors, and their relationship to published CEA results. / / Methods: A search of Medline, AMCP, and ISPOR abstracts was conducted to identify BIAs published between 01/2002 and 04/2013. The included studies were BIAs that used modeling methods to predict incremental PMPMC (or equivalent) associated with the formulary introduction of one or more new pharmacotherapies. Author conclusions of PMPMC and BIA acceptability were analyzed descriptively. Associations between PMPMC, author conclusions and other study characteristics (publication year and type, analytical horizon, and patient population size) were evaluated. A separate systematic search was conducted to determine (1) whether CEAs have been published for each intervention evaluated in the BIAs and (2) whether the CEA were favorable (i.e., cost/QALY <\$100,000). / / Results: Forty BIAs were identified, reporting 52 PMPMC outcome estimates (as some studies reported multiple populations/indications). The median (min; max) PMPMC across all 52 estimates was 2 (-50; 894) cents (US\$). Fifteen percent of all estimates were cost-saving while 75% and 95% were ≤ 5 and ≤ 90 cents, respectively. Nearly two thirds of BIAs reported results between -5 and +5 cents PMPM. In 81% of studies the authors provided qualitative judgments of the acceptability of their BIA results. In 94% of studies and estimates, the PMPMC was reported as acceptable. A published CEA could be identified for only 44% of interventions evaluated. Across all BIA interventions, a cost/QALY was reported in 23% of cases, and the cost/QALY was \leq \$100,000 in 12% of cases. Among those costing $>$ \$100,000/QALY, 80% were considered to have an acceptable PMPMC. / / Conclusions: : BIA results cluster within a relatively narrow range (-5 to +5 cents) and are nearly always reported as acceptable,

perhaps because PMPMC are expressed in terms of cents on the dollar and may easily provide a false impression of minimal impact. In addition, BIA analyses are often reported despite absent or negative CEA evidence. These findings raise questions regarding the relevance and validity of published BIAs. Without pre-defined benchmarks, judgments regarding BIA acceptability may be best left to decision-makers and within the context of more comprehensive assessment such as CEA. /

UMD - A. James Clark School of Engineering, Bioengineering

95. Presenter: Samantha Spindel

Title: Spatial and Spectral Multiplexing on a Planar Surface Fluorescent Immunoassay using Quantum Dots

Co-authors: 1. Samantha Spindel (UMD and USPHS) / 2. Joshua Balsam (UMD) / 3. Govind Mattay (U Penn) / 4. Kim Sapsford-Medintz (FDA)

Department/Center: Bioengineering

Affiliation: University of Maryland, A. James Clark School of Engineering

Poster Category: Research Methods

Abstract:

The development of a cheap and portable diagnostic system is necessary to facilitate treatment and prevention of the spread of disease in impoverished areas. This work focuses on the construction of such a platform to detect two proteins: Chicken Immunoglobulin (IgG) and Staphylococcal Enterotoxin B (SEB). Fluorescent assays are often used to detect proteins. Proteins are tagged with labels that fluoresce when excited by light of a certain wavelength. Such assays usually involve the use of a plate reader. Plate readers require much larger volumes of analyte than the proposed method (100 μ l as compared to 5 μ l). Furthermore, plate readers are expensive, not portable, and cannot be used in a POC setting. Similar methods could eventually be used to detect biomarkers implicated in a variety of diseases such as Acute Kidney Injury (AKI). /

UMD - School of Public Health: MPH - Environmental Health Sciences from the Maryland Institute of Applied Environmental Health (MIAEH)

96. Presenter: Allison Gost

Title: A quantitative comparison of urinary deoxynivalenol biomarker concentrations using a single versus multi-mycotoxin assay.

Co-authors: 1Allison Gost, 2Stina Wallin, 2Michele Solfrizzo 2 Monica Olsen, 1Paul C. Turner. / 1Maryland Institute for Applied Environmental Health, School of Public Health, University of Maryland, College Park, MD 20742, USA; 2 National Food Agency, P.O Box 622, SE-751 26 Uppsala, Sweden; 3 Institute of Sciences of Food Production (ISPA), National Research Council (CNR), Bari 70126, Italy /

Department/Center: Kinesiology
Affiliation: University of Maryland
Poster Category: Research Methods

Abstract:

Deoxynivalenol (DON), a common fungal toxin in grains, is globally one of the most frequently encountered dietary mycotoxins. It is toxic to the gastrointestinal tract and immune system, though exposure assessment to better inform epidemiological studies has been problematic. A novel validated urinary assay permits biomonitoring in humans; however where data from separate studies are to be reliably compared it remains critical to assess methodologies in different laboratories. / This study compared the urinary DON concentrations from 260 samples in the Swedish National Survey of adults using the original single mycotoxin method (SSM) with a newer multi-mycotoxin method (MMM) that additionally quantified other mycotoxins. / For the SSM 230/260 samples exceeded the LOQ (mean of positives was 5.6ng/ml: SD 7.7, range 0.5-60.2ng/ml) whilst for the MMM 138/260 samples exceeded the LOQ (mean of positives was 8.1 ng/ml: SD 16.9, range 0.6-135.2ng/ml). Linear regression analysis revealed a significant but modest relationship between the two measures ($p < 0.001$, adjusted $R^2 = 0.35$). For samples $< LOQ$ using MMM ($n=122$), the mean concentration by the SMM was 2.8ng/ml (95%CI: 2.1, 3.5ng/ml). / This was the first study to compare urinary DON biomarkers using two methods. Overall data are in reasonable agreement. The differences observed may reflect subtle handling differences in DON extraction between the methods, and highlight the need for vigorous validation as novel methods develop. . /

UMD - School of Public Health: Environmental Health

97. Presenter: Prachi Kulkarni

Title: Evaluating the Bacterial Microbiota of Reclaimed Water Using Next-Generation Sequencing

Prachi Kulkarni, Emma Claye, Rachel Rosenberg Goldstein, Shawn G Gibbs, Mihai Pop, Michael Cummings, Cynthia Maddox, Emmanuel F. Mongodin, Amy R. Sapkota

Department/Center: Environmental Health

Affiliation: University of Maryland, SPH

Poster Category: Research Methods

Abstract:

Over 2.22 billion gallons of wastewater effluent are reclaimed per day in the U.S. However, limited data exist on the pathogens and total bacterial communities that remain in this water, as well as the potential health risks from exposure to this alternative water source. Thus, the objective of this study was to characterize bacterial communities present in wastewater and reclaimed water using next generation sequencing. Wastewater (from each step of the treatment process), final effluent and reclaimed water samples ($n=94$) previously collected from four U.S. wastewater treatment plants and their associated reclamation sites were tested. DNA extractions involving both enzymatic and mechanical lyses were performed on all samples, followed by bacterial community profiling using 16S rRNA gene sequencing on the Illumina MiSeq platform. Raw sequences were processed using PANDAseq to generate high-quality consensus sequences from the MiSeq

paired-ends, and taxonomic assignments performed using a new taxonomic classifier, the MC classifier, able to classify 16S reads to the species level with an accuracy of 98%.. Diverse bacterial communities were present in all samples. Fewer pathogens were present as the wastewater treatment process progressed with reclaimed water characterized by the fewest numbers of pathogens. Our approach has generated novel pilot data that can be used in future proposals, the findings of which will assist in the development of risk-based water reuse policies that move us towards a more sustainable water use paradigm and protect human health.

UMB - School of Nursing: PhD Nursing

98. Presenter: Xochitl Ceniceros

Title: E-Health Amputee Patient Empowerment Program (EAPEP)

Co-authors: Eun-Shim Nahm, PhD, RN, FAAN; Erika Friedmann, PhD; Joseph Pellegrini, PhD, CRNA;

Department/Center: PhD Nursing

Affiliation: University of Maryland, Baltimore- School of Nursing

Poster Category: Research Methods

Abstract:

E-Health Amputee Patient Empowerment Program (EAPEP) / Background: With advances in combat technology and medical care, overall combat casualties have been reduced and more soldiers survive high energy penetrating battle injuries. / A web based empowerment program will be particularly beneficial to the large magnitude of injured war wounded amputee soldiers that need to manage their chronic conditions. In particular, empowerment of these soldiers can be enhanced through theory based comprehensive health information and resources, provided by an interdisciplinary team (Petoukhov, K., 2010). Easily accessible information empowers patients to be more knowledgeable about their health and to be more actively engaged in their healthcare and recovery process (Maizes, V., 2009). / Purpose: This study will examine the preliminary impact of the EAPEP on empowerment, self-efficacy for managing chronic disease, and health related quality of life using a small sample of war wounded amputees. / Design: The study will use a two group pre-and post-test randomized control trail design. The two groups will be participants that receive conventional Military Treatment Facility (MTF) information versus patients in the EAPEP group who will use the theory based patient empowerment e-health website. / Methods: Proposal stage (intervention developed). / Intervention: Participants in the experimental group will access a wide range of holistic health amputee patient information over the course of 8 weeks biweekly (twice a week) for 15 minutes each session. / Website Development: The content in the interventional website has been developed based on patients and suggestions from content experts, and an interdisciplinary medical team about the / proximal outcomes (increasing patient knowledge, change of perception of the impact of the illness, and change in behavior) of empowerment through patient education in the Program Logic Model for Public Health (Osborne, 2009). Content was developed using the steps followed by other health Orthopaedic self-management websites which include resource research, consultation with content experts, and audience analysis (the patients requests) (Shuyler, 2002). / Reference: / Andersen, R. J. (2008). Shell shock an old injury with new weapons. *Molecular Interventions*, 8(5), 204-218. / Maizes V, Rakel D, Niemiec C. (2009). Integrative medicine and patient-centered care. *Explore*. 5(5):277-89. / Osborne, R. H., (2009). What should an effective whole of system approach to patient education and self-management look like? Insights from Australia. *Les Journees de la Prevention* Retrieved Dec. 6, 2010 2010 from http://www.inpes.sante.fr/jp/cr/pdf/2009/session2/PPT_OSBORNE_Richard.pdf / Petoukhov, K. (2010).

Measuring the Effectiveness of Interdisciplinary HealthCare Teams in a Primary Care Setting: A Review of Published Evidence, from <http://www.gov.mb.ca/health/phc/pin/docs/ihct.pdf> / Shuyler K., W. T., Macklin S., Louie A., Shelton B., Maddox E., Turns J., and Matsen F.A. III, M.D. (2002). Transforming Web-based Patient Education at the University of Washington and Beyond. Retrieved Dec. 6, 2010 from <http://depts.washington.edu/pettt/papers/arthritis/may2002.pdf> /

UMB - School of Nursing, Family and Community Health

99. Presenter: Carla Storr

Title: Genetic research participation in a young adult community sample

Co-authors: 1) Carla Storr-UMB / 2) William Eaton-JHSPH / 3) Nicholas Ialongo-JHSPH

Department/Center: Family and Community Health

Affiliation: University of Maryland, Baltimore: School of Nursing

Poster Category: Research Methods

Abstract:

Opposed to large nationally sponsored health initiatives or biobanks, little is known about gathering genetic samples from young adults participating in academic population-based epidemiologic studies of mental health and substance use, especially samples with a large number of minority participants. This study describes our experience of establishing a genetic arm within a longitudinal study of a cohort of young adults (mean age 29, 75% African American, 58% female). In total, 75% of those interviewed in the most recent wave donated a DNA sample (31.6% blood and 68.4% saliva) and over 90% provided consent for storage and sharing. Participants with a family history of daily smoking or alcohol problems were 41-56% more likely to donate a sample. While current and former substance use was also associated with an increased odds (44-84%) of obtaining a sample, fewer users consented to sharing their sample with other investigators (OR=0.51, 95% CI= 0.32, 0.83). Findings also illustrate there are many study parameters that are very important in planning biologic collection efforts. Paying extra attention to building strong rapport and trust with subjects, reaching out to insure access and minimizing the burden involved to obtain a biological sample, offering a choice to provide blood or saliva, and offering an incentive will increase the likelihood of obtaining a sample and more importantly increase the opportunity to store and share the sample for the future.

UMD - School of Public Health: Epidemiology and Biostatistics

100. Presenter: Xin He

Title: A model for time to fracture with a shock stream superimposed on progressive degradation: the Study of Osteoporotic Fractures

Co-authors: 1) Xin He - UMD / 2) Mei-Ling Ting Lee - UMD / 3) G. A. Whitmore - McGill University / 4) Geok Yan Loo - FDA / 5) Marc C. Hochberg - UMB

Department/Center: Epidemiology and Biostatistics

Affiliation: University of Maryland, SPH

Poster Category: Research Methods

Abstract:

Osteoporotic hip fractures in the elderly are associated with a high mortality in the first year following fracture and a high incidence of disability among survivors. We study first and second fractures of elderly women using data from the Study of Osteoporotic Fractures (SOF). We present a new conceptual framework, stochastic model and statistical methodology for time to fracture. Our approach gives additional insights into the patterns for first and second fractures and the concomitant risk factors. Our modeling perspective involves a novel time-to-event methodology called threshold regression which is based on the plausible idea that many events occur when an underlying process describing the health or condition of a person or system encounters a critical boundary or threshold for the first time. In the parlance of stochastic processes, this time to event is a first hitting time of the threshold. The underlying process in our model is a composite of a chronic degradation process for skeletal health combined with a random stream of shocks from external traumas, which taken together trigger fracture events.

Bon Secours Baltimore Health System-Community and clinical research department:

101. Presenter: Aurelia Laird

Title: Empowering Hard-to-reach Patients to Have Their Voice Being Heard in the Research Process

Co-authors: 1)Aurelia Laird, RN, Bon Secours Baltimore Health System; 2) Samuel Ross, MD, Bon Secours Baltimore Health System; 3)C. Daniel Mullins, PhD, University of Maryland; 4)Yingjing Liu, MPP, Bon Secours Baltimore Health System

Department/Center: Community and clinical research department

Affiliation: Bon Secours Baltimore Health System

Poster Category: Research Methods

Abstract:

Objective: To include patients and constituents in the population we serve to sit along with researchers at the table and have a voice in the design of research methods that will be meaningful to them. Integrating patients' voices in study with a focus on hard to reach patients will empower them to speak out and be a part of research questions and answers that are relevant to them, their needs and community. This method should enable them to have a better understanding of how the healthcare system works, improve their access to care, be better partners in their care and make best informed decisions. / **Methods:** Hard to reach patients were identified and approached by Research Nurse from Ambulatory Care setting at Bon Secours Baltimore Health System (BSBHS) and Hispanic population from a Community Based Latino Center. All patients and constituents were invited to participate in focus groups sessions and rationale for same was explained. They were invited along with caregivers to participate in discussions centered on their thoughts and sentiments regarding best ways and practices that will motivate them to be a part of research activities and some of the issues that are most important to them that they might want to see answered. Each participant got the opportunity to share their challenges and concerns related to research and clinical trials and expressed things they will like to see change like the dissemination of findings and study outcomes. / **Findings:** The majorities of the patients at BSBHS and EBLO were very much engaged in these discussions and were very inquisitive and anxious to learn of findings and outcomes related to their participation. Guided by the interview questions modified and rephrased by 9

and outcomes related to their participation. Guided by the interview questions modified and rephrased by partnering advisors in Phase I of the study, 20 focus groups and one individual interview were conducted among 10 types of groups in Phase II. Among the total number of 160 participants, majorities of them were female (N=123, 77%), 59% (N=95) were African Americans, 27% (N=43) non-Hispanic whites, 11% (N=18) Hispanics, and 3% (N=4) other racial groups. While patients represented 59% (N=95) of the study objects, their care providers composed the rest 41% (N=65) of the participants. / Conclusion: Despite being viewed as “hard-to-reach” patients, the patients in the population BSBHS serve and in targeted Hispanic population that seldom participate in research due to cultural, socioeconomic, language, physical or cognitive impairment, were motivated to participate and actively engaged during the research process. / /

Surveillance, Community Needs Assessment, Pedagogy

UMD - School of Public Health: Maryland Institute for Applied Environmental Health:

102. Presenter: Priya Parikh

Title: Engineering and public health: An interdisciplinary approach to addressing water quality in Compone, Peru

Co-authors: 1) Elisabeth Maring -UMD-SPH, 2) Greg Raspanti-UMD-SPH, 3) Graciela Jaschek - UMD-SPH, 4) Kevin Hogan - UMD-Engineering, 5) Coke Farmer - UMD-SPH, 6) David Lovell - UMD-Engineering, 7) Stephanie Grutzmacher - UMD-SPH, 8) Priya Parikh - UMD-Global Public Health Scholars, 9) Stephanie Olcese-UMD-Global Public Health Scholars

Department/Center: Maryland Institute for Applied Environmental Health

Affiliation: University of Maryland, SPH

Poster Category: Surveillance, Community Needs Assessment, Pedagogy

Abstract:

An interdisciplinary team of University of Maryland undergraduate and graduate students and faculty members from the Schools of Engineering and Public Health conducted field water quality testing and a health needs assessment in a traditional farming community in the Andean mountain region of Southern Peru. This innovative project focuses on health as a cross-cutting issue that can be best addressed as an interdisciplinary team. Additionally, the project provides an opportunity to develop relationships among members of different fields and expands leadership capacity through multi-level teams of undergraduate students, graduate students, and faculty. The first phase was a multi-method needs assessment to examine health issues and priorities among residents and concurrently assess water quality by sampling the local water supply for contamination. The public health team used principles of cultural competency and health literacy to develop a qualitative questionnaire. Fourteen interviews were conducted with health clinic staff, school personnel, community leaders, and community members. Teams worked together to conduct 7 field tests of the local water supply at various points in the water distribution system. Residents and leaders identified animal contamination, flooding, and standing water as health priorities. Common health problems identified by residents and leaders were stomach/diarrheal diseases, acute respiratory infections, cold/flu, alcoholism, and skin problems. Social mapping analysis revealed that communication between residents and leaders is not prioritized in relation to health issues in this community. Field and laboratory water quality analyses revealed that the water supply is

health issues in this community. Field and laboratory water quality analyses revealed that the water supply is not suitable for human consumption due to high fecal coliform and E. coli contamination. In the second phase of this project, data were used to design a water disinfection system and health education curriculum with community partner support. This case study illustrates the opportunities of cross-discipline collaborations to simultaneously address technical, infrastructural, and behavioral challenges in sustainable global health projects.

UMD - School of Public Health: Family Science

103. Presenter: Emily Cook

Title: Treating Behavioral Health Conditions of OEF/OIF Veterans and their Families: A State Needs Assessment of Civilian Providers

Co-authors: 1) Emily Cook - UMD 2) Sally Koblinsky - UMD 3) Leigh Leslie - UMD

Department/Center: Family Science

Affiliation: University of Maryland, SPH

Poster Category: Surveillance, Community Needs Assessment, Pedagogy

Abstract:

With the return of troops from Afghanistan and Iraq, increasing numbers of civilian behavioral health providers are treating veterans and their families for service-related conditions. However, little is known about civilian providers' capacity to meet the needs of this population. A statewide needs assessment of 1,665 clinicians examined their screening/referral practices, knowledge and confidence in treating 14 veteran conditions, and training interests. Overall, providers had limited knowledge and confidence to treat veteran conditions, but reported high interest in training to enhance their clinical skills. Findings informed the training of 690 state clinicians to provide culturally-competent behavioral healthcare for veterans and their families.

UMD - School of Public Health: Health Services

104. Presenter: Raphael Gaeta

Title: Creating Age-Friendly Communities: Investigating Needs and Preferences in a Racially/Ethnically Diverse, Low Income Community

1) Raphael Gaeta - UMD, 2) Lori Simon-Rusinowitz - UMD, 3)

Co-authors: Jacqueline Wallen - UMD, 4) Joan Davitt - UMB, 5) Edgar Rivas - Volunteers of America, 6) Connie Raab - UMD /

Department/Center: Health Services

Affiliation: University of Maryland, SPH

Poster Category: Surveillance, Community Needs Assessment, Pedagogy

Abstract:

The majority of public funding for long-term services and supports (LTSS) for elders and adults with physical disabilities in the U.S. is spent on nursing home care. Maryland has lagged behind many states in shifting

LTSS spending to community options. Thus, Maryland legislators passed the 2011 Maryland Communities for a Lifetime Act, which focuses on community services such as LTSS, housing, transportation, health care, and civic engagement. We know little about the feasibility of implementing age-friendly services in a racially and economically diverse community. This pilot project is investigating community needs and preferences in designing an age-friendly community in Prince George's County. It is comprised of focus groups with key stakeholders, elderly residents of two low-income senior buildings, and family members of building residents. We are also reviewing existing data to describe the needs of County elders. This poster will describe the study background, methods, analysis plans, and preliminary findings. This research will inform future efforts to design and evaluate age-friendly County-wide services.

UMD - School of Public Health: Epidemiology

105. Presenter: Pamela Barainca

Title: Vitamin D: Intake of Americans from diet and supplements

**1) Pamela Barainca-UMD, 2) Donna Rhodes-FSRG 3) John Clemens -
Co-authors: FSRG 4) Alanna Moshfegh - FSRG / / (Beltsville Human Nutrition
Research Center--Food Surveys Research Group)**

Department/Center: Epidemiology

Affiliation: University of Maryland, SPH

Poster Category: Surveillance, Community Needs Assessment, Pedagogy

Abstract:

Technical Abstract: / Vitamin D (VitD) is the topic of intense public and scientific interest. Inadequate levels of VitD are associated with osteoporosis, and may play a role in certain cancers, diabetes, cardiovascular and autoimmune diseases. The objective of this study is to quantify the mean (\pm SE) intake of VitD from food and dietary supplements (DS) using day 1 dietary intake data of individuals 2 years and over (n= 9,042) from What We Eat in America (WWEIA), NHANES 2009-2010. DS usage was determined using the 2009-2010 NHANES day 1 24-hour dietary supplements data. Mean daily dietary intake from food/beverages was 5.3 (\pm 0.11) mcg per person. More than one-fourth of the population (28%) consumed a DS containing VitD, increasing total VitD intake by fourfold. Their mean daily VitD intake from food/beverages and from DS containing VitD was 5.6 (\pm 0.21) mcg from food/beverages, and 24.5 (\pm 1.93) mcg, respectively, resulting in a mean total daily intake of 30.1 (\pm 1.99) mcg. Based on WWEIA Food Categories, the largest contributor of VitD to the diet of all individuals regardless of DS usage was milk (49%), followed by fish (10%), eggs (7%) and ready-to-eat cereals (6%). Additional results on VitD intake by diet and DS usage will be described for select population groups. / /

UMD - School of Public Health: Family Science

106. Presenter: Tiffany Francois

Title: Racial socialization from the perspective of Black immigrant emerging adults

1) Tiffany S. Francois - UMD, 2) John Hart - UMD, 3) Mia A. Smith-
Co-authors:

Co-authors: Bynum - UMD, & BreAnna L. Davis - UMD

Department/Center: Family Science

Affiliation: University of Maryland, SPH

Poster Category: Surveillance, Community Needs Assessment, Pedagogy

Abstract:

Racial socialization is instrumental to promoting positive development in African American children. However, young people from Black immigrant backgrounds make sense of their identity in ways that differ from African Americans. Black immigrants vary in the extent to which they identify with the African American racial group, and yet many find that it is often imposed upon them by others in the U.S. Few studies have examined these dynamics and their role in shaping black identity processes among emerging adults who vary in their immigration background. This poster will report preliminary results from a focus group study examining the role of gender in racial socialization messages among 59 African American emerging adults enrolled at a public university. One unexpected finding occurred in who enrolled in the study. Despite our focus on African Americans, a significant number of participants were either Black immigrants or the children of immigrants. This sample composition had a distinct impact on the responses that participants had to the focus group questions. Our content analyses indicated that participants with immigrant backgrounds reported that their families placed high expectations on education. Educational opportunities were often one of the reasons families moved to the U.S. Participants also reported stricter enforcement of traditional gender roles for men and women than typically found in African American families. Participants also reported that families encouraged them to de-emphasize race, and at times, overtly reject associations with African Americans. Reasons for these latter suggestions reflected knowledge of African American racial stereotypes.