



**FIRST ANNUAL UC SAN DIEGO
PUBLIC HEALTH RESEARCH DAY
APRIL 9, 2015**

ABSTRACT BOOK

**PRESENTED BY THE
INSTITUTE FOR PUBLIC HEALTH
www.publichealth.ucsd.edu**

TABLE OF CONTENTS

PRESENTING AUTHOR	ABSTRACT NUMBER	TOPIC	TITLE
Jillian Tom	1	Chronic Disease	Sleep Disturbance and Fatigue in Breast Cancer Survivors
	2	Chronic Disease	Abstract Withdrawn
Michael Cheng	3	Chronic Disease	Glucocorticoid mediated regulation of inflammation in human monocytes is associated with obesity and depressive mood
Morgana Mongraw-Chaffin	4	Chronic Disease	The sex-specific relationship between body mass index and coronary heart disease: A meta-analysis of 94 cohorts with 1.1 million participants
Paul J Mills	5	Chronic Disease	Effects of Gratitude Journaling on Heart Rate Variability and Inflammatory Biomarkers in Asymptomatic Heart Failure Patients
Sheri Hartman	6	Chronic Disease	Sedentary behaviors and quality of life in breast cancer survivors
Suzi Hong	7	Chronic Disease	Immunological predicament of obesity: are obese individuals more prone to infections due to low-grade inflammation?
Tiffany Tran	8	Chronic Disease	Correlations between four measures of kyphosis
Yessica Diaz-Roman	9	Chronic Disease	Diabetes Management Class Utilization in Hispanics vs. Non-Hispanics, BRFSS 2012
Amanda Wilson	10	Community Health Programs and Policy	Active Living Research: Promoting Activity-Friendly Communities
Amanpreet Sandhu	11	Community Health Programs and Policy	Addressing the Shortage of Primary Care Physicians: Outcomes from Two Programs at the UC San Diego School of Medicine
Camille Nebeker	12	Community Health Programs and Policy	Measuring Research Competencies in Community Health Workers/Promotores
Chad Spoon	13	Community Health Programs and Policy	Designing Communities for Active Living Creates Diverse Co-Benefits
Elle Mari	14	Community Health Programs and Policy	Building Capacity & Collaborating for Action in California's Inland Desert
Hymie Payne	15	Community Health Programs and Policy	Development of a Workshop Series for Community-Based Participatory Research: Creating a Common Language in Partnership (CCLP)
Iliana Molina	16	Community Health Programs and Policy	UCSD EyeMobile for Children: Model Vision Screening Program
Kate Murray	17	Community Health Programs and Policy	Bridging Gaps in Refugee Health through the Refugee Resettlement Practicum
Katherine Garcia	18	Community Health Programs and Policy	Program in Medical Education – Health Equity (PRIME-HEq): Training Future Physicians to Care for Underserved Communities at Risk for Health Disparities
Kim Tran	19	Community Health Programs and Policy	Developing health fair educational booths for low-income students in grades 6-12 by targeting the four pillars of health
Linda Hill	20	Community Health Programs and Policy	Improving Driving Safety Through Education and Training: A Multi-disciplinary Approach
Shana Wright Bruno	21	Community Health Programs and Policy	Lactation Supportive Environments: Improving lactation policies in businesses throughout San Diego County
Ting Chow	22	Community Health Programs and Policy	Complete Streets for Healthy Communities
Karemi Alvarez	23	Community Health Programs and Policy	Faith-Based Wellness Program
Gabriel Anaya	24	Global & Environmental Health	Trends in Mortality for Non-Communicable Diseases in Mexican Border Municipalities: 1998-2012 Global Burden of Diseases Data
Abdur Rahman Amin	25	Global & Environmental Health	Addressing Mental Health Needs of Iraqi Refugees in the United States and its Significance in the Global Health Landscape
Catherine Larsen	26	Global & Environmental Health	Evaluation of harmful chemicals found in dust collected from homes in Los Laureles Canyon, Tijuana Mexico

PRESENTING AUTHOR	ABSTRACT NUMBER	TOPIC	TITLE
Cheyenne Rose Butcher	27	Global & Environmental Health	Residential distance to flower plantations in relation to a marker of pesticide exposure
Elisea Avalos	28	Global & Environmental Health	Risk factors of multi and extensively drug resistant tuberculosis in a multisite study: a case cohort study
Erika Reames	29	Global & Environmental Health	Women's health and sexual education in Siruvani, Tamil Nadu, India: a student-run public health program
Jesse Nodora	30	Global & Environmental Health	Acculturation, behavioral factors, and family history of breast cancer among Mexican and Mexican-American women
Kristen Guirguis	31	Global & Environmental Health	Human health Impact of California Heat Waves
Maximo R. Prescott	32	Global & Environmental Health	Health Implications of Biomass Fuels for Cooking in the Developing World: A Review
Melawhy Garcia	33	Global & Environmental Health	Toilet to Tap: Qualitative study to assess water quality and sanitation services to inform the implementation of a novel waste water initiative in rural Mexico
Molly Moor	34	Global & Environmental Health	Decreased Anemia Prevalence Among Women and Children in Baja California, Mexico: A Six Year Comparative Study
Natalie Ferraiolo	35	Global & Environmental Health	Prevalence and correlates of depressive symptoms among structurally vulnerable patients of a binational student-run free medical clinic in Tijuana, Mexico
Sophia Georghiou	36	Global & Environmental Health	Performance of a Pyrosequencing Platform in Diagnosing Drug-Resistant Tuberculosis: A Global Study
Uyen Nguyen	37	Global & Environmental Health	Malaria Prevention Study: Insecticide-treated Nets (ITNs) Coverage and Usage in Three Communities in Western Ghana
Amina Sheik Mohamed	38	Health Disparities	Overcoming Barriers to Health for East African Refugee Youth: A Photovoice Project
Andrea S. Mendoza-Vasquez	39	Health Disparities	Health literacy, use of intervention materials, and changes in self-efficacy and processes of change: A secondary data analysis
Eda He	40	Health Disparities	The impact of Somali refugee mother's health on the health of their children: a cross-sectional study
Monica Sias	41	Health Disparities	Diversity at UCSD: Fact or Fiction
Myra Dang	42	Health Disparities	Occupational Health of Taxi Drivers in San Diego
Ramon Hernandez	43	Health Disparities	LGBT Health Immersion Day: Measuring the Impact of an LGBT Health Education Intervention
Ramon Hernandez	44	Health Disparities	Developing a Diverse Healthcare Workforce to Address Health Inequalities
Yasmin Hussain	45	Health Disparities	The Lack of Awareness of Health Disparities in the United States
Andrew Trinidad	46	Health Services and Technologies	An accessible communication approach for the development of D&I research
Drew Colantino	47	Health Services and Technologies	Understanding of Oral Health Coverage in the Affordable Care Act
Karyn Speidel	48	Health Services and Technologies	Do personal rituals reduce burnout and increase compassion in hospice staff?
Kristin Palmsten	49	Health Services and Technologies	Medication Use Among Pregnant Women Enrolled in the United States Medicaid Program

PRESENTING AUTHOR	ABSTRACT NUMBER	TOPIC	TITLE
Lindsay Freeman	50	Health Services and Technologies	Multimodal Medical Sensing and Diagnostic Platform for Mobile Phones
Margaret Ryan	51	Health Services and Technologies	Influenza Vaccination of Healthcare Personnel: Impact of Evolving Local Policy at a Military Community Hospital
Sara McMenamin	52	Health Services and Technologies	The California Health Benefits Review Program
Sol D'Urso	53	Health Services and Technologies	Walk-in Mental Health Services for Vulnerable Populations along the U.S.-Mexico Border
Catherine Marinac	54	Physical Activity & Diet	Prolonged Nightly Fasting and Breast Cancer Risk: Findings from NHANES (2009-2010)
Anant Singhania	55	Physical Activity & Diet	Daily Patterns of Sedentary Time, Depression and Physical Functioning: Is the way in which Sedentary Time is Accumulated Associated with Indicators of Healthy Aging in Older Adults?
Ariel Hamburger	56	Physical Activity & Diet	Healthy Cocina Initiative: Creating Accessible, Affordable, Healthy Meals at Local Grocery Stores
Bess Marcus	57	Physical Activity & Diet	A randomized controlled trial of an Internet-delivered, physical activity intervention for Latinas
Britta Larsen	58	Physical Activity & Diet	Cost-Effectiveness of a Mail-Delivered Culturally and Linguistically Adapted Physical Activity Intervention for Latinas
Cheryl Anderson	59	Physical Activity & Diet	SPICE Trial
Dominique Daniell	60	Physical Activity & Diet	The Walking School Bus: Analysis of Volunteer Dedication and Re-enlistment
Erik Groessl	61	Physical Activity & Diet	Yoga Therapy for Inactive Older Adults
Fatima Isabel Castaneda	62	Physical Activity & Diet	Mother Physical Activity Support Behaviors in Latina Adolescents
Greg Norman	63	Physical Activity & Diet	Employee Use of a Wireless Physical Activity Tracker within Two Incentive Designs at One Company
James Sallis	64	Physical Activity & Diet	Built Environment and Physical Activity: 10-Country Study
Jessa Engelberg	65	Physical Activity & Diet	See Spot Walk: Dog Walking as Physical Activity and Multi-level Correlates of Dog Walking among Adolescents
Job Godino	66	Physical Activity & Diet	Results of a two-year social and mobile weight-loss intervention for overweight and obese young adults: Project SMART
Kelsie M Full	67	Physical Activity & Diet	Physical Activity and Sleep: Examining the Effects of the MIPARC Physical Activity Intervention on the Sleep Problems of Older Adult Participants
Laura Redwine	68	Physical Activity & Diet	Effects of mild-to-moderate exercise interventions on cognitive function and depression symptoms in heart failure patients
Lila M Estrada	69	Physical Activity & Diet	Relationship between maternal weight-related messages and eating and physical activity behaviors of young overweight women
Marisol Garcia	70	Physical Activity & Diet	Mother-daughter criticism on weight-related behaviors and interest in a weight loss program
Michelle Takemoto	71	Physical Activity & Diet	The Cross-Sectional Associations between Objective Travel Behaviors and Health Outcomes in Older Adults in Retirement Communities
Rosemay A. Remigio-Baker	72	Physical Activity & Diet	Walking May Be A Viable Alternative To Recreational Physical Activity For Promoting Physical And Mental Wellbeing Among Older Women: The Women's Health Initiative-San Diego
Selene Xu	73	Physical Activity & Diet	Objective assessment of physical activity: statistical approaches to account for missing values in accelerometry data
Sunny Smith	74	Physical Activity & Diet	Universal food insecurity screening and referrals within Student-run Free Clinics
Trina Tang	75	Physical Activity & Diet	Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis

PRESENTING AUTHOR	ABSTRACT NUMBER	TOPIC	TITLE
Annika Montag	76	Tobacco, Alcohol & Other Drugs	Community Based Research to Reduce Risky Drinking Among Women of Childbearing Age
Coroline Chen	77	Tobacco, Alcohol & Other Drugs	Electronic Cigarette Model Preferences: A U.S. Population Study
David Strong	78	Tobacco, Alcohol & Other Drugs	Understanding Cessation Among Smokers With Depression: Linking Population To Clinical Practice
Gabriel Anaya	79	Tobacco, Alcohol & Other Drugs	Effect of alcohol sales and healthcare access in alcohol-attributable deaths in Mexico from 1998 to 2012
Hien Thai Nguyen	80	Tobacco, Alcohol & Other Drugs	The environmental impacts of cigarette butt litter on UC San Diego campus
Madison Noble	81	Tobacco, Alcohol & Other Drugs	Increasing cessation or prolonging the urge? Differences in marketing features in nicotine replacement product advertisements
Maya Vijayaraghavan	82	Tobacco, Alcohol & Other Drugs	Building tobacco cessation capacity in homeless shelters
Meredith Meacham	83	Tobacco, Alcohol & Other Drugs	Prevalence and correlates of simultaneous injection of heroin and methamphetamine in two parallel cohorts of PWID in San Diego, CA, and Tijuana, BC, Mexico
Sarah Linke	84	Tobacco, Alcohol & Other Drugs	An Exercise-based Program for Veterans with Substance Use Disorders: Formative Research
Sarah Linke	85	Tobacco, Alcohol & Other Drugs	The Relationships among Physical Activity, Sedentary Behavior, Obesity, and Cessation Attempts among Smokers in California
Yue-Lin Zhuang	86	Tobacco, Alcohol & Other Drugs	Attitudes Toward E-Cigarettes Among Smokers Who Have Never Tried E-Cigarettes
Yuyan Shi	87	Tobacco, Alcohol & Other Drugs	E-Cigarette Use, Smoking Cessation and Change in Smoking Intensity in the 2010/2011 TUS-CPS Longitudinal Cohort
Laura Buehning	88	Late Breaking Submission	Vaccination Practices and Beliefs of ABIHM Physicians
Alice E. Zemljic-Harpf	89	Late Breaking Submission	Personalized Medicine and Statin Side Effects: Fact or Fiction?

AUTHOR CONTACT INFORMATION

NAME	ABSTRACT #	E-MAIL	CATEGORY
Abdur Rahman Amin	25	abamin@ucsd.edu	Undergraduate Student
Amanda Wilson	10	alw038@ucsd.edu	Staff
Amanpreet Sandhu	11	asandhu@ucsd.edu	Staff
Amina Sheik Mohamed	38	asheikmohamed@ucsd.edu	Staff
Anant Singhania	55	a2singhania@ucsd.edu	Undergraduate Student
Andrea S. Mendoza-Vasconez	39	asm015@ucsd.edu	Graduate Student
Andrew Trinidad	46	ajtrinidad@ucsd.edu	Undergraduate Student
Annika Montag	76	amontag@ucsd.edu	Postdoc
Ariel Hamburger	56	ahamburger@ucsd.edu	Staff
Bess Marcus	57	bmarcus@ucsd.edu	Faculty
Britta Larsen	58	blarsen@ucsd.edu	Faculty
Camille Nebeker	12	nebeker@ucsd.edu	Faculty
Caroline Chen	77	cac025@ucsd.edu	Postdoc
Catherine Larsen	26	calarsen@ucsd.edu	Staff
Catherine Marinac	54	crmarinac@ucsd.edu	Graduate Student
Chad Spoon	13	scsnoon@ucsd.edu	Staff
Cheryl Anderson	59	c1anderson@ucsd.edu	Faculty
Cheyenne Rose Butcher	27	crbutche@ucsd.edu	Undergraduate Student
David Strong	78	dstrong@ucsd.edu	Faculty
Dominique Daniell	60	ddaniell@ucsd.edu	Undergraduate Student/Intern
Drew Colantino	47	dac444@gmail.com	Postdoc
Eda He	40	eqhe@ucsd.edu	Undergraduate Student
Elisea Avalos	28	elisea.avalos@gmail.com	Graduate Student
Elle Mari	14	emari@ucsd.edu	Staff
Erik Groessl	61	egroessl@ucsd.edu	Faculty
Erika Reames	29	ereames@ucsd.edu	Undergraduate Student
Fatima Isabel Castaneda	62	ficastan@ucsd.edu	Undergraduate Student
Gabriel Anaya	24	ganaya@ucsd.edu	Graduate Student
Gabriel Anaya	79	ganaya@ucsd.edu	Graduate Student
Greg Norman	63	gnorman@ucsd.edu	Faculty
Hien Thai Nguyen	80	thnguyen.pghs@gmail.com	Undergraduate Student
Hymie Payne	15	hapayne@ucsd.edu	Undergraduate Student
Iliana Molina	16	imolina@ucsd.edu	Staff
James Sallis	64	jsallis@ucsd.edu	Faculty

NAME	ABSTRACT #	E-MAIL	CATEGORY
Jessa Engelberg	65	jkengelb@ucsd.edu	Graduate Student
Jesse Nodora	30	jnodora@ucsd.edu	Faculty
Jessica McCurley	53	jlmcurl@ucsd.edu	Graduate Student
Jillian Tom	1	j3tom@ucsd.edu	Undergraduate Student
Job Godino	66	jgodino@ucsd.edu	Postdoc
Karemi Alvarez	23	karemi@ucsd.edu	
Karyn Speidel	48	kespeide@ucsd.edu	Undergraduate Student
Kate Murray	17	k2murray@ucsd.edu	Faculty
Katherine Garcia	18	k2garcia@ucsd.edu	Faculty, Staff, Medical Student
Kelsie M Full	67	kfull@ucsd.edu	Graduate Student
Kim Tran	19	kht008@ucsd.edu	Undergraduate Student
Kristen Guirguis	31	kguirguis@ucsd.edu	Staff
Kristin Palmsten	49	kpalmsten@ucsd.edu	Postdoc
Laura Redwine	68	lredwine@ucsd.edu	Faculty
Lila M Estrada	69	lmestrad@ucsd.edu	Undergraduate Student
Linda Hill	20	llhill@ucsd.edu	Faculty
Lindsay Freeman	50	lmfreema@ucsd.edu	Graduate Student
Madison Noble	81	mlnoble@ucsd.edu	Staff
Margaret Ryan	51	m1ryan@ucsd.edu	Faculty
Marisol Garcia	70	mag049@ucsd.edu	Undergraduate Student
Maximo R. Prescott	32	mprescot@ucsd.edu	Undergraduate Student
Maya Vijayaraghavan	82	mvijayaraghavan@ucsd.edu	Faculty
Melawhy Garcia	33	mgarcia@mail.sdsu.edu	Graduate Student
Meredith Meacham	83	mmeacham@ucsd.edu	Graduate Student
Michael Cheng	3	t6cheng@gmail.com	Graduate Student
Michelle Takemoto	71	miblack@ucsd.edu	Graduate Student
Molly Moor	34	mollymoor@hotmail.com	Graduate Student
Monica Sias	41	msias@ucsd.edu	Undergraduate
Morgana Mongraw-Chaffin	4	mmongrawchaffin@ucsd.edu	Postdoc
Myra Dang	42	mndang@ucsd.edu	Undergraduate Student
Natalie Ferraiolo	35	nferraiolo@ucsd.edu	Graduate Student
Paul J Mills	5	pmills@ucsd.edu	Faculty
Ramon Hernandez	43, 44	rah003@ucsd.edu	Staff
Rosemay A. Remigio-Baker	72	raremigobaker@ucsd.edu	Postdoc
Sara McMenamin	52	smcmenamin@ucsd.edu	Staff
Sarah Linke	84, 85	slink@ucsd.edu	Postdoc
Selene Xu	73	yux033@ucsd.edu	Graduate Student

NAME	ABSTRACT #	E-MAIL	CATEGORY
Shana Wright Bruno	21	smwright@ucsd.edu	Staff
Sheri Hartman	6	sjhartman@ucsd.edu	Faculty
Sol D'Urso	53	sol@soldurso.com	Faculty
Sophia Georghiou	36	sgeorghi@ucsd.edu	Graduate Student
Sunny Smith	74	sdsmith@ucsd.edu	Faculty
Suzi Hong	7	s1hong@ucsd.edu	Faculty
Tiffany Tran	8	tran.tiffanyh@gmail.com	Undergraduate Student
Ting Chow	22	t5chow@ucsd.edu	Undergraduate Student
Trina Tang	75	TrinaMTang@gmail.com	Undergraduate Student
Uyen Nguyen	37	u1nguyen@ucsd.edu	Undergraduate Student
Yasmin Hussain	45	ymhussai@ucsd.edu	Undergraduate Student
Yessica Diaz-Roman	9	yroman@ucsd.edu	Postdoc
Yue-Lin Zhuang	86	y1zhuang@ucsd.edu	Postdoc
Yuyan Shi	87	yus001@ucsd.edu	Faculty
Laura Buehning	88	laurabuehning@gmail.com	Staff
Alice E. Zemljic-Harpf	89	azemljicharpf@ucsd.edu	Staff

#1. JILLIAN TOM

SLEEP DISTURBANCE AND FATIGUE IN BREAST CANCER SURVIVORS

CONFERENCE THEME

Chronic Disease

COLLABORATORS

Catherine R. Marinac, Sheri J. Hartman

ABSTRACT

Background/Context: Sleep disturbance and fatigue have been shown to be common concerns among breast cancer survivors (BCS).

Study Objectives: The aim was to evaluate the associations of sleep disturbance and fatigue with clinical and demographic characteristics and quality of life.

Methods/Design: Sleep disturbance and fatigue were assessed using the Patient Reported Outcomes Measurement Information System (PROMIS®). Clinical and demographic characteristics were obtained through medical charts and self-report, respectively; BMI was calculated in clinic. Correlation analyses were used to examine associations of PROMIS scores with demographic and clinical variables.

Setting/Subjects: Participants were BCS (n=31) with a mean age of 62 (SD= 7.7) and were diagnosed with Stage I (65%), II (32%), or III breast cancer (3%).

Results: Sleep disturbance was inversely associated with age ($r = -0.36$, $p = 0.049$) but not with other clinical or demographic variables. Greater sleep disturbance was related to greater cognitive concerns ($r = 0.38$, $p = 0.035$), anxiety ($r = 0.398$, $p = 0.027$), pain ($r = 0.367$, $p = 0.043$), and lower satisfaction in social roles and activities ($r = -0.437$, $p = 0.014$). Fatigue was positively associated with cognitive concerns ($r = 0.533$, $p = 0.002$), pain ($r = 0.624$, $p = 0.0002$) and inversely associated with cognitive abilities ($r = -0.402$, $p = 0.025$), physical function ($r = -0.60$, $p = 0.0004$), and satisfaction in social roles and activities ($r = -0.63$, $p = 0.0001$). Fatigue was not related to any physical or demographic variables.

Conclusion: Findings suggest that younger BCS may be at higher risk for sleep disturbance and fatigue. Sleep disturbance and fatigue are strongly related to quality of life variables, but not to clinical and demographic characteristics.

#2. ABSTRACT WITHDRAWN

#3. MICHAEL CHENG

GLUCOCORTICOID MEDIATED REGULATION OF INFLAMMATION IN HUMAN MONOCYTES IS ASSOCIATED WITH OBESITY AND DEPRESSIVE MOOD

CONFERENCE THEME

Chronic Disease

COLLABORATORS

Stoyan Dimitrov, Christopher Pruitt, Suzi Hong

ABSTRACT

Background/Context: Dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis is most significantly studied via glucocorticoid (GC) receptor desensitization and has been associated with diseases such as depression and obesity, which may be physiologically related. Study

Objectives: To better understand and characterize the relationship between these health variables and GC receptor desensitization. Setting and Subjects: 35 otherwise healthy participants were recruited.

Methods/Design: Depressive mood was assayed via Beck Depression Inventory (BDI-Ia), obesity via body mass index (BMI), plasma cortisol via enzyme-linked immunosorbent assay, and cortisol sensitivity via modulation of lipopolysaccharide stimulated monocyte tumor necrosis factor (TNF) production in whole blood by incubation with cortisol. Sensitivity was quantified as the slope of linear regression of percent of TNF+ monocytes at control and two concentrations of cortisol inhibition.

Results: After controlling for age, gender, systolic blood pressure (SBP), and plasma cortisol, multiple regression showed that overall cortisol sensitivity as quantified by regression slope is predicted by total depressive mood ($\beta= 0.324$, $p= 0.045$), somatic subcomponents of depressive mood ($\beta= 0.469$, $p= 0.002$), and BMI ($\beta= 0.407$, $p= 0.012$). When BDI-S was added as an additional step to the BMI model, only BDI-S remained a significant independent predictor ($\beta= 0.367$, $p= 0.024$). When BDI-T was added instead, BMI remained the only independent predictor ($\beta= 0.331$, $p= 0.048$).

Conclusions: Our results find a strong relationship between the triad of HPA dysregulation, depression, and obesity through the inflammatory potential of monocytes. Given the epidemic and growing prevalence of obesity, elucidating both biological and psychological underpinnings would inform effective intervention strategies for this public health concern.

#4. MORGANA MONGRAW-CHAFFIN

THE SEX-SPECIFIC RELATIONSHIP BETWEEN BODY MASS INDEX AND CORONARY HEART DISEASE: A META-ANALYSIS OF 94 COHORTS WITH 1.1 MILLION PARTICIPANTS

CONFERENCE THEME

Chronic Disease

COLLABORATORS

Sanne A.E. Peters, Rachel R. Huxley, Mark Woodward

ABSTRACT

Introduction: Risk for coronary heart disease differs by sex, with women developing disease later than men. This difference might be explained by sexual dimorphisms in body composition. We hypothesized that the relationship between body mass index and coronary heart disease would be different for women and men, with men having higher risk at the same level of body mass index.

Methods: Published studies reporting the longitudinal association between body mass index and coronary heart disease in women and men in general populations up to August 19th, 2013 were included from systematic searches in Pubmed/Medline and EMBASE. Also included were individual participant data from 4 large studies. Data were pooled using random effects models with inverse variance weighting.

Results: Data from 94 cohorts, 1,119,201 participants, and 34,191 incident cases of coronary heart disease were included. Higher body mass index was significantly associated with age-adjusted incident coronary heart disease in women (one unit body mass index Hazard Ratio=1.04 (1.03-1.05), overweight HR=1.21 (1.13-1.31), obese HR=1.62 (1.42-1.84)) and men (corresponding HRs=1.05 (1.03-1.07), 1.21 (1.10-1.32), 1.59 (1.41-1.80)). Overall, there was no difference in the hazard ratios by sex (Figure). The HR for women/men for one unit difference in body mass index was 0.99 (0.98-1.01) and for categories of body mass index the HR for overweight 1.01(0.93-1.09) and for obese 1.07(0.97-1.19). The results were similar for multiple-adjustment and for a range of sensitivity analyses.

Conclusion: Increments in BMI, measured continuously and categorically, have the same deleterious effects on risk of incident coronary heart disease in women and men across diverse populations.

#5. PAUL J MILLS

EFFECTS OF GRATITUDE JOURNALING ON HEART RATE VARIABILITY AND INFLAMMATORY BIOMARKERS IN ASYMPTOMATIC HEART FAILURE PATIENTS

CONFERENCE THEME

Chronic Disease

COLLABORATORS

Brook Henry, Meredith Pung, Kathleen Wilson, Kelly Chinh, J Christopher Wells, Shamini Jain, Alex Wood, Laura Redwine

ABSTRACT

The field of behavioral cardiology has moved away from an emphasis on examining effects of anger, stress, and depression to examining effects of positive psychological attributes such as gratitude, empathy and optimism, among others. Gratitude interventions are considered a potential useful intervention, although their evidence base is lacking. We examined whether a gratitude intervention could improve biomarkers linked with CVD prognosis in a clinical population, specifically patients with asymptomatic Stage B heart failure (HF). This study examined the effects of a gratitude journaling intervention on autonomic and inflammatory biomarkers. Heart rate variability (HRV) is increasingly used to detect impairment in autonomic function and assess risk for morbidity and mortality relating to cardiovascular pathology. Increased inflammation is associated with cardiovascular remodeling and worse prognosis in HF. Participants included 40 Stage B HF patients randomly assigned to an 8-week gratitude journaling condition or usual care. Plasma cytokines and HRV were assessed at baseline and again after the 8-week intervention period. After the post-intervention period both groups were asked to write about 3-5 things they were grateful for while HRV was assessed. For HRV (time, frequency and non-linear domains), after adjusting for baseline resting HRV, significant group by time interactions and medium Cohen's d effect size differences were found in response to the journaling task for RMSSD, HF, SD1 ($p = .005$, $d = .49$; $p = .038$, $d = .51$; $p = .005$; $d = 0.47$ respectively). Significant reductions in plasma cytokine levels IL-6, and sTNFr1 were found in the gratitude intervention group compared to controls, with medium to large effect size differences ($p = .048$, $d = 1.10$; $p \leq .05$, $d = 0.60$, respectively). Findings suggest that for Stage B HF patients there may be clinical benefits of gratitude journaling by improving autonomic control (suggested to reflect better cardiac function) and reducing inflammation. Gratitude journaling is a low-cost, easily implementable intervention that may have significant impact on enhancing physiological health and attenuating the progression of CVD. However, clinical implications for morbidity and mortality still need to be determined.

#6. SHERI HARTMAN

SEDENTARY BEHAVIORS AND QUALITY OF LIFE IN BREAST CANCER SURVIVORS

CONFERENCE THEME

Chronic Disease

COLLABORATORS

Catherine R Marinac, Jillian Tom, Jaqueline Kerr, Loki Natarajan, Ruth Patterson

ABSTRACT

Engaging in moderate to vigorous intensity physical activity (MVPA) has been shown to improve quality of life in cancer survivors, but less is known about the associations between sedentary time and quality of life. The aim of this study was to examine the relationships between sedentary time and quality of life in breast cancer survivors. Quality of life was assessed using the SF-36 and PROMIS sleep impairment; self-reported sedentary behavior was measured by the PACES+; objective sedentary time and physical activity was assessed with 7-day hip-worn accelerometers. Linear regression models were used to examine the associations of time spent in sedentary activities (self-report and accelerometer) with the SF-36 and sleep impairment while controlling for relevant demographic (e.g., age, BMI) and clinical (e.g., cancer stage, time since diagnosis) variables. Participants were breast cancer survivors (n=136), a mean of 63 years old (SD=6.6), diagnosed on average 2.1 years ago (SD=1.3) with Stage 1 (50%), 2 (35%), and 3 (15%) breast cancer. More time spent watching TV was significantly related to worse SF-36 physical component scores ($\beta=-0.48$, SE=0.18, $p = .01$) and greater sleep impairment ($\beta=0.17$, SE=0.08, $p < .05$). Greater TV time was also associated with worse SF-36 mental component scores, but this was not statistically significant ($\beta=-0.24$, SE=0.17, $p=.15$). TV time remained related to the physical and mental component scores and sleep impairment after adding accelerometer measured MVPA to the model. Time spent on a computer and total sedentary time (self-report and accelerometer) were not significantly related to the physical and mental component scores or sleep impairment. These findings suggest that the relationship between sedentary time and quality of life outcomes varies by type and measurement of sedentary behavior, and that time spent watching TV may be particularly detrimental to quality of life. Additionally, engaging in MVPA may not be able to counteract the negative influence of TV time on quality of life. Future research to improve quality of life in cancer survivors may benefit from focusing on reducing TV time.

#7. SUZI HONG

IMMUNOLOGICAL PREDICAMENT OF OBESITY: ARE OBESE INDIVIDUALS MORE PRONE TO INFECTIONS DUE TO LOW-GRADE INFLAMMATION?

CONFERENCE THEME

Chronic Disease

COLLABORATORS

Stoyan Dimitrov, Tiefu Cheng, Farah Shaikh, Christopher Pruitt, Michael Green, Kathleen Wilson, and Nuzhat Beg

ABSTRACT

Background: “Obesity epidemic” is a major threat to public health, being a major risk factor for numerous chronic diseases. More recently, findings of compromised immune function of the obese such as reduced vaccine efficacy further highlighted detrimental impact of obesity.

However, little is known in cellular mechanisms, linking impaired immunity and obesity.

Objectives: We investigated systemic inflammation and cellular immunity (antigen-stimulated intracellular cytokine production) in order to elucidate the cellular processes of compromised immunity in obese individuals.

Participants: Ninety-six lean, overweight and obese individuals volunteered.

Methods: Body mass index was used to identify overall obesity, and DEXA scan was used to determine %trunk and total fat. Plasma TNF levels were determined by immunoassay. Lipopolysaccharide (LPS)-stimulated monocytic intracellular TNF was assessed by flow cytometry.

Results: Blood levels of TNF (inflammation) and LPS-stimulated monocytic intracellular TNF levels (immune function) were negatively correlated ($r = -0.34$, $p < .01$). Obese participants showed higher TNF levels but lower monocytic TNF production than lean individuals ($p < .05$). Multiple regression revealed that higher BMI or %trunk fat were independent predictors of both higher plasma TNF and lower intracellular TNF production levels, controlling for covariates ($p' < .05$ to $.001$). Furthermore, 24-hr in vitro treatment of blood monocytes with rTNF suppressed LPS-stimulated intracellular TNF production.

Conclusions: Our findings suggest that chronic stimulation of immune cells through elevated levels of inflammatory cytokines is a cellular mechanism by which chronic inflammation compromises acute inflammatory responses necessary to resolve immunological challenge (e.g., flu virus) and thereby, impaired host defense in obesity.

#8. TIFFANY TRAN

CORRELATIONS BETWEEN FOUR MEASURES OF KYPHOSIS

CONFERENCE THEME

Chronic Disease

COLLABORATORS

D Wing, A Davis, N Bergstrom, JF Nichols, DM Kado

ABSTRACT

Background/Context: Hyperkyphosis is the excessive curvature of the thoracic spine that, when severe, can result in serious health consequences including earlier mortality. There are multiple ways to assess kyphosis, but the degree of agreement between measures is not well described.

Study Objectives: To assess the correlation between four commonly used measures of kyphosis.

Methods/Design: Four kyphosis measures were assessed in the same person, two done in the lying (L) and two in the standing (ST) position: 1) Cobb angle calculated from DXA (L) ; 2) Debrunner Kyphometer (DK) angle measured by protractor (ST); 3) Kyphotic Index (KI) calculated using an architect's flexicurve ruler (ST); and the 4) blocks method involving counting the number 1.7 cm blocks required to achieve a neutral head position (L). Pearson correlations coefficients (ICC) were used to determine the strength of the association between each kyphosis measure.

Settings and Subjects: 72 persons aged ≥ 65 were recruited from the San Diego community. Kyphosis measures were conducted at the Exercise and Physical Activity Resource Center (EPARC) at UC San Diego.

Results: Using the Cobb angle as the gold standard, the block method demonstrated the lowest correlation (ICC = 0.58, $p < 0.0001$), the Debrunner method had a moderate correlation (ICC = 0.61, $p < 0.0001$), and the kyphotic index had the highest correlation (ICC = 0.68, $p < 0.0001$). The correlation was strongest between the two standing measures (ICC = 0.76, $p < 0.0001$).

Conclusions: In older men and women, all 4 measures of kyphosis were significantly correlated with each other, whether assessed in the lying or standing position.

#9. YESSICA DIAZ-ROMAN

DIABETES MANAGEMENT CLASS UTILIZATION IN HISPANICS VS. NON-HISPANICS, BRFSS 2012

CONFERENCE THEME

Chronic Disease

COLLABORATORS

Lorena Martin, Benjamin J. Becerra, Dorothy D. Sears

ABSTRACT

Objective: The purpose of this study was to assess the participation in a diabetes self-management class among Hispanics with diabetes and Non-Hispanic Whites (NHW). This study compared Hispanics and NHW who took diabetes classes to help them manage their diabetes and assessed factors which may have an impact in the utilization of diabetes classes for effective self-management.

Research design and methods: We analyzed cross-sectional data from the 2012 Behavioral Risk Factor Surveillance System (BRFSS), focusing on the population subset of Hispanics and NHW adults ≥ 35 years of age with diabetes ($n=3,300$ and $n=35,344$, respectively).

Results: Our results revealed that Hispanics are 39.5% less likely to take a self-management diabetes class as compared to non-Hispanics with diabetes with an OR of 0.605 (0.56-0.65). After adjusting for age, sex, and income level, the OR (95% CI) for Hispanics versus non-Hispanics Diabetics that took a self-management class in diabetes was 0.632 (0.58-0.69) 0.42.3% of Hispanics and 54.7% of NHW took a diabetes class.

Conclusions: Our results suggest that disparities exist between the proportions of Hispanics and NHW who have taken a diabetes classes. Multidisciplinary health-care teams should incorporate community and cultural resources to provide self-management support for high risk and vulnerable populations and increase utilization of diabetes classes for effective self-management.

#10. AMANDA WILSON

ACTIVE LIVING RESEARCH: PROMOTING ACTIVITY-FRIENDLY COMMUNITIES

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

James F. Sallis, Carmen Cutter, Chad Spoon, Debra Rubio, Alexandra Mignano

ABSTRACT

Background/Contextual Information: Active Living Research (ALR) is administered by the University of California, San Diego and led by a trans-disciplinary program team with background in the fields of public health, planning, transportation and parks and recreation. Between 2001 and 2013, ALR was a national program of the Robert Wood Johnson Foundation (RWJF). During that time, we focused on awarding research grants to build the evidence base on policy and environmental changes that could encourage more physical activity. ALR supported \$28 million of grants led by investigators from 20+ fields and funded 230 studies that have produced about 400 papers.

Population of Interest: The goal of ALR is to support and share research that can promote daily physical activity for children and families across the United States. We place special emphasis on research related to children of color and lower-income children who are at highest risk for obesity.

Description of the Project/Intervention: ALR provides credible and action-oriented research results that address the root causes of childhood obesity and physical inactivity. With a focus on communities, active transportation, schools, and parks and recreation, ALR works with advocates, practitioners, policy-makers and other organizations interested in reversing the childhood obesity epidemic and promoting active living.

Policy Implications: The mission of ALR is to apply the lessons of research to ensure that solid evidence informs practices and policies to create communities that are active-friendly, healthy, environmentally sustainable and economically vibrant.

#11. AMANPREET SANDHU

ADDRESSING THE SHORTAGE OF PRIMARY CARE PHYSICIANS: OUTCOMES FROM TWO PROGRAMS AT THE UC SAN DIEGO SCHOOL OF MEDICINE

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Ramon Hernandez, Lourdes Rivera, Sandra Daley

ABSTRACT

Background/Contextual Information: A shortage of physicians practicing in disadvantaged communities is a contributor to the persistence of health disparities. The passage of the Affordable Care Act provides greater access to health insurance for low-income, uninsured individuals but there are concerns about the shortage of primary care providers and physicians. The Program in Medical Education – Health Equity (PRIME-HEq) and the Conditional Acceptance Program (CAP) were created at the UC San Diego School of Medicine in an effort to increase the number of students working in underserved communities.

Population of Interest: UCSD medical students

Description of the Project/Intervention: CAP trains students with a demonstrated commitment to community service. PRIME-HEq is a joint MD/Master’s program that trains students who plan to work with populations at risk for experiencing health disparities. PRIME-HEq and CAP students were tracked after graduation to determine whether or not they chose a primary care specialty, and whether or not they chose to work in a Medically Underserved Area/Population (MUA/P) or a Health Professions Shortage Area (HPSA). As of 2014 29 CAP students and 29 PRIME-HEq have graduated.

Policy Implications: Outcomes from the CAP and PRIME-HEq programs strongly demonstrate that supporting medical students who have demonstrated a commitment to community service and desire to address health disparities can lead to a higher percentage of physicians choosing to work in underserved communities.

#12. CAMILLE NEBEKER

MEASURING RESEARCH COMPETENCIES IN COMMUNITY HEALTH WORKERS/PROMOTORES

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Jasmine Martinez, Daniella Vital, Elizabeth Mejia Booen, Michael Kalichman, Blanca Pacheco, Sheila Castaneda, Rebeca Espinoza

ABSTRACT

Community Health Workers (CHWs) are increasingly involved in planning and implementing research; however, few receive formal academic training in research methods and ethical research practices. Lacking appropriate understanding of the scientific method and associated ethical practices may increase risk to participants and compromise data integrity. The Project BRIC (Building Research Integrity in the Community), team is developing and testing an assessment tool to evaluate competencies that project managers and principal investigators have identified as essential for lay-research staff and volunteers. This poster presents findings from Phase 1 of the BRIC Inventory (RRI) development process, which involved completion of a web-based survey by 19 researchers who engage CHWs in health research. The survey included subject demographics, experience working with CHWs and ranking of 68 research competency areas using a 5 point scale where 1= "Definitely Not Important" and 5= "Definitely Important." The competency items were generated from review of a research ethics curriculum entitled, "Training in Research Ethics and Standards: A Self-study Guide for Promotores" and included knowledge or skills associated with human research protections. Results indicate that participants engaged CHWs in research planning (42%), research conduct (e.g., recruitment, intervention delivery and data collection (100%) and, data analysis and/or reporting of result (42%). Using qualitative analysis, research competency items were coded and grouped as being high, medium or low priority. Distribution of competency ratings was also organized based on investigator involvement of CHWs across the continuum of Community Based Participatory Research (e.g., planning, conduct and reporting of research).

#13. CHAD SPOON

DESIGNING COMMUNITIES FOR ACTIVE LIVING CREATES DIVERSE CO-BENEFITS

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

James Sallis, Chad Spoon, Nick Cavill, Jessa Engelberg, Klaus Gebel, Debbie Lou, Mike Parker, Christina Thornton, Amanda Wilson, Carmen Cutter, Ding Ding

ABSTRACT

Background: To reverse the global epidemic of physical inactivity, many groups recommend creating "activity-friendly environments." Such environments may have other benefits, beyond facilitating physical activity, but these potential co-benefits have not been well described.

Objectives: To explore a wide range of literature and conduct an initial summary of evidence on co-benefits of activity-friendly environments. **Methods:** An extensive but non-systematic review of scientific and "gray" literature was conducted.

Setting: Five physical activity settings were defined: parks/open space/trails, urban design, transportation, schools, and workplaces/buildings. Several evidence-based activity-friendly features were identified for each setting. Six potential co-benefits were searched: physical health, mental health, social benefits, safety/injury prevention, environmental sustainability, and economics. A total of 418 higher-quality findings were summarized.

Results: Specific environmental features with the strongest evidence of multiple co-benefits were park proximity, mixed land use, trees/greenery, accessibility and street connectivity, building design, and workplace physical activity policies/programs. The highest percentage of environment feature by co-benefit combinations categorized as "strong" positive evidence was found for urban design (27%) and parks/trails (17%) settings. The best evidence of co-benefit was found for environmental sustainability. The highest percentage of combinations with "insufficient" evidence was found for transportation (71%) and building/workplace (69%) settings. Across all settings, only one environmental feature had strong evidence of an unfavorable outcome.

Conclusions: The exploration revealed substantial evidence that designing community environments that make physical activity attractive and convenient is likely to produce additional important benefits. Evidence of co-benefits could be of interest to decision-makers, but there are many gaps in evidence.

#14. ELLE MARI

BUILDING CAPACITY & COLLABORATING FOR ACTION IN CALIFORNIA'S INLAND DESERT

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Blanca Melendrez, Michelle Zive, Reba Meigs, Rachel Kramer, Dan Bennett, Karemi Alvarez, David Martin

ABSTRACT

The Inland Desert Training & Resource Center (TRC), housed at UC San Diego's Center for Community Health, is a newly formed resource hub that provides learner-centered, multi-layered capacity building services for public health professionals in Inyo, Imperial, Riverside, San Bernardino, and San Diego Counties to support the local implementation of nutrition education and obesity prevention work. The TRC serves as technical advisors on evidence-based, best practice-based, and innovative strategies and techniques to improve health outcomes for California's low-income families and low-resource neighborhoods. This work is done through training and technical assistance, collaborating for action through a multi-county coalition, and providing expertise and leveraging resources for media and public relations, outreach and coordination. A sample of dynamic workshops the TRC has provided include: Community Engagement: A Food Justice Lens, Opportunities for Policy, Systems, and Environmental Changes in Early Childhood Settings, Seeding the Neighborhood: Strategies to Promote Urban Agriculture, and Faith-Based Wellness. The TRC's work is pivotal in that it actively tests and informs the development of a new statewide model to provide localized, tailored capacity building services for nutrition education and obesity prevention grantees. The TRC is in the unique position to unite and elevate best practices and successes throughout a geographically, culturally, and politically diverse swath of Southern California.

#15. HYMIE PAYNE

DEVELOPMENT OF A WORKSHOP SERIES FOR COMMUNITY-BASED PARTICIPATORY RESEARCH: CREATING A COMMON LANGUAGE IN PARTNERSHIP (CCLP)

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Susan M. Shinagawa, Lynda Barbour, Syvera Hardy, Jonathan Lepule, Lolita V. Lizarraga, Elizabeth L. Klonoff, Ana M. Navarro

ABSTRACT

Background: Community-Based Participatory Research (CBPR) represents an important tool to advance health equity. Preparing stakeholders in the implementation of proper CBPR requires special attention. The Creating a Common Language in Partnership (CCLP) workshops are designed to foster CBPR training and the development of projects adhering to high CBPR standards.

Study Objectives: To determine whether the CCLP workshops represent a viable program to promote knowledge of CBPR principles as well foundational teamwork necessary for successful research partnerships.

Methods: Starting in 2012, community and academic partners in the San Diego and Imperial Valley region with interests in health equity have attended biannual CCLP workshops. Pre-workshop and post-workshop questionnaires assessed self-reported levels of familiarity with CBPR, research, community service, and ratings of workshop logistics in 2013 and 2014. McNemar's tests were conducted to assess pretest-posttest changes.

Setting and Subjects: Guided by a professional facilitator, the workshops are structured as 3.5-hour events that include network opportunities as well as interactive joint training activities. On average, 61 participants of diverse background, disciplines, and research interests attended the workshops.

Results: Compared to pretest, participants self-reported a statistically significant ($p < .05$) increase at posttest in knowledge about community services, research, and CBPR. The vast majority of attendees reported that their expectations of the workshop were met.

Conclusions: The initial results indicate that the workshops are well received and that they represent a promising strategy to foster CBPR in the local community. Determining whether CCLP participation affects engagement in quality CBPR projects should be the focus of future research.

#16. ILIANA MOLINA

UCSD EYEMOBILE FOR CHILDREN: MODEL VISION SCREENING PROGRAM

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Silma Zuniga, Jovanna Barajas, Eric Hernandez, Lilly Lee, Stephanie Cortes, Eric Vargas, Stephanie Le, Austin Lee

ABSTRACT

The UCSD EyeMobile for Children is a mobile vision clinic dedicated to providing preschool children in San Diego County with the vision they need to succeed in school and in life. This model public health program addresses the access to barriers to vision care faced by undeserved young children and their families ensuring no children is left untreated. In 2011, UCLA collaborated with UCSD and adopted the EyeMobile for Children program. Since then, UCI and UCSF have followed in the footsteps of UCSD and begun their own EyeMobile for Children.

#17. KATE MURRAY

BRIDGING GAPS IN REFUGEE HEALTH THROUGH THE REFUGEE RESETTLEMENT PRACTICUM

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Ute Maaschke, Ashleigh Montgomery

ABSTRACT

Background/Contextual Information: The refugee resettlement practicum was developed as a bridge between UC San Diego and local resettlement organizations to address refugee communities' most pressing public health needs collaboratively. The practicum included guest lecturers, a tour of a resettlement agency, and key informants for the students to interview. Students designed and implemented a public health intervention for a target refugee community.

Population of Interest: The program involved undergraduate UCSD students, local resettlement and refugee-serving community-based organizations.

Description of the Project/Intervention: Through classroom activities, students were introduced to refugee resettlement and public health needs and challenges for newly arriving communities. Students worked in small groups to conduct needs assessments and partnered with community experts in refugee resettlement in the development of their programs. Students researched and developed a culturally appropriate public health intervention and disseminated it to refugee-serving organizations. The final public health interventions targeted local Iraqi and Burmese communities, which constitute a large percentage of the San Diego resettlement program. Products included a cookbook (available in English and Arabic); a mind, body, and spiritual wellness guide to raise awareness and reduce stigma around mental health; and an educational pamphlet identifying warning signs and potential consequences of substance abuse.

Policy Implications: Resettlement policies should actively support public-private partnerships to support community health needs. This practicum provides a template for other public-private partnerships to address the constantly changing public health needs of newly arriving refugee cohorts.

#18. KATHERINE GARCIA

PROGRAM IN MEDICAL EDUCATION – HEALTH EQUITY (PRIME-HEQ): TRAINING FUTURE PHYSICIANS TO CARE FOR UNDERSERVED COMMUNITIES AT RISK FOR HEALTH DISPARITIES

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Lindia, Willies-Jacobo, Tamara Powell, Alexis Lopez, Jacob Bailey

ABSTRACT

Background/Context: Physician workforce shortages in California are growing rapidly, with the state facing a predicted shortfall of up to 17,000 physicians by 2015. The growing physician shortage will make it increasingly difficult for vulnerable populations to access equitable care from practitioners prepared to meet their needs. In response to this anticipated shortfall, the University of California’s medical schools are working to implement and evaluate programs to equip physicians with a distinct skillset for working with disenfranchised populations. One of the important components of this effort was the creation of a distinct training program known as the Program in Medical Education (PRIME). PRIME was established to prepare future physicians to clinically serve and publically advocate for patients as well as communities through training in: culturally sensitive clinical skills; the socioeconomic determinants of health disparities; and community engagement.

Study Objectives: For the last several years, each University of California medical school has developed their own unique PRIME program. The authors of this poster represent faculty, students, and staff from the University of California, San Diego (UC San Diego) PRIME program, which is known as PRIME Health Equity (PRIME-HEq) due to our focus on the difference in the quality of health and health care across different populations. The study objectives is to: 1) outline PRIME’s history and the model of PRIME medical education that has evolved at UC San Diego; 2) report PRIME-HEq’s early program outcomes; and 3) describe future directions for our program.

Methods/Design: Description of PRIME’s history and the model at UCSD SOM PRIME Health Equity. Analysis of students selections, demographics, curriculum, community engagement projects, scholarly activities and Master’s Degree Year data will be provided. Initial comparison to regular UCSD SOM MD applicants residency and community engagement projects.

Setting and Subjects: Medical student participants in the UCSD SOM PRIME-HEq program from 2007-2014.

Results: Initial program outcomes will be delivered with an emphasis on Residency Training and Contributions to Diversity. We have graduated our first two PRIME-HEq cohorts. Upon entering medical school, our PRIME-HEq students commit to caring for underserved populations,

however, pursuing training in a primary care specialty, while desirable, is by no means mandatory. Of the 21 students who have graduated, 76% have pursued residencies in primary care, while 24% have pursued other specialties including emergency medicine, orthopedics, and general surgery. 76% are currently training in California. Also, one of PRIME-HEq's greatest achievements has been its ability to increase diversity within the School of Medicine. The increased application rates from students self-identifying as coming from URM backgrounds translate to a greater compositional diversity within the program. Since 2008 the percentage of URM students has been dramatically greater in PRIME-HEq than that of the overall class.

Conclusions: Disparities in health continue to be well documented for many segments of the United States population, including racial and ethnic minorities, sexual minority communities, rural and farming communities, and people with disabilities. Because the population of California is more diverse than other parts of the country, there is a compelling need to develop health care providers with the skills, knowledge, attitudes and behaviors that will allow them to successfully increase health equity and eliminate health disparities. PRIME-HEq endeavors to fulfill these goals. While we will not know the full impact of our program for years to come, we have had some distinct successes. The majority of our graduating students are pursuing training in primary care, which will contribute to filling the need for more primary care providers. The overarching mission of UC PRIME is to care for California's underserved populations, and most of our graduates are pursuing residency training in California. While it remains unclear how students will apply the Master's degree to their future careers, we are confident that the skill set acquired during this year will serve to better inform how they practice medicine. As the Affordable Care Act takes full effect and increased segments of the population obtain health insurance coverage, programs such as PRIME-HEq become even more essential, all in a climate of tenuous funding streams. Maintaining the vitality of these programs is of utmost importance if we are to continue to diversify the health workforce and provide culturally sensitive quality care to California's neediest populations.

#19. KIM TRAN

DEVELOPING HEALTH FAIR EDUCATIONAL BOOTHS FOR LOW-INCOME STUDENTS IN GRADES 6-12 BY TARGETING THE FOUR PILLARS OF HEALTH

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Sara Mcmenamin, Kate Murray

ABSTRACT

Description of the Project: The UC San Diego Undergraduate Public Health Practicum seeks to develop educational booths for a local San Diego charter school, which will promote the four pillars of health including physical, mental, emotional, and social health.

Background/Contextual Information: The Preuss School at UC San Diego is home to 846 highly diverse students who come from low-income and medically underserved communities of San Diego. All of the students will be the first in their family to attend college; therefore, it is especially important for them to develop a healthy lifestyle through which they can thrive academically. The health fair is novel because it is the first to be hosted at Preuss.

Population of Interest: The health fair targets students in grades 6-12 and their family members, many of whom are minorities of Hispanic, African American, and Asian/Indo-Chinese races.

Intervention or program: There are six educational booths developed, each covering at least one pillar of health. Based on the social cognitive theory, the main learning objectives of the booths include helping students and their family to: (1) increase their health knowledge and (2) increase their self-efficacy to practice healthy habits at school and at home.

Policy Implications: The evaluations for the pilot health fair educational booths could be used to justify the establishment of the health fair as an annual event at the Preuss School.

#20. LINDA HILL

IMPROVING DRIVING SAFETY THROUGH EDUCATION AND TRAINING: A MULTI-DISCIPLINARY APPROACH

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Jill Rybar, Jana Johns, Angelica Ng-Barrerra

ABSTRACT

Background: Motor vehicle crashes are a leading cause of death in the US with 33,561 fatalities in 2012. Medically impaired and distracted drivers are major contributors to avoidable crashes. While medical impairments can occur at any age, older drivers are more likely to have chronic disease and take daily and potentially impairing medications. As the US population ages, the number of older drivers will continue to increase; by 2020 there will be an estimated 40 million US drivers aged 65 and older. Crash risk increases with age, and approximately 500 older drivers are injured and 15 killed in crashes each day in the US. Distracted driving joins drunk/drugged driving and speeding as a leading cause of collisions. The National Safety Council (NSC) has reported that 26% of all crashes in 2012 involved drivers either talking or texting on a cell phone. Furthermore, there were an estimated 3,328 deaths and 421,000 injuries due to distraction-affected crashes.

Methods: The UC San Diego Training, Research and Education for Driving Safety (TREDS) program provides training to physicians, law enforcement officers, and the lay public on older driver safety and distracted driving. Since 2005, over 8000 clinicians, 3500 officers, and 6000 members of the public have been trained. Evaluation data includes pre/post testing, and three-month post training follow-up.

Results: 1) Professional training: Training has been found successful in changing knowledge, attitudes and practice for physicians and law enforcement (LE). On physician post-testing, confidence to screen increased from 25% to 80%, and 6 weeks later 84% said their driving counseling practices had increased. LE professionals reported 90% likely to use the roadside screening tool provided in training, and 93% said the training and tool would help with DMV reporting. 2) Distracted driving: In post-testing, 88.5% of participants reported motivation to change their behaviors, and in three-month post-training follow-up surveys participants reported multiple changes to driving behaviors, including not taking calls, not making calls, speaking with friends and family about distracted driving, and changes to work policies.

Conclusions: Driving safety is an important public health issue. Targeted educational interventions have been successful in changing behavior.

#21. SHANA WRIGHT BRUNO

LACTATION SUPPORTIVE ENVIRONMENTS:IMPROVING LACTATION POLICIES IN BUSINESSES THROUGHOUT SAN DIEGO COUNTY

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Anne Kashiwa, Shana Wright Bruno

ABSTRACT

Background/Contextual Information: Breast milk is the ideal first food for newborns, and the benefits of breastfeeding have a lifelong impact on health, including significantly lowering their risk for childhood illnesses and chronic diseases such as obesity, diabetes, and asthma.

Population of Interest: Working mothers have lower breastfeeding rates and shorter duration of breastfeeding compared to non-working mothers. The focus of this project is on working mothers in varying industries such as hotels, retail, and casinos.

Description of the Project/Intervention: In October 2010, tools were created to support 15 low income businesses and 10 other businesses in developing and implementing workplace lactation policies with funding from Communities Putting Prevention to Work, the County of San Diego Health and Human Services Agency, in collaboration with UC San Diego-Center for Community Health. This comprehensive, evidenced-informed approach to establishing lactation supportive environments in businesses utilized a framework including direct buy-in from business owners and human resource decision makers, collaboration with multiple stakeholders, development of practice-based models, and provision of hands-on technical assistance.

Policy Implications: The project is being extended, under First 5 funding, to work with an additional 30 businesses. Key partnerships have been established and expanded including the Women, Infants and Children Program and the San Diego County Breastfeeding Coalition. The policy implication of creating breastfeeding-friendly businesses contributes to improving rates of initiation and duration of breastfeeding which impacts the health of employees and future generations.

#22. TING CHOW

COMPLETE STREETS FOR HEALTHY COMMUNITIES

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

James F. Sallis

ABSTRACT

Complete Streets are streets that are accessible and safe for all modes of transportation and all types of people. The goal of Complete Streets is to improve the quality of cities by focusing on street design in order to promote transportation that induce physical activity. There is a special interest in increasing the number of Complete Streets in Southeastern states because of the high prevalence of obesity, diabetes, and cardiovascular disease in the Southeast. In this special studies project, information from Smart Growth America (SGA) website was summarized and analyzed to assess trends in Complete Streets policy adoption, particularly in Southeastern States. In 2005, there was only 31 Complete Streets policies; however, by 2013, there was over 600 Complete Streets policies in the United States. 17% of Complete Streets policies in the United States are in Southeastern States which is relatively proportional to the 18% of states belonging in the category of Southeastern States. However, there is a greater percentage of people living in Southeastern States, 21%, than the percentage of Complete Streets policies in the Southeast, 17%. This percentage difference indicates that there are fewer Complete Streets policies per person in the Southeast compared to the rest of the United States. In order to increase implementation and success of Complete Streets in all states, particularly in the Southeast, different departments, including public health and law enforcement, must come together to ensure that policies are implemented and followed. The need to consider all aspects of street designs and their impacts on health mirrors the need to consider all aspects of society, including economics, law, and even aesthetics, in order for public health programs and implementation to be successful.

#23. KAREMI ALVAREZ & LAKEYSHA SOWUNMI

FAITH-BASED WELLNESS PROGRAM

CONFERENCE THEME

Community Health Programs and Policy

COLLABORATORS

Karemi Alvarez, Lakeysha Sowunmi

ABSTRACT

The Nutrition Education and Obesity Prevention (NEOP) Faith-Based Wellness Program partners with numerous San Diego County faith-based organizations to deliver free nutrition education and physical activity programming for children, adolescents and adults in order to reduce the risk of diet-related chronic diseases – including obesity, heart disease, hypertension, type 2 diabetes and cancer – among SNAP-ed eligible families, predominantly those in Latino, African American and East African communities. Led by Healthy Works and the University of California, San Diego (UCSD) Center for Community Health, this program is made possible through the California Department of Public Health's Nutrition Education and Obesity Prevention Branch, with funding from USDA SNAP-Ed, known in California as CalFresh. UCSD has over 15 years of experience engaging with numerous San Diego County faith-based organizations. Currently, through Healthy Works and UCSD Center for Community Health, the Faith-Based Wellness Program promotes environments that support healthy lifestyles in faith-based settings by implementing policy, systems and environmental changes, creating physical activity opportunities, promoting nutrition education, and improving health outcomes and food access for San Diego County's most vulnerable families through a comprehensive faith-based wellness approach. The Faith-Based Wellness Program implements evidence-based and culturally sensitive nutrition education and establishes meaningful partnerships with San Diego County faith-based organizations regardless of faith. Collaborations with other stakeholders that impact community health, such as businesses, direct health service providers, decision makers, community organizations and other community partners, are essential to the success of improving the congregations' health.

#24. GABRIEL ANAYA

TRENDS IN MORTALITY FOR NON-COMMUNICABLE DISEASES IN MEXICAN BORDER MUNICIPALITIES: 1998-2012 GLOBAL BURDEN OF DISEASES DATA

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Al-Delaimy W, Anaya G, Floca M

ABSTRACT

Introduction: Although improvements in health infrastructure and coverage in the border area of Mexico reflects national trends, the demographic, social and economic dynamics differ from the rest of the county. The aim of this analysis is to assess the differences in health outcomes in the border region as compared to the rest of Mexico by measuring mortality rates for a subset of non-communicable diseases (NCDs). Quantifying these differences is a first step to gaining a better understanding of the social determinants of health along the border.

Methods: In this cross-sectional time-trend analyses, we used a dataset of the seven and a half million deaths registered in Mexico from 1998 to 2012. The Global Burden of Disease (GBD) methodology was applied to recode and reclassify causes of premature death based on ICD-10 codes included in the original data. Using this data, we calculated age and gender-specific mortality rates and standardized on the national population. Municipalities were categorized as “border” municipalities if they had borders with the U.S. Southern border or as “non-border” municipalities if they do not share a border with the U.S.

Results: Out of the 7.5 million death certificates analyzed, 74% of mortality cases were due to NCDs, 13% to communicable diseases (CMD) and 13% to injuries (INJ). Mexico has an average of 502,831 premature deaths per year. Within NCDs, “Cardio and Circulatory Diseases” (CCD) was the highest cause of death in both border and non-border regions, followed by Diabetes, Urinary, Blood and Endocrine diseases (DUBE), and Cancer. There has been a consistently increasing trend in mortality rates from these diseases between 1998 and 2012 across all municipalities. Our analysis showed a statistical difference ($p < 0.001$) of higher mortality rates for the three NCDs in the border region compared to mortality rates from these diseases in the rest of the country.

Conclusion: Based on mortality rates in Mexico, the northern border region population is suffering higher rates of mortality from the main NCDs of cardiovascular diseases, diabetes and cancer. This might be attributed to the higher socioeconomic status and industrialization of that region bringing with it the common NCDs risk factors of more developed countries. Interestingly we have observed that deaths due to NCDs in the rest of the country is rapidly growing compared to the border and reaching that of the border region NCDs mortality in the year 2012.

#25. ABDUR RAHMAN AMIN

ADDRESSING MENTAL HEALTH NEEDS OF IRAQI REFUGEES IN THE UNITED STATES AND ITS SIGNIFICANCE IN THE GLOBAL HEALTH LANDSCAPE

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Dr.Wael al-Delaimy

ABSTRACT

Background/Context: The inequality of resources combined with higher populations of people living in low middle income countries (LMIC) have led to the global crisis of a treatment gap in which 80% of the world population has less than 20% access to mental health services/resources. As the field of global mental health is quite broad, one area of study that is not well documented is the mental health pertaining to refugee populations.

Study Objectives: The objective was to conduct a comprehensive literature review to assess the area of contemporary refugee mental health in the United States. Particular emphasis is placed on the Iraqi refugee community as it's quite pertinent to our local regional community with their growth post-2004.

Methods/Design: The design of this study was to search for criteria on the overall landscape of refugee mental health. A particular emphasis was placed on assessing some current tools, methods of testing/gathering data, interventions and types of treatments currently being used in practice.

Setting and Subjects: The subjects of interest were contemporary Iraqi refugee population that relocated to the United States following the 2004 War.

Results: The few studies that have been conducted show higher prevalence rates of anxiety and depression. PTSD and trauma related ailments are also apparent. Themes such as resilience levels in refugees and the problem of under-reporting/misreporting symptoms are issues that must be addressed.

Conclusions: Very few studies have been dedicated to the study of refugee mental health. They are often lumped together with general health surveys which undercut the importance of addressing mental health needs, especially in vulnerable communities, such as resettled refugees. More emphasis needs to be placed in this field for future progress.

#26. CATHERINE LARSEN

EVALUATION OF HARMFUL CHEMICALS FOUND IN DUST COLLECTED FROM HOMES IN LOS LAURELES CANYON, TIJUANA MEXICO

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Wael Al-Delaimy, Gabriel Anaya, Keith Pezzoli

ABSTRACT

Indoor dust can contain chemicals that affect the endocrine system, known as endocrine disrupting compounds. These chemicals include: bisphenol A and phthalates, commonly found in household products including plastics; triclosan, an antibacterial agent commonly found in personal care products, and; heavy metals, commonly found in industrial wastes, vehicle emissions, paints and treated woods. In fulfillment of UCSD Superfund Community Engagement Core's aim of identifying, prioritizing and addressing environmental health hazards and issues in the San Diego-Tijuana city-region, we conducted a small study to collect indoor dust and measure concentration levels of phthalates, triclosan; bisphenol A, and heavy metals from two neighborhoods in Los Laureles Canyon, San Bernardo and Cardenas, as a preliminary study for a much larger environmental epidemiological study. We surveyed residents and collected dust from 46 houses using a Dustream dust collector filter attached to the end of a cordless vacuum. Heavy metals, triclosan, bisphenol A, and phthalates were detected in all samples. Average dust concentration levels, including the range of concentration levels of each endocrine disrupting compound and heavy metal will be presented. This is the first study of this kind conducted in Mexico. This poster will highlight the study methodology, dust analysis, and statistical comparisons of the chemicals.

#27. CHEYENNE ROSE BUTCHER

RESIDENTIAL DISTANCE TO FLOWER PLANTATIONS IN RELATION TO A MARKER OF PESTICIDE EXPOSURE

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Jose R. Suarez-Lopez, Cheyenne R. Butcher, David R. Jacobs Jr., Bruce H. Alexander, John H. Himes

ABSTRACT

Background: Exposure to acetylcholinesterase (AChE) inhibiting pesticides (i.e. organophosphates and carbamates) has been shown to have a multitude of negative health effects in humans. Adults and children residing in agricultural communities have been found to be at increased risk of exposure due to off-target drift of pesticides from farms. In the present study, we hypothesized that greater proximity of children's residences to agricultural plantations was associated with lower AChE activity (marking greater pesticide exposure) in children.

Methods: Children of 4-9 years of age living in the agricultural county of Pedro Moncayo, Ecuador were examined. Blood AChE activity and hemoglobin concentration were measured using the EQM Test-mate system, and geographic coordinates of flower plantations and homes were obtained using global positioning system receivers. Linear regression models adjusted for age, sex, race, income, maternal education, height-for-age, hemoglobin concentration, date of examination, and flower worker cohabitation.

Results: The mean (SD) of AChE activity was 3.14 U/ml (0.49 U/ml) and distance of homes to the nearest flower plantation was 448m (343m). Home distance to plantations was positively associated with AChE activity (difference of AChE activity per SD increase of distance (β_{sd})= 0.07 U/ml, 95%CI: 0.02-0.11). The association was strongest among participants living within 185m (1st quartile) of a plantation (β_{sd} = 0.59 U/ml, 95%CI: 0.05-1.13).

Conclusions: Proximity of homes to flower plantations was positively associated with a marker of pesticide exposure especially among participants living within 185m. Added precautions to reduce pesticide exposures among children living in close proximity to plantations would be prudent.

#28. ELISEA AVALOS

RISK FACTORS OF MULTI AND EXTENSIVELY DRUG RESISTANT TUBERCULOSIS IN A MULTISITE STUDY: A CASE COHORT STUDY

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Richard Garfein, Donald Catanzaro, Theodore G. Ganiats, Antonino Catanzaro, Stephanie Brodine, John Alcaraz, Timothy Rodwell

ABSTRACT

Objectives: To analyze the prevalence and clinical and epidemiologic characteristics of multi and extensively drug resistant tuberculosis (M/XDRTB). Mycobacterium tuberculosis (Mtb) isolates from Mumbai, India; Chisinau, Moldova; and Port Elizabeth, South Africa were selected due to the high documented risk for DRTB and the ethnic diversity of these regions.

Methods: A case cohort study was conducted from May 2012 to August 2013. Mtb strains isolated from patients were subjected to drug susceptibility testing (DST). Cases were defined as patients with M/XDRTB. Control subjects were patients selected from the cohort during the same period who were pan-susceptible.

Results: Among the 838 patients enrolled, the overall prevalence of multidrug-resistant TB (MDRTB) and extensively drug resistant tuberculosis (XDRTB) were 63.6% (n = 533) (61.3% of newly diagnosed patients and 64.6% of previously treated cases) and 9.5% (n = 80) (5.4% of newly diagnosed patients and 11.4% of previously treated cases), respectively. A multiple logistic regression analysis showed that those less than 25 years of age (OR 1.9, 95%CI 1.1 to 3.3), city of residence (Mumbai, India (OR 33.1, 95% CI 18.8 to 58.3) Chisinau, Moldova (OR 13.7, 95%CI 7.1 to 26.1)), higher education (OR 2.5, 95%CI 1.5 to 4.1), ever been hospitalized (OR 1.9, 95%CI 1.2 to 2.9) and having been previously treated with TB (OR 1.8, 95% CI 1.1-2.8) were associated with developing M/XDRTB. An interaction was also observed between city of residence and having been previously treated for TB; however, the multiplicativity and additivity between these risk factors were not significant.

Conclusions: The results of this study reflect the growing drug resistance situation in Mumbai, India; Chisinau, Moldova; and Port Elizabeth, South Africa. Thus, the timely detection of drug resistance is of great importance to optimize treatment and to direct infection control measures to prevent the transmission of M/XDRTB.

#29. ERIKA REAMES

WOMEN'S HEALTH AND SEXUAL EDUCATION IN SIRUVANI, TAMIL NADU, INDIA: A STUDENT-RUN PUBLIC HEALTH PROGRAM

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

ABSTRACT

CORDUSA@UCSD, a chapter of the Indian non-governmental organization (NGO) Chinmaya Organization for Rural Development (CORD), was established at the University of California, San Diego (UCSD) in 2012 and offers undergraduate students of varying disciplines the opportunity to design and implement sustainable projects. The chapter "CORD Siruvani" specifically serves the Siruvani region of Tamil Nadu, India, a rural region composed of five different villages.

Through previous academic research, interviews with the head of CORD Siruvani, Dr. Meera Krishna, and the head of the Siruvani clinic, and regional statistics provided by the clinic, it became clear that there were few to no programs in the region that aimed to provide women with basic health and sexual education. With extremely high rates of anemia amongst women and infants, low usage and knowledge of contraceptive options and family planning, and little education on STDs/HIV, construction of a women's health program was heavily supported by CORD Siruvani.

To further explore the issue of women's health education in the region, interviews with young girls and women ages 13-45 from the five villages were conducted. Questions ranged from basic knowledge of contraceptives, STDS/HIV, etc. to anemia, sanitary practices, and menstrual health. Additionally, each participant was asked if they would want basic health and sexual education; an overwhelming majority affirmed they would want both these options for themselves and their families. Through a community-based participatory approach (CBPA) and with the support and approval of CORD Siruvani, parents, and local government and private primary schools, undergraduate students from UCSD have been conducting research and structuring a women's health education program. This program will include curriculum on anemia, STDs/HIV, government funded and available contraceptive options, menstrual health, and other general healthy living practices.

The basic health and sexual education curriculum was drafted and approved by the principles of the schools and Dr. Meera Krishna. On a return trip in September of 2014, undergraduate students who constructed the curriculum as well as other students interested in women's health implemented the public health program. In an effort to make this educational program as sustainable and accessible as possible, one female volunteer from each village has been selected to actively teach the curriculum in women's support groups, at village community

centers, and upon request in accordance with the needs of their respective village. In the first implementation of this program, surveys were given in the schools and the women's groups before and after the class to assess the improvement in the understanding of these health issues and of the curriculum and program as requested.

Through the usage of a CBPA, partnering with CORD Siruvani , local schools, and women's support groups in Siruvani, undergraduate students interested in global health gained and will continue to gain invaluable experiences working with women and young girls from a rural community, learn how to structure and implement a public health project, assess the impact, and ultimately foster professional and personal skills that will play a role in their future academic and career interests.

#30. JESSE NODORA

ACCULTURATION, BEHAVIORAL FACTORS, AND FAMILY HISTORY OF BREAST CANCER AMONG MEXICAN AND MEXICAN-AMERICAN WOMEN

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Renee Cooper, María Elena Martínez, Gregory Talavera, Patricia Thompson, Ian K. Komenaka, Melissa Bondy, Abenaa Brewster, Adrian Daneri-Navarro, Maria Mercedes Meza-Montenegro, Luis Enrique Gutierrez-Millan

ABSTRACT

Introduction: Incidence rates for breast cancer are higher among Mexican-American (MA) women in the US than women living in Mexico. Studies have shown higher prevalence of breast cancer risk factors in higher vs. lower acculturated Hispanic/Latina women in the US.

Methods: Data were collected from 1,201 recently diagnosed breast cancer patients living in Mexico (n=581) and MAs in the US (n=620). MA participants were categorized into three acculturation groups (Spanish dominant, bilingual and English dominant) according to responses to an 8-item language acculturation scale, while women living in Mexico were used as the reference group. Prevalence of behavioral risk factors and family history of breast cancer were compared among the acculturation groups adjusting for age at diagnosis and education level.

Results: In the final adjusted models, bilingual and English-dominant MAs were significantly more likely to have a body mass index > 30 kg/m², consume more than one alcoholic beverage a week, and report having a family history of breast cancer when compared to women living in Mexico. All three US acculturation groups were significantly more likely to have low total energy expenditure (<533 kcal/day) than women in Mexico. English-dominant women were significantly less likely to smoke cigarettes than the Mexican comparison group.

Conclusions: Interventions and public health policies may benefit from considering acculturation and distributions of behavioral risk factors and family history of breast cancer when targeting health programs and campaigns to Mexican-American and Mexican women.

#31. KRISTEN GUIRGUIS

HUMAN HEALTH IMPACT OF CALIFORNIA HEAT WAVES

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Alexander Gershunov, Alexander Tardy, Rupa Basu

ABSTRACT

Collaborative research between UCSD, California EPA, and the San Diego office of the National Weather Service investigated the health impacts of recent heat waves in California. By using canonical correlation analysis applied to daily maximum temperatures and morbidity data in the form of unscheduled hospitalizations from 1999 to 2009, 19 heat waves spanning 3–15 days in duration that had a significant impact on health were identified. On average, hospital admissions were found to increase by 7% on the peak heat-wave day, with a significant impact seen for several disease categories, including cardiovascular disease, respiratory disease, dehydration, acute renal failure, heat illness, and mental health. Statewide, there were 11,000 excess hospitalizations that were due to extreme heat over the period, yet the majority of impactful events were not accompanied by a heat advisory or warning from the National Weather Service. The temperature threshold at which an impact is seen varies by subregion and timing within the season. These results suggest that heat-warning criteria should consider local percentile thresholds to account for acclimation to local climatological conditions as well as the seasonal timing of a forecast heat wave. Given that heat waves are expected to become more frequent and more severe, it is crucial to understand the impact on human health now so public health officials can respond effectively and plan adequately for the future.

#32. MAXIMO R. PRESCOTT

HEALTH IMPLICATIONS OF BIOMASS FUELS FOR COOKING IN THE DEVELOPING WORLD: A REVIEW

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Wael Al-Delaimy

ABSTRACT

Background/Context: 4.3 million die every year from exposure to household air pollution. The vast majority of those deaths occur in the developing world, where it's estimated that nearly three billion people continue to rely on solid biomass fuels for cooking.

Objective: To conduct a review on the association between biomass fuel use during cooking and its health consequences.

Design: A literature search was conducted on PubMed and Google Scholars on recent randomized controlled trials and observational epidemiological studies that reported associations between solid biomass fuel use and health consequences. Specifically, the conditions that were targeted included: acute and chronic respiratory conditions (COPD, ALRI, TB, pneumonia, lung cancer) and neonatal complications (low birth weight, child mortality). For a study to be included for analysis, the study must have meet the following criteria: sufficient participant size, published between 2009-2014, measurement of a specific health outcome, and been conducted in a developing country.

Setting/Subjects: Those most at risk for the health consequences associated with biomass use are often women and children, who are frequently exposed to the resulting household air pollution during cooking.

Results: All health outcomes that were included in our final analysis determined solid or biomass fuel use to be a risk factor for their respective health consequence under study. However, most studies relied on survey data to assess exposure levels, and a lack of reliable biomarkers for the assessment of exposure in developing countries was apparent.

Conclusion: Upon review of these studies, a strong need for more reliable and field-reliable biomarkers for the measurement of exposure became evident. Similarly, the effectiveness of improved cook stove interventions was inconclusive. Future studies are needed to clarify the effectiveness of improved cook stoves on reducing household air pollution and detrimental health outcomes.

#33. MELAWHY GARCIA

TOILET TO TAP: QUALITATIVE STUDY TO ASSESS WATER QUALITY AND SANITATION SERVICES TO INFORM THE IMPLEMENTATION OF A NOVEL WASTE WATER INITIATIVE IN RURAL MEXICO

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Linda Llyoid, Orianna Bretschger, Hala Madanat, Miguel Fraga

ABSTRACT

Background: The majority of those without improved sanitation and water services are poorer people living in rural areas. One rural area in need of improved water availability and sanitation facilities is colonia Vicente Guerrero in Baja California. The purpose of the study was to gather qualitative data to inform the plans to implement a waste water sanitation project.

Methods: The PRECEDE component of the PRECEDE-PROCEED model was used to develop the semi-structured focus group guide and organize the findings. Three focus groups were conducted with 21 adults, aged 21-53 years, living in the colonia to explore: sanitation knowledge and practices, water availability and quality, and attitudes and perceptions towards waste water.

Results: Water availability and quality were a main concern. Residents receive unscheduled yellow colored, highly salinized, pipe water at odd hours, leaving many without water. The environment was also a major issue. Primarily, the lack of sanitation facilities, open defecation, and poor waste management. Participants also expressed feelings of insecurity due to loitering and vandalism. Besides having little or no knowledge, participants were open to the installation of a waste water system. Participants were eager to learn about the installation and provided valuable insight for placement, maintenance and security.

Conclusions: Focus groups provided rich insight to current conditions of water quality and availability as well as lack of sanitation practices. The findings indicate the urgent need to improve water and sanitation services as well health education and policies to improve living conditions and overall health in the colonia.

#34. MOLLY MOOR

DECREASED ANEMIA PREVALENCE AMONG WOMEN AND CHILDREN IN BAJA CALIFORNIA, MEXICO: A SIX YEAR COMPARITIVE STUDY

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Stephanie Brodine, Richard Garfein, Miguel Fraga, Hooman Rashidi, John Elder

ABSTRACT

Limited information exists about the health of Mexican agricultural laborers and their families. This study sought to measure the prevalence and correlates of anemia among women and children living in a rural, agricultural community and to assess whether interventions were effective at decreasing anemia prevalence over a six year period. A series of cross-sectional studies were conducted in 2004-2005 (Wave 1) and in 2011-2012 (Wave 2) among women (15-49 yrs) and their children (6-59 mos) in Baja California, Mexico. Participants included 201 women and 99 children in Wave 1, and 146 women and 77 children in Wave 2. Demographic, socioeconomic, and dietary data were collected. Anemia testing was performed and blood smears were obtained. Individuals diagnosed with anemia received vitamins and nutritional counseling. Between Waves 1 and 2, biannual free health clinics and health interventions were offered to community members. Prevalence of anemia decreased from 42.3% in Wave 1 to 23.3% Wave 2 in women ($p < 0.001$), from 46.5% to 30.2% in children 24-59 mos ($p = 0.066$), and from 71.4% to 45.8% in children 6-23 mos ($p = 0.061$). Among women in Waves 1 and 2, consumption of iron promoting foods within 48 hours prior to testing was protective against anemia ($p = 0.018$). Furthermore, women in Wave 2 who ate ≥ 4 servings of green, leafy vegetables per week were less likely to be anemic than women who consumed ≤ 3 servings ($p = 0.034$). Among women, low SES and working as an agricultural laborer were associated with being anemic. Microscopic examination of blood smears from anemic individuals revealed microcytic, hypochromic red blood cells in 90% of anemic children and 68.8% of anemic women, which suggests iron deficiency anemia.

#35. NATALIE FERRAILOLO

PREVALENCE AND CORRELATES OF DEPRESSIVE SYMPTOMS AMONG STRUCTURALLY VULNERABLE PATIENTS OF A BINATIONAL STUDENT-RUN FREE MEDICAL CLINIC IN TIJUANA, MEXICO

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Miguel Pinedo, Jessica McCurley, Adriana Vargas, Jose Luis. Burgos, Victoria Ojeda

ABSTRACT

Background/Context: Little is known about depression among socially and structurally vulnerable groups living in Tijuana (e.g., migrants, deportees, substance users, sex workers, homeless) who may be at high risk for poor mental health.

Study Objectives: To determine the prevalence and correlates of depressive symptoms among vulnerable patients at a free medical clinic in Tijuana, Mexico.

Methods/Design: A convenience sample of 584 Mexican patients completed an interviewer-administered questionnaire that included the 8-item NIH PROMIS depression scale and measures of individual, social, and structural factors affecting health. Descriptive statistics and multivariate logistic regression were performed to determine factors independently associated with depressive symptoms.

Setting and Subjects: The study took place at a student-run free medical clinic in 2013. Eligible participants were ≥ 18 years of age and spoke either Spanish or English.

Results: The prevalence of clinically significant depressive symptoms was 55%. In the multivariate analysis, female gender, poor/fair self-rated health, recent illicit drug use, feeling rejected, history of forced sexual act, and history of violence were independently associated with increased odds of experiencing symptoms of depression.

Conclusions: The prevalence of depressive symptoms among patients surveyed at this Mexican free clinic far exceeds prevalence rates reported for other populations in the region. Public health efforts to support mental health in the border region, such as interventions to address socioecological risk factors for depression (e.g., interpersonal and sexual violence, drug abuse) are needed. The clinic is now piloting a walk-in mental health program as a model for mental health service provision for vulnerable patients.

#36. SOPHIA GEORGHIOU

PERFORMANCE OF A PYROSEQUENCING PLATFORM IN DIAGNOSING DRUG-RESISTANT TUBERCULOSIS: A GLOBAL STUDY

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

ABSTRACT

Background: Pyrosequencing, with its ability to quickly identify genetic mutations associated with drug-resistance, holds great potential to curb the spread of drug-resistant tuberculosis.

Study Objectives: 1128 tuberculosis isolates from Moldova, India, and South Africa were analyzed in order to assess the ability of pyrosequencing to predict phenotypic drug-resistance in diverse clinical environments.

Methods: Acid-fast bacilli smears and drug-susceptibility testing were performed on all samples using critical concentrations of isoniazid (INH), rifampin (RIF), moxifloxacin (MOX), ofloxacin (OFX), amikacin (AMK), kanamycin (KAN) and capreomycin (CAP). Genetic resistance profiles of all isolates were determined by pyrosequencing the *inhA*, *katG*, *ahpC*, *gyrA*, *rrs*, and *rpoB* genes. *eis*-promoter sequencing capability was added to the platform following initial genetic analysis. Sensitivity and specificity of the assay was calculated for each drug evaluated.

Results: 86.7% of smear-positive and 86.4% of culture-positive isolates yielded valid pyrosequencing reads, compared to 54.9% of smear-negative and 43.1% of culture-negative isolates. Altogether, the sensitivities and specificities of pyrosequencing as a predictor of phenotypic drug-resistance were 95.2 and 96.1%, 93.8 and 99%, 93.7 and 98.3%, 94.1 and 99.1%, 83.5 and 99.3%, 50.4 and 99.2%, and 84.2 and 99% for the detection of resistance to INH, RIF, MOX, OFX, AMK, KAN, and CAP, respectively. *eis*-promoter sequencing capability improved the sensitivity of KAN-resistance detection to 85.8%, but the specificity fell to 93.3%.

Conclusion: Our study finds pyrosequencing to be a highly specific and very sensitive diagnostic, due to its high performance in predicting phenotypic drug-resistance profiles and its ability to perform on smear- and culture-negative samples in diverse clinical environments.

#37. UYEN NGUYEN

MALARIA PREVENTION STUDY: INSECTICIDE-TREATED NETS (ITNS) COVERAGE AND USAGE IN THREE COMMUNITIES IN WESTERN GHANA

CONFERENCE THEME

Global & Environmental Health

COLLABORATORS

Ashley Marks, Clement Donkor, Diana Rickard

ABSTRACT

Background/Context: Malaria is a leading cause of morbidity and mortality in Ghana, particularly among women and children under five. Insecticide-treated nets (ITNs) are employed as the principal preventive measure against malaria.

Study Objective/Setting & Subjects: The Ghana Health and Education Initiative (GHEI) conducted a community-based survey to assess the level of ITNs coverage and usage in three communities in Western Ghana.

Methods: A random sample of households was selected to participate in the survey, which was administered in the local language by local trained staff. The households completed questionnaires regarding ITN ownership, sleeping sites, which were visually verified, and ITN usage the previous night.

Results: 464 household surveys were completed across three communities. The ratios of ITNs per sleeping sites (SS) were 1,122/2,380 in Humjibre, 87/141 in Kojina, and 344/612 in Soroano. The percentage of nets that were slept under the previous night was 91% (607/667) for Humjibre, 83.4% (71/85) for Kojina, and 93% (304/327) for Soroano. The percentage of children under age five who slept under a net the previous night in Humjibre was 63.8% (185/290), 80.7% (25/31) for Kojina, and 76.1% (70/92) for Soroano. There was a 15% absolute decrease from the prior year assessment in the number of children under age 5 sleeping under bednets.

Conclusions: The decline in ITN usage was concurrent with a decrease in availability of nets in the communities. The loss of bednets in these communities has curtailed the program's effort to maintain previously high level of bednet usage within local communities.

#38. AMINA SHEIK MOHAMED

OVERCOMING BARRIERS TO HEALTH FOR EAST AFRICAN REFUGEE YOUTH: A PHOTOVOICE PROJECT

CONFERENCE THEME

Health Disparities

COLLABORATORS

Michelle Zive

ABSTRACT

Background/Contextual Information: Immigrants and refugees relocating to the US face many hardships. Language and cultural barriers, financial instability, and access to healthy foods contribute to a feeling of being restricted and having limited choices. For immigrants and refugees in City Heights these barriers create a boundary between living a healthy and unhealthy lifestyle.

Population of Interest: First or second generation East African Females Aged 12 to 17

Description of the Project/Intervention: The project was a collaboration between UC San Diego-Center for Community Health, the AjA Project, City Heights Hope Youth Advocacy Project, and SDSU Geography Urban Studies Program with funding from the California Department of Health's Nutrition Education and Obesity Prevention program through the County of San Diego Health and Human Services Agency. Using photovoice, the youth collectively identified health issues by taking photos and then used their images to create dialogue surrounding the root causes and implications of health disparities within their community. Throughout the program, participants worked toward creating a photo essay highlighting challenges faced by newly arrived immigrants and refugees in accessing healthy foods with the purpose of raising their voice and bringing their findings directly to the community.

Policy Implications: The photo essay was presented and well-received from community members, community organizations as well as media outlets. The first policy to be addressed is to improve signage (in different languages) for the EBT-accessible City Heights Farmers Market, to increase visibility and access to healthy food.

#39. ANDREA S. MENDOZA-VASCONEZ

HEALTH LITERACY, USE OF INTERVENTION MATERIALS, AND CHANGES IN SELF-EFFICACY AND PROCESSES OF CHANGE: A SECONDARY DATA ANALYSIS

CONFERENCE THEME

Health Disparities

COLLABORATORS

Bess Marcus, Shira Dunsiger

ABSTRACT

Background: Health literacy, or the ability to understand and use health information, has been positively associated with health outcomes, various health behaviors, and cognitive variables, including self-efficacy. High rates of low-literacy among Latinos place them at elevated risk of physical inactivity and poor health outcomes. The Seamos Saludables RCT used print materials based on constructs of the Transtheoretical Model and Social Cognitive Theory, including processes of change and self-efficacy, to motivate Latinas to engage in physical activity.

Objectives: To test the effect of health literacy and participants' use of intervention materials on participants' use of processes of change and self-efficacy. We hypothesized that health literacy and self-reported use of intervention materials are positively associated with and predict use of processes of change and self-efficacy.

Methods: Secondary data analysis using linear and logistic regressions.

Settings/Subjects: Data from 132 sedentary adult Latinas in the intervention arm of the RCT was analyzed.

Results: Health literacy predicted self-efficacy ($\beta = -.041$, $p = .018$) and use of two behavioral processes at 6 months: counter conditioning ($\beta = -.049$, $p = .008$) and reinforcement management ($\beta = -.038$, $p = .039$); these associations were in the opposite direction of those hypothesized. There was no statistically significant relationship between health literacy and use of materials. Nevertheless, participants' acculturation predicted use of materials ($\beta = -.966$, $p = .029$) and was inversely correlated with health literacy ($r = .385$, $p < .001$). Use of all the materials significantly predicted three outcome variables at 6 months.

Conclusions: Findings contradicted our hypothesis, which might be a product of the limited range in the health literacy variable, or possible unaccounted-for confounders.

#40. EDA HE

THE IMPACT OF SOMALI REFUGEE MOTHER'S HEALTH ON THE HEALTH OF THEIR CHILDREN: A CROSS-SECTIONAL STUDY

CONFERENCE THEME

Health Disparities

COLLABORATORS

Wael Al-Delaimy

ABSTRACT

Background: San Diego has the 2nd largest Somali refugee community in the United States, emigrating to escape the Somali civil wars. To gain insight to the effects of living in a war-torn nation, becoming a refugee, and cultural barriers introduced from settling in a foreign nation, community health workers conducted 198 surveys for Somali mother-child pairs.

Objectives: The goal was to assess whether a Somali child's mental health status was associated with the corresponding Somali mother's mental health status. The second goal was to examine the factors affecting the Somali mother's presentation of PTSD symptoms, anxiety symptoms, depression symptoms, and overall negative mental health status.

Design: This was a cross-sectional study. Somali children were categorized into 2 groups: normal mental health status and decreased mental health status (compared to the general adolescent population in the US). Categorization was done according to the child's score on the Children's Depression Index Survey. The Somali mothers were categorized into 2 groups according to their children's grouping.

Participants: 198 Somali mothers completed the demographics, Harvard Trauma Survey, Acculturative Stress Scale, and Hopkins Symptoms Checklist. 197 Somali children completed the Child's Depression Index Survey. 191 Somali child-mother pairs were included in the analysis after excluding children with too many omitted answers.

Results: Independent T-test analysis determined there was no significant difference in HTQ-PTSD scores between Somali mothers of children with normal mental health status compared to Somali mothers of children with decreased mental health status [t(110.30)=-1.52, p=0.13]. According to independent T-tests analysis between Somali mothers of children with normal mental health status and Somali mothers of children with decreased mental health status, there was a significant difference in HTQ-Total scores [t(105.74)=-2.28, p=0.025], HSCL-anxiety scores [t(98.15)=-2.03, p=0.045], HSCL-depression scores [t(101.79)=-2.68, p=0.009], and HSCL-total scores [t(99.46)=-2.48, p=0.015].

Conclusions: Somali children's CDI assessment scores in all 7 categories are within the normal range compared to the general US children's population. Somali mothers' anxiety, depression, PTSD, and overall health scores are also within normal ranges of those reported by the US

general population. However, both Somali mothers and children omitted portions of their surveys, which may have affected the true mental health status in this community.

#41. MONICA SIAS

DIVERSITY AT UCSD: FACT OR FICTION

CONFERENCE THEME

Health Disparities

COLLABORATORS

Nancy Binkin

ABSTRACT

Background/Context: Diversity in the health professions improves cultural and linguistic access among underserved communities and improves trust. Recruiting a diverse undergraduate student body is an important first step towards a diverse health workforce.

Study Objectives: To compare diversity at selected University of California campuses and examine the role of transfer students in enriching UCSD's diversity.

Methods/Design: Descriptive statistics on ethnicity, income, first-generation status, and residence for freshmen and transfer students from UCSD, UCLA, UCIrvine, UCRiverside, and UCMerced were abstracted for 2013 from university websites. Setting and Subjects: Undergraduate students at selected UC campuses.

Results: UCSD has the lowest population of black, Native American, and Latino freshmen among the five schools (2%, 0.4%, and 15%, respectively). UCMerced had the highest percentage of Latino freshmen (46%), while UCRiverside recruited the highest percentage of blacks (5%). While transfer students were more diverse than freshmen on most campuses, those admitted to UCSD did not substantially improve diversity (3% black, 1% Native American, and 16% Latino). First-generation status was reported by 27% of freshmen and 33% of UCSD transfers in 2013. Few freshmen and transfer students were from non-urban centers. However, UCSD had a high percentage of low-income students on Pell Grants (46%), exceeded only by Merced (58%).

Conclusions: UCSD's ethnic, first generational, and geographic diversity were low compared with other UC campuses. If UCSD is to contribute to a more diverse workforce in health and other fields, efforts must be made to develop innovative strategies to recruit and retain students from more varied backgrounds.

#42. MYRA DANG

OCCUPATIONAL HEALTH OF TAXI DRIVERS IN SAN DIEGO

CONFERENCE THEME

Health Disparities

COLLABORATORS

Myra Dang, Kate Murray, Abdimalik Buul, Ahmed Aden

ABSTRACT

Background/Context: The occupational health of taxi drivers is an important issue that affects not only the individual driver but the general population. Fatigue is a very common self-reported symptom that inhibits many drivers from working to their fullest capacity. Fatigue leads to lower levels of mental and physical performance that can contribute to unsafe roads. Study Objectives: To assess predictors of fatigue in taxi drivers in San Diego.

Methods/Design: Individual interviews were conducted to assess demographic characteristics, occupational and health concerns. The interview included questions on diet, exercise, hours of sleep, fatigue, chronic pain, amount of time worked, and overall perception of one's health and occupation.

Setting and Subjects: A total of 75 taxi drivers and 25 non-drivers were recruited through a taxi advocacy organization. The majority of participants were immigrants from Africa, in their mid-40s. The control group in this study were matched to the cases based on age and gender with no taxi driving history.

Results: Results show that there are significant differences between drivers and non-drivers in overall health status and a range of health behaviors including physical activity and hours of sleep. Nearly half (42%) the drivers felt excessive fatigue that hindered their job performance every single day in the past month, as compared to 4.3% of non-drivers.

Conclusions: This research raises concerns involving the occupational and individual health of taxi drivers. Health guidelines and assessments can be initiated to further develop ways to combat fatigue in the work force.

#43. RAMON HERNANDEZ

LGBT HEALTH IMMERSION DAY: MEASURING THE IMPACT OF AN LGBT HEALTH EDUCATION INTERVENTION

CONFERENCE THEME

Health Disparities

COLLABORATORS

Brian Nuyen, Amanpreet Sandhu, Nancy Graff, Sandra Daley

ABSTRACT

Background/Contextual Information: Lesbian, gay, bisexual, and transgender (LGBT) people are an underserved patient population. Contributing to this underserved need is the inadequacy in fully addressing LGBT health issues in US medical education. One solution to the education deficit – including more and higher-quality hours of LGBT health instruction – has been proven to be a high-yield and successful endeavor.

Population of Interest: UC San Diego School of Medicine implemented “LGBT Health Issues Immersion Day” as part of the 2nd-year medical education curriculum.

Description of the Project/Intervention: The Immersion Day was composed of three educational activities: 1) An introductory LGBT health lecture; 2) A moderated panel of six LGBT patients/community members; and, 3) Facilitated small group break-out sessions. The following themes were covered: 1) Latina Lesbian Health, 2) Elder Married Gay Male, and 3) Transgender Adolescent. Pre- and post- questionnaires were administered and results were analyzed with paired samples t-tests.

Policy Implications: Analysis revealed that students demonstrated a significant increase in: 1) level of knowledge of health risks of LGBT patients; 2) level of comfort in engaging LGBT patients; and, 3) level of confidence in connecting LGBT patients to LGBT friendly health-care providers and services. Lastly, 81.8% found the Immersion Day to be “useful” or “very useful” in cultural-competency care training. The Immersion Day was a successful intervention and has been institutionalized. Integrating LGBT health instruction into US medical education can potentially translate to culturally competent and successful patient-oriented care.

#44. RAMON HERNANDEZ

DEVELOPING A DIVERSE HEALTHCARE WORKFORCE TO ADDRESS HEALTH INEQUALITIES

CONFERENCE THEME

Health Disparities

COLLABORATORS

Lourdes Rivera, Amanpreet Sandhu, Sandra Daley

ABSTRACT

Background/Contextual Information: African Americans, Latinos and American Indians together comprise less than 9% of nurses, 12% of physicians and 8% of dentists while they represent more than one-fourth of the US population. The lack of diversity among students choosing and being retained in the behavioral, clinical and biomedical sciences poses a challenge in the development of successful strategies for reducing health disparities, meeting the needs of the medically underserved and achieving the goals of Healthy People 2020.

Population of Interest: Strategies aimed at diversifying the health professions “pipeline” have primarily focused on high school students and college juniors and seniors; yet, students from disadvantaged backgrounds overwhelmingly enter the post-secondary education system through community colleges. Recognizing this, the University of California, San Diego School of Medicine developed the UniversityLink Medical Science Program (ULMSP) in 2001 to address this.

Description of the Project/Intervention: ULMSP is an academic enrichment program for underserved and disadvantaged community college students to transfer to a four-year institution, to graduate in the aforementioned majors, and to compete successfully for entry into graduate/health professions schools.

Policy Implications: As of 2014, 156 students have completed the program; 98% of the students have transferred to a four-year university; 86% graduated from college; 85% have graduated with a degree in the sciences; and, 54% have entered a graduate program. This demonstrates a student development program can improve the rates of transfer, retention, graduation in the sciences, and entry into graduate/professional schools.

#45. YASMIN HUSSAIN

THE LACK OF AWARENESS OF HEALTH DISPARITIES IN THE UNITED STATES

CONFERENCE THEME

Health Disparities

COLLABORATORS

Kate Murray

ABSTRACT

Background: Health disparities are an important public health issue. Despite the negative effects of health disparities for specific groups in the United States, knowledge and awareness of health and healthcare disparities are limited in the general public.

Study Objectives: In this study, we examine the relation between education, awareness of health disparities, and attitudes and beliefs about the Affordable Care Act.

Methods/Designs of Survey: Approximately 200 participants were recruited through a national database called Amazon Mechanical Turk. The participants were asked to complete a 20-30 minute online survey that questioned their beliefs about health disparities in the US.

Setting and Subjects: The participants were a mean age 38.6 years (SD = 12.5) and majority female (57%) all living in the United States.

Results: Higher levels of education were related to greater awareness of racial and gender disparities in health. Higher levels of education, but not awareness of racial and gender disparities, was related to more favorable views of the Affordable Care Act.

Conclusion: Having a higher level of education does affect the public's awareness of racial and gender disparities, as well as people's perceptions on the Affordable Care Act. While higher education has increasingly emphasized the social determinants of health, it is imperative to introduce information about health disparities into curriculums and programs to better reach the entirety of the US population.

#46. ANDREW TRINIDAD

AN ACCESSIBLE COMMUNICATION APPROACH FOR THE DEVELOPMENT OF D&I RESEARCH

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

Via Ventura, Samir Gupta, Jesse Nodora

ABSTRACT

Background: The emergence of D&I research seeks to promote partnerships that investigate the “how to” of the evidence-to-practice process in research. Infographics are common accessible communication tools that effectively relay information in a concise manner. The applicability of such tools is evident for public health areas such as health literacy; however, there is less evidence for accessible communication tools as part of D&I research. This project will explore how accessible communication tools can enhance decision-making as part of D&I research.

Population: A D&I research team composed of academics (UCSD) and members of a community health center (La Maestra).

Description: The D&I research team is part of an FMPH pilot seeking to increase colorectal cancer (CRC) screening in a CHC setting. The CRC pilot will use a mixed methods approach to gather data from administrators, providers, patients and non-patients. We will assess the applicability and usefulness of accessible communication tools in all aspects of the pilot, including development, implementation, interpretation and dissemination of results. Applicability and usefulness of infographics may include: 1.creation of an infographic describing each of the assessment methods in the pilot, assessment participants, and anticipated time burden; 2.identify how the infographic was used; 3.use a Likert scale survey to assess usefulness.

Policy Implications: Accessible communication tools may compliment the D&I research process by assisting both investigators and practitioners to quickly and accurately consume and interpret complex information thereby improving the decision-making process.

#47. DREW COLANTINO

UNDERSTANDING OF ORAL HEALTH COVERAGE IN THE AFFORDABLE CARE ACT

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

Donna Kritz-Silverstein, John Da Silva

ABSTRACT

Background/Context: The Affordable Care Act (ACA) is relatively new and its benefits may be misunderstood by the public.

Study Objectives: This study examines caregivers' understanding of the ACA and its benefits for pediatric oral health.

Methods: A survey assessed ACA knowledge and perceptions of its impact on obtaining oral health for children.

Setting and Subjects: 501 caregivers from two San Diego pediatric dental clinics

Results: Most (96%) caregivers were parents, 84% were women, and 54% completed \geq some college. Average age of caregivers was 36.9 ± 8.6 y, and children was 7.3 ± 3.5 y. Overall, 30% reported knowing nothing about the ACA, 37% had heard of it, 25% knew something about it and 9% reported understanding it well. Two-thirds (63%) reported knowing what Affordable Insurance Exchanges were; 30% believed all children would have dental insurance under ACA. Overall, 21% felt ACA would change their child's ability to obtain dental care; 42% felt it would improve their child's oral health. Comparisons showed those with \leq high school education reported lower rates of understanding the ACA well than those with \geq some college (6% vs. 12%, $P < .001$), and more believed all children would have dental insurance (36% vs. 26%, $P = .03$). There were no differences by education in believing the ACA would change their child's ability to obtain dental care (20% vs. 21%, $P > .10$), but more parents with lower education believed it would improve their child's oral health (52% vs. 31%, $P < .001$). Significant variations by other demographic characteristics were observed.

Conclusions: Awareness and understanding of the ACA is low, even among the more educated. Increased efforts are needed to provide clear information to the public.

#48. KARYN SPEIDEL

DO PERSONAL RITUALS REDUCE BURNOUT AND INCREASE COMPASSION IN HOSPICE STAFF?

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

Lori Montross Thomas

ABSTRACT

Background/Context: Hospice staff and volunteers who work with the terminally ill have elevated risks of stress and burnout. Studies have shown a link between personal ritual use as a way to alleviate stress and enhance compassion in other populations. This novel study evaluates ritual use among at-risk hospice staff and volunteers.

Study Objectives: Identify particular ritual practices of hospice staff and volunteers that alleviate stress, mitigate burnout and increase compassion associated with caring for the terminally ill.

Methods/Designs: We conducted an on-line survey of the members within the National Hospice and Palliative Care Organization (NHPCO), which included a demographics questionnaire, a list of open-ended questions related to ritual practices and the ProQoL scale.

Settings and Subjects: Participants were all hospice staff (e.g., chaplains, doctors, nurses) and volunteers in the NHPCO. The study consisted of 390 participants (40% male and 60% female), across 38 states, with a mean of 9 years working in hospice care.

Results: The study found 71% of participants used personal rituals and 29% did not. Participants who used rituals showed significantly increased compassion and significantly decreased burnout.

Conclusions: These findings may encourage administrators to adopt enriching practices that would decrease burnout, increase compassion and ultimately, improve patient care in hospice staff and volunteers.

#49. KRISTIN PALMSTEN

MEDICATION USE AMONG PREGNANT WOMEN ENROLLED IN THE UNITED STATES MEDICAID PROGRAM

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

Kristin Palmsten, Sonia Hernandez-Diaz, Christina D Chambers, Helen Mogun, Sophia Lai, Todd P Gilmer, Krista F Huybrechts

ABSTRACT

Background/Context: Medication use during pregnancy among low-income women and variability in medication use by age and race/ethnicity are not well characterized.

Objective: To characterize the most commonly used prescription medications among pregnant women enrolled in Medicaid, the health insurance program for low-income individuals in the US.

Methods/Design/Settings: We identified 1,106,757 pregnant women with live births from 2000-2007 Medicaid Analytic eXtract (MAX) data. We used outpatient pharmacy records to identify medication dispensings. Medication prevalences were stratified by maternal age and race/ethnicity and compared using prevalence ratios and 95% confidence intervals (CI).

Results: During pregnancy, 82.5% of the cohort had a dispensing for ≥ 1 prescription medication. The most prevalent classes included: antibacterials (49.7%), analgesics/antipyretics (29.6%), and skin/mucous membrane anti-infectives (28.7%). There were differences in the prevalences of some of the most common classes across age and race/ethnicity groups. For example, compared with women ≥ 35 , the prevalence of urinary anti-infectives was 1.5-fold higher (CI: 1.5-1.6), and antiprotozoals was 1.9-fold higher (CI: 1.8-1.9) among women who were < 20 . The antiprotozoal prevalence was 2.2-fold higher (CI: 2.2-2.3) among black women compared with white women. The medications with the highest prevalence during pregnancy were nitrofurantoin (21.6%), metronidazole (19.5%), and amoxicillin (18.0%). Excluding estrogens, progestins and infertility treatments, 39.9% of women had ≥ 1 dispensing for a medication classified in the former Food and Drug Administration categories D or X. Codeine (13.0%) and hydrocodone (10.2%) had the highest prevalences of all D medications.

Conclusions: Prevalences of commonly used prescription medications during pregnancy varied by age and race/ethnicity.

#50. LINDSAY FREEMAN

MULTIMODAL MEDICAL SENSING AND DIAGNOSTIC PLATFORM FOR MOBILE PHONES

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

Yeshaiahu Fainman, Drew Hall, Truong Nguyen, Alexander Sun, Brandon Hong, Lin Pang, Maxim Abishan

ABSTRACT

The advancement of smartphone technology has remained underutilized for tackling complex problems, such as disease prevention and diagnostics. We propose to develop a mobile health (mHealth) system capable of early disease detection that is directly integrated with a user's smartphone. This medical sensing and diagnostic platform (MSDP) uses novel optical techniques to perform surface plasmon resonance (SPR) sensing, electrochemical impedance spectroscopy (EIS), and surface-enhanced Raman Spectroscopy (SERS). The SPR and Raman systems are miniaturized to perform sensing in a box that can be portable and integrated directly with current smartphones available on the market. The EIS component communicates to the phone through the audio jack for easy communication across devices. The MSDP utilizes a disposable cartridge lab-on-chip (CLOC) component, which can be functionalized for detection of various diseases, enabling the MSDP to perform detection of a multitude of diseases. The CLOC is designed using a coupled resonance system, in which two resonances (SPR and Fabry-Pérot) generate much higher signals than comparable technologies, allowing for greater sensitivity in a smaller area for both SPR and SERS. Complex signal processing techniques are used to further improve the reliability and accuracy of the signals. The high signal-to-noise ratio (SNR) of the CLOC with dual resonances allows for the miniaturization of the entire system, realizing a truly portable, low cost, and reliable mHealth diagnostics platform.

#51. MARGARET RYAN

INFLUENZA VACCINATION OF HEALTHCARE PERSONNEL: IMPACT OF EVOLVING LOCAL POLICY AT A MILITARY COMMUNITY HOSPITAL

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

Laurie Duran, Jennifer Holden, Christy Inae, Christina Spooner

ABSTRACT

Background: Although the US Advisory Committee on Immunization Practices has recommended annual influenza vaccination of all healthcare personnel (HCP) for more than 30 years, vaccine uptake in this occupational group has been historically low. Influenza vaccination rates of HCP have varied from less than 50% to 75% over the past five years. The US military was one of the first large healthcare organizations to mandate influenza vaccination for all HCP in 2009. Local practices at military hospitals evolved over the subsequent five years to support this vaccine mandate.

Population of Interest: Civilian HCP at a local military community hospital

Description of Project: Documented local policies regarding seasonal influenza vaccination were reviewed and compared from 2008 to 2014; influenza vaccine uptake among civilian HCP was tracked over the same period. Vaccine uptake increased from 64% to 87% in 2009, the first year of the military mandate. Increases in vaccine uptake continued to be observed over the next five years; more than 99% of HCP at this institution received influenza vaccine in 2014. Increased vaccination rates were associated with clarified local policies on exemption requests and management of unvaccinated HCP.

Policy Implications: Marked increases in influenza vaccination of HCP were associated with an organizational policy, as well as phased-in strengthening of local practices in subsequent years. Vaccination increases outpaced changes observed in other healthcare organizations and the general population over the same period.

#52. SARA McMENAMIN

THE CALIFORNIA HEALTH BENEFITS REVIEW PROGRAM

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

ABSTRACT

Background/Contextual Information: Established in 2002 pursuant to AB 1996, the California Health Benefits Review Program (CHBRP) responds to requests from the state legislature to provide independent analysis of the medical, financial, and public health impacts of proposed health insurance benefit mandates and repeals. This program is comprised of a collaboration between six UC campuses and is coordinated by program staff at the UC Office of the President.

Population of Interest: Insured Californians
Description of the Project: Analysis requests are made to CHBRP from the California Assembly and Senate Health Committees. CHBRP teams have 60 days to complete the analysis. The authorizing statute requires the analysis report to contain three specific sections: 1) medical effectiveness, a review of the peer-reviewed evidence on the medical effectiveness of the proposed mandate, 2), cost and utilization impacts prepared with the assistance of a certified actuary, and 3) public health impacts, presenting an overview of the impact on the health of the community with a specific emphasis on a reduction in health disparities, premature death, and economic loss associated with disease.

Policy Implications: Since 2004, CHBRP has reviewed 106 health insurance benefit mandate bills providing the California State Legislature an unbiased report of the medical effectiveness, cost implications, and public health impacts to use in their deliberations. The CHBRP program is unique compared to other state's review programs in the requirement that the reports assess the public health impacts of proposed legislation, specifically requiring an assessment of the impact on gender or racial/ethnic disparities in health outcomes.

#53. SOL D'URSO AND JESSICA MCCURLEY

WALK-IN MENTAL HEALTH SERVICES FOR VULNERABLE POPULATIONS ALONG THE U.S.- MEXICO BORDER

CONFERENCE THEME

Health Services and Technologies

COLLABORATORS

Jessica McCurley, Margaret Muranyi

ABSTRACT

Background/Context: Individuals living in resource-poor areas of the U.S.- Mexico border are confronted with numerous social and structural challenges, including homelessness, poverty, family disruption, poor access to medical care, drug abuse, discrimination, and victimization, which increase risk for depression and other mental health concerns.

Population of Interest: The HFiT Mental Health Clinic provides free services to families and individuals who are migrants, deportees, sex workers, homeless, victims of violence and trauma, individuals who use or inject drugs, and other vulnerable groups.

Description of the Intervention: Responding to the unique needs of this population, we developed a walk-in single-session mental health treatment model. In this model, each session is considered a brief, self-contained intervention. Using evidenced-based, strengths-focused strategies, we assess patients' needs, develop feasible and patient-centered action plans, and make appropriate referrals to additional care in Tijuana when needed. Our aim in implementing this model is to increase access to mental health care, enhance collaboration with medical professionals, provide high-quality integrated care, and decrease mental health stigma in the border region.

Policy Implications: Negative mental health trends along the U.S.-Mexico border contribute to decreased productivity and quality of life and heightened health care costs in both the U.S. and Mexico. Projects such as the current one are urgently needed to develop acceptable, sustainable, and effective mental health interventions for this challenging context.

#54. CATHERINE MARINAC

PROLONGED NIGHTLY FASTING AND BREAST CANCER RISK: FINDINGS FROM NHANES (2009-2010)

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Loki Natarajan, Dorothy D. Sears, Linda C. Gallo, Sheri J. Hartman, Elva Arredondo, Ruth E. Patterson

ABSTRACT

Background/Context: A novel line of research has emerged suggesting that daily feeding-fasting schedules that are synchronized with sleep-wake cycles have metabolic implications that are highly relevant to breast cancer.

Study Objectives: To examine associations of nighttime fasting duration with biomarkers of breast cancer risk.

Methods/Design: Dietary, anthropometric and HbA1c data were available for 2,212 women, and 2-hour postprandial glucose concentrations were available for 1,066 women. Nighttime fasting duration was calculated using 24-hour food records. Separate linear regression models examined associations of nighttime fasting with HbA1c and 2-hour glucose concentrations. Logistic regression modeled associations of nighttime fasting with elevated HbA1c (HbA1c \geq 39 mmol/mol or 5.7%) and elevated 2-hour glucose (glucose \geq 140 mg/dL). All models adjusted for age, education, race/ethnicity, BMI, total kcal intake, evening kcal intake, and the number of eating episodes per day.

Settings and Subjects: Adult women in the 2009-2010 U.S. National Health and Nutrition Examination Survey.

Results: Each 3-hour increase in nighttime fasting duration (roughly one standard deviation) was associated with a 4% lower 2-hour glucose measurement (β 0.96, 95% CI 0.93-1.00; $p < 0.05$), and a non-statistically significant decrease in HbA1c. Logistic regression models indicate that each 3-hour increase in nighttime fasting duration was associated with roughly a 20% reduced odds of elevated HbA1c (OR 0.81, 95% CI 0.68, 0.97; $p < 0.05$) and non-significantly reduced odds of elevated 2-hour glucose.

Conclusions: A longer nighttime duration was significantly associated with improved glycemic regulation. Randomized trials are needed to confirm whether prolonged nighttime fasting could improve biomarkers of glucose control, thereby reducing breast cancer risk.

#55. ANANT SINGHANIA

DAILY PATTERNS OF SEDENTARY TIME, DEPRESSION AND PHYSICAL FUNCTIONING: IS THE WAY IN WHICH SEDENTARY TIME IS ACCUMULATED ASSOCIATED WITH INDICATORS OF HEALTHY AGING IN OLDER ADULTS?

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Anant Singhania, John Bellettiere, Suneeta Godbole, Jacqueline Kerr, Loki Natarajan

ABSTRACT

Objective: This study examines the relation between sedentary behavior and two specific health outcomes, depression and physical functioning among older adults.

Methods: Participants were 307 retirement-community dwelling women (n=222) and men (n=82) ages 65-100. Data were collected at 11 communities in 2011. Depressive symptoms were measured using the self-administered Center for Epidemiological Studies Short Depression Scale; functioning was measured using the Short Physical Performance Battery. Daily activity was objectively measured by accelerometer over 6 days. Patterns of sedentary time (defined as <100 counts per minute) were extracted from accelerometer data to count and describe periods with consecutive (unbroken) sedentary time. The association between multiple measures of sedentary time, depression and physical functioning were examined using linear mixed-effects regression models adjusting for age, sex, marital status, education level and average daily accelerometer wear time.

Results: Initial findings suggest that adults with longer daily average bout duration showed significantly lower physical functioning scores compared to those with shorter daily average bout duration (Beta Estimate = -0.188, p-value < 0.001). Similar trends were observed for most measures of sedentary behavior patterns. Results of associations between sedentary behavior patterns and depression were mixed, with total daily accumulated sedentary time having a marginally significant positive association with depression (Beta Estimate = 0.41, p-value=0.059).

Conclusions: Preliminary findings suggest that more sedentary time is associated with lower physical functioning in older adults. While results were less conclusive regarding the relationship between depression and patterns of sedentary time, the observed trends highlight a need for further analysis.

#56. ARIEL HAMBURGER

HEALTHY COCINA INITIATIVE: CREATING ACCESSIBLE, AFFORDABLE, HEALTHY MEALS AT LOCAL GROCERY STORES

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Chelsea Baron, Shana Wright, Michelle Zive

ABSTRACT

Background/Contextual Information: Supermercado Murphy's is a locally-owned and managed, small supermarket in the heart of San Diego's most diverse community of City Heights. According to the store's manager, the market is the main food source for many families in this community. Therefore, the store was chosen for its level of potential impact and commitment to the people it serves. Time and again, staff members from the store's owners to the head chef have demonstrated their obligation to their customers. The program requires a buy-in from the store's employees which has been developed through implementation and on-going evaluation of various phases of the project.

Population of Interest: Low-income Latino families

Description of the Project/Intervention: Pilot project that offers a low-cost, highly-nutritious premade meal to encourage healthy eating. Through the efforts of the cocina's staff, recipes are chosen each month highlighting San Diego's Harvest of the Month item and are acculturated to the target community. San Diego's HOTM program elevates locally grown produce with the intention of emphasizing the importance of eating local.

Policy Implications: Encouraged an internal policy to focus on offering and promoting healthy options within the cocina, including augmenting prices so the meal is not only accessible but also affordable. Additionally, there is a systems-level change which involves promoting locally grown produce through the Harvest of the Month initiative in the grocery store.

#57. BESS MARCUS

A RANDOMIZED CONTROLLED TRIAL OF AN INTERNET-DELIVERED, PHYSICAL ACTIVITY INTERVENTION FOR LATINAS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Shira I. Dunsiger, Sheri J. Hartman, Sarah L Linke, Dori W. Pekmezi, Becky Marquez, Britta A. Larsen, Kim M. Gans

ABSTRACT

Latinas in the U.S. report low rates of physical activity and are disproportionately burdened by related medical conditions. Physical activity interventions tailored to Spanish speaking Latinas that utilize technology to improve access are needed. Pasos Hacia la Salud, a 6-month Spanish-language randomized controlled trial, tested a culturally and linguistically adapted, individually tailored, Internet-based physical activity intervention vs. an Internet-based Wellness Contact Control condition among under-active Latinas. Intent to treat analyses tested the change in minutes of moderate to vigorous physical activity (MVPA). Participants (n=205) were a mean age of 39.21 years (SD=10.47) and the majority identified themselves as Mexican (84.4%), White (51.7%) and First Generation (81%). Intervention participants (n=103) reported increasing MVPA (as collected by the 7-day Physical Activity Recall) from a mean of 7.89 min/week (SD=14.98) at baseline to 110.51 min/week (SD=95.20) at 6 months, whereas control participants (n=102) reported increasing their MVPA from a mean of 8.46 min/week (SD=14.60) at baseline to 63.45 min/week (SD=88.71) at 6 months ($p<.05$). This difference was corroborated by accelerometer readings ($\rho=.48$ $p<.01$ at 6 months). Using a mixed effects regression model, we tested the effect of the Intervention, controlling for baseline and including a subject specific intercept. Results showed a significant intervention effect such that Intervention participants reported, on average, 47 more min/week of MVPA than Controls at 6 months (SE=9.45, $p<.01$). Moreover, at 6 months, 30.6% of Intervention vs. 12.8% of Control participants (adjusted OR=3.00, $p=0.004$) met national PA guidelines (≥ 150 min/week of MVPA). Findings support the efficacy of using interactive Internet technology to promote physical activity in Latinas. This Internet-delivered intervention has the potential to reach Spanish-speaking Latinas who may have difficulty accessing other physical activity programs. Future studies should evaluate the feasibility and appeal of other delivery channels such as text messaging, and other populations such as Latino men, which could further increase reach and cost-effectiveness and help eliminate health disparities in this population.

#58. BRITTA LARSEN

COST-EFFECTIVENESS OF A MAIL-DELIVERED CULTURALLY AND LINGUISTICALLY ADAPTED PHYSICAL ACTIVITY INTERVENTION FOR LATINAS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Todd Gilmer, Dorothy Pekmezi, Melissa Napolitano, Bess Marcus

ABSTRACT

Background: Latinos report high rates of inactivity and related conditions (diabetes, obesity). It is therefore essential to develop interventions that not only increase physical activity (PA) in Latinos but do so in a cost-effective way with potential for broad dissemination.

Objectives: to determine the costs and cost-effectiveness of a mail-delivered PA intervention for Latinas.

Methods: Seamos Saludables was an RCT of a mail-delivered print-based individually tailored PA intervention (vs. a contact control). PA was measured using the 7-Day Physical Activity Recall Interview at baseline, six, and 12 months. Costs were calculated from a clinical perspective, and included staff time, hardware/software, materials, printing and postage. Research, measurement, and recruitment costs were not included.

Subjects: 266 adult Latinas living in New England.

Results: Intervention participants showed greater increases in PA than controls at six months (+71 vs. +30 minutes/week) and 12 months (+94 vs. +40 minutes/week). The cost to deliver the intervention was \$29/month/participant at six months vs. \$15/month for controls, and \$17 and \$9 at 12 months, respectively. The cost-per-minute increase in PA at six months was \$0.18 for the intervention vs. \$0.23 for controls. These fell to \$0.07 and \$0.08 at 12 months. Overall, the incremental cost per minute of PA for the intervention relative to controls was \$0.15/minute at 6 months and \$0.05/minute at 12 months.

Discussion: The cost of delivering the intervention was roughly twice that of delivering the control. However, the intervention was more cost effective, costing less per minute of PA increase than controls.

#59. CHERYL ANDERSON

SPICE TRIAL

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

ABSTRACT

Introduction: Adherence to the recommended dietary sodium intake is challenging given the ubiquity of sodium in the US food supply. We hypothesized that a multifactorial, behavioral intervention that emphasized spices and herbs would facilitate adherence to dietary sodium recommendations.

Methods: SPICE was a two-phase study including adults, 18 years or older, for whom Dietary Guidelines for Americans recommends 1500 mg/d of sodium. In phase one, 55 individuals were fed a low sodium diet for 4 weeks to acclimatize them to eating according to dietary sodium recommendations. Participants were provided all food, snacks and calorie-containing drinks. In phase two, 40 participants from phase 1 were randomized to either a multifactorial behavioral intervention designed to reduce sodium intake (n=20) or a self-directed control group (n=20), for 20 weeks. The intervention included advice on replacing sodium with spices and herbs. The primary study outcome was 24-hour urinary sodium excretion. We used linear regression analyses to determine the effects of the intervention on urinary sodium excretion.

Results: Participants were 65% female, 88% African American; 63% had hypertension, 18% had diabetes; mean(sd) age was 61(9.7) years, and BMI was 30(8.9) kg/m². During phase one (controlled feeding), mean 24-hour urinary sodium excretion decreased (150 mmol/d to 72 mmol/d). At the end of the 20-week behavioral intervention, 24-hour urinary sodium excretion increased in both arms but was 42 mmol/d lower in the intervention group than in the control group, p=0.002 (Figure). These findings were robust to methods excluding incomplete urine collections (Mage equation: mean difference -47.4, p=0.001, Joosens equation: mean difference -34.6, p=0.04).

Conclusions: A multi-factorial behavioral intervention that emphasizes spices and herbs facilitates adherence to the recommended dietary sodium intake.

#60. DOMINIQUE DANIELL

THE WALKING SCHOOL BUS: ANALYSIS OF VOLUNTEER DEDICATION AND RE-ENLISTMENT

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Jordan Carlson, Jim Sallis

ABSTRACT

Background: Evidence suggests supporting youth walking to/from school can have significant impacts on total physical activity and obesity. WSB programs are often a component of Safe Routes to School (SRTS) initiatives. The purpose of this project is to identify models for recruiting and maintaining WSB leaders.

Population of interest: WSB programs are targeted towards elementary-school students, but also positively impact adult chaperons, parents, teachers, schools, and community.

DESCRIPTION OF PROJECT: WSB is a mode of transportation to/from school for students who live within walking distance of their school or are able to be dropped off/picked up at a set location on the route of a WSB. A web search was conducted to identify various leadership options and assess their sustainability. The WSB is led by ≥ 2 adults who are community volunteers including parents, retired adults, and college students, or paid staff from schools, community organizations, and universities. In researching the various WSB programs, it appears that these distinct leadership models have differing levels of effectiveness and sustainability. In my presentation, I will highlight key aspects, implications, and evidence of effectiveness for the various leadership models.

Policy implications: Identifying sustainable leadership models for WSB programs could inform local and national policy. Effective models could be adopted into SRTS programs. Schools would benefit from effective active travel to school policies because active travel provides children with independent mobility and has been associated with improved attendance and academic performance.

#61. ERIK GROESSL

YOGA THERAPY FOR INACTIVE OLDER ADULTS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Laura Schmalzl, Meghan Maiya, Maria Mazzi, Frank Izsak

ABSTRACT

In the next few decades, a dramatic increase in the number of Americans age 65+ is expected. Many older adults are sedentary and can benefit from interventions that increase mobility and physical function. Although many interventions may help sedentary older adults, yoga may be able to produce broader changes and impact multiple health outcomes simultaneously. Other features of yoga such as transportability, home practice, social interaction, and spirituality may increase its appeal to older adults.

Silver Age Yoga Community Outreach (SAYCO) provides free yoga programs to older adults who have limited resources and who reside at community senior centers. The yoga program consists of weekly 60-minute sessions that are specifically designed for inactive older adults. A gentle pace and props are used to make it accessible to all functional levels. Volunteer instructors are recruited to sustain the programs as long as possible. Participants at four new SAYCO programs were invited to complete questionnaires before their first class and again 3 months later.

Questionnaires included measures of pain, functional status (HAQ), depression (CESD-10), fatigue, and health-related quality of life (EQ5D). Paired t-tests were used to compare baseline scores to those at the 10-week follow-up for the single group, pre-post design.

Baseline and follow-up data were available for 31 participants who were 81% female, 23% Hispanic, 77% white, 48% had a college degree; median annual income was \$20-39K and mean age was 69.1 years. Participants tended to be quite healthy, as assessed by baseline health status. (EQ5D = 0.778) Despite the small sample size, significant decreases were found for depression ($p = 0.025$) and pain frequency ($p = 0.040$). Improvement trends were also found for fatigue, total pain severity, and pain discomfort.

The data suggest that inactive older adults derive health benefits from free weekly yoga programs. However, the limitations of a small, unfunded, single-group study make conclusions tentative. A larger randomized, controlled trial of the yoga for older adults can answer these questions more definitively.

#62. FATIMA ISABEL CASTANEDA

MOTHER PHYSICAL ACTIVITY SUPPORT BEHAVIORS IN LATINA ADOLESCENTS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Britta Larsen

ABSTRACT

Background/Context: Latina adolescents experience health care disparities such as obesity and diabetes. Exercising can reduce these disease rates. Latinos behavior is greatly influenced by social support in the household; however, little information about Latina mothers influencing the physical activity of daughters exists.

Study Objectives: We explore support behavior for physical activity in Latina mothers and their adolescent daughters. We will analyze how mothers rate themselves as support-givers and assess their how their daughters perceive their support behaviors.

Methods/Design: Questions were extracted from a questionnaire measuring physical activity support behaviors. Mothers evaluated their support behavior towards daughters, and daughters rated their mothers support behaviors. Examples of domains include monitoring, limit-setting, and role-modeling. We analyze similarities and discrepancies between their responses.

Setting and Subjects: Data was obtained from the Niñas Saludables pilot study designing a physical activity intervention for Latina adolescents and additional mother-daughter pairs. Results: Data collection is ongoing. Preliminary data from 11 mother-daughter pairs indicates that mothers rated themselves highest on encouraging and monitoring; lowest on punishment, providing transportation, and watching daughters exercise. Daughters rated mothers highest in encouragement, monitoring, and valuing; lowest on punishment and limit-setting. High correlations between responses exist between limit-setting, role-modeling, watching daughters exercise, and encouragement ($r>0.3$). Discrepancies exist in reminders, punishment, and reward domains ($r<0.1$).

Conclusion: Mother-daughter pairs agree that limit-setting, role-modeling, watching daughters exercise, and encouragement were support behaviors used by mothers. Daughters disagreed that mothers used reminders, punishment, and reward physical activity as support behaviors.

#63. GREG NORMAN

EMPLOYEE USE OF A WIRELESS PHYSICAL ACTIVITY TRACKER WITHIN TWO INCENTIVE DESIGNS AT ONE COMPANY

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Kevin Heltemes

ABSTRACT

Background: Physical activity provides numerous benefits, including reducing risk factors that contribute to the leading causes of morbidity and mortality.

Methods: The current study had a retrospective design and the study population consists of EBE American Specialty Health employees who have completed a HA, and biometric screening during 2011 (N = 396) or 2012 (N = 500 EBE); age 18 to 65. There were 320 employees that were in both 2011 and 2012. During 2011, the threshold was 500,000 steps per quarter. By comparison, there was a three tier step threshold during 2012 (e.g., 400,000 steps per quarter, 650,000 steps per quarter, 900,000 steps per quarter) and employees earned different gift card values.

Results: The prevalence of non-users during 2011 was 35.4% and 27.2% for 2012. Incentive year and quarter of year were significant predictors of meeting a quarterly incentive threshold. After adjusting for covariates, members engaged in coaching were 3 times as likely to be active users in relation to non-users, compared to those not engaged in coaching during 2011. During 2012, recent employees were significantly more likely to be active users. Conversely, members with high stress were less likely to be active users.

Conclusions: The change in incentive plan design in 2012 increased the prevalence of employees reaching the incentive at each quarter, and all four quarters compared to 2011. The findings of this study suggest the multi-tiered design may be preferable as a population health approach.

#64. JAMES SALLIS

BUILT ENVIRONMENT AND PHYSICAL ACTIVITY: 10-COUNTRY STUDY

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Ester Cerin, Terry L. Conway, Marc Adams, Lawrence D. Frank, Deborah Salvo, Graham Smith, Jasper Schipperijn, Mike Pratt, Neville Owen, Kelli L. Cain, Rachel Davey, Jacqueline Kerr, Poh-Chin Lai, Josef Mitas, Rodrigo Reis, Olga L. Sarmiento, Grant Schofie

ABSTRACT

Purpose: The study purpose was to document the strength, shape, and generalizability of associations of built environment variables to total physical activity, using objective measures, in an international sample of adults.

Methods: The International Physical activity and Environment Network (IPEN) Adult Study was a coordinated international study, with common methods. The study design was to sample participants from neighborhoods selected to be high or low on walkability and high or low on income. Present analyses were done with 6822 adults aged 18-66 years from 14 cities in 10 countries on 5 continents. Indicators of walkability, transit access, and park access were assessed in 1-km and 0.5-km street network buffers around each participant's home using Geographic Information Systems (GIS)-based methods. Total minutes of moderate-to-vigorous physical activity (MVPA) were measured by 4+ days of waist-worn accelerometer monitoring. Associations of environmental variables with MVPA were estimated using generalized additive mixed models (GAMMs) with Gamma variance and logarithmic link functions, with numerous covariates.

Results: Four of 6 environmental variables were significantly and linearly related to MVPA in single-variable models: net residential density, intersection density, transit density, and number of parks. Mixed land use variables and distance to nearest transit point were unrelated. Living in the most activity-friendly environments could help the average resident achieve 32-59% of the 150 minute/week physical activity guidelines.

Conclusion: Using objective data in a study of 14 cities in 10 countries, residential density, intersection density, transit access, and number of parks were positively related to total moderate-to-vigorous physical activity, with residential density being the strongest correlate. Generalizability of findings across cities suggests built environment interventions hold promise as a strategy to reduce the health burden of the global physical inactivity pandemic.

#65. JESSA ENGELBERG

SEE SPOT WALK: DOG WALKING AS PHYSICAL ACTIVITY AND MULTI-LEVEL CORRELATES OF DOG WALKING AMONG ADOLESCENTS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Jordan A. Carlson, Terry L. Conway, Kelli L. Cain, Brian E. Saelens, Karen Glanz, Lawrence Frank, James F. Sallis

ABSTRACT

Background/context: Given the low levels of physical activity and that nearly 50% of US households own dogs, exploring factors associated with dog walking are important to inform public health interventions to increase physical activity.

STUDY OBJECTIVES: To assess the association of dog ownership and dog walking with moderate to vigorous physical activity (MVPA) and BMI and explore correlates.

Methods/design: Measures included 7 days of accelerometer monitoring, GIS measures of the built environment, and surveys of psychosocial and environment characteristics. Minutes/day of MVPA, BMI and psychosocial and environmental correlates were compared among adolescents (1) without a dog (n=441) and those with a dog who (2) do (n=300) or (3) do not (n=184) walk it. All models were adjusted for participant demographic factors.

SETTING AND SUBJECTS: Participants were adolescents (n=928) from the Baltimore, MD and Seattle, WA regions, ages 12-17 years.

Results: Adolescent dog walkers obtained 4-5 more minutes/day of MVPA non-dog-walkers (p=.044) and those who lived in non-dog households (p=.025). Adolescent BMI was not associated with dog walking or dog ownership. Adolescents who walked their dog were 12% more likely to live in a walkable neighborhood (p=.006), and more likely to have an educated parent (p=.006), own more personal electronics (p=.047), and live in a neighborhood with lower perceived traffic safety (p=.048).

Conclusions: Dog walkers obtained 7-8% more minutes/day of MVPA than those who did not walk them, and correlates of dog walking were found at multiple levels of influence. Results suggest interventions to increase dog walking at the environmental and psychosocial levels are worthy of evaluation.

#66. JOB GODINO

RESULTS OF A TWO-YEAR SOCIAL AND MOBILE WEIGHT-LOSS INTERVENTION FOR OVERWEIGHT AND OBESE YOUNG ADULTS: PROJECT SMART

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

G. Merchant, G.J. Norman, M.C. Donohue, S.J. Marshall, J.H. Fowler, K.J. Calfas, J.S. Huang, C.L. Rock, W.G. Griswold, A. Gupta, F. Raab, B.J. Fogg, T.N. Robinson, K. Patrick

ABSTRACT

Purpose: Relatively few weight-loss interventions are evaluated for longer than a year, and even fewer employ mobile and social technologies commonly used among young adults. We assessed the effectiveness of a two-year intervention designed to reduce weight by improving weight-related behaviors. The intervention was theory-based and delivered via integrated user-experiences with 1) Facebook, 2) mobile apps, 3) text messages, 4) emails, 5) a website, and 6) ad hoc contact with a health coach.

Methods: 404 overweight or obese college students (aged 18 to 35 years) from three universities in San Diego, CA were randomized to receive either the intervention (n=202) or access to a website containing general health information (control group, n=202). The primary outcome was objectively measured weight at 24 months, and differences between groups were evaluated using linear mixed-effects regression.

Results: The mean (SD) age of participants was 22.7 (3.8) years; most were female (70%); and many had diverse racial or ethnic backgrounds (42% white and 31% Hispanic). Mean (SD) BMI was 29.0 (2.8) kg/m², waist circumference was 87.8 (8.9) cm, and systolic blood pressure was 115.3 (10.9) mm Hg. At 24 months, weight was assessed in 341 (84%) participants. Weight, adjusted for sex, ethnicity, and university, was significantly less in the intervention group compared to the control group at 6 months (-1.33 kg, p = 0.011) and 12 months (-1.33 kg, p = 0.008). However, differences in adjusted mean weight between groups at 18 months (-0.67 kg, p = 0.200) and 24 months (-0.79 kg, p = 0.204) were not significant. Additional outcomes have been analyzed and will be reported.

Conclusions: Social and mobile technologies may facilitate limited short-term weight loss among young adults, but as utilized in this intervention, these approaches did not produce sustained weight changes. Nonetheless, the intervention was not geographically constrained and could feasibly be disseminated to large numbers of individuals. Thus, if the reductions in weight observed in this trial could be replicated in other social and mobile interventions that improve engagement and retention, there is promise that they could translate into a meaningful population-level effect on weight status among young adults.

#67. KELSIE M FULL

PHYSICAL ACTIVITY AND SLEEP: EXAMINING THE EFFECTS OF THE MIPARC PHYSICAL ACTIVITY INTERVENTION ON THE SLEEP PROBLEMS OF OLDER ADULT PARTICIPANTS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Jacqueline Kerr

ABSTRACT

Background: One third of the US population report problems sleeping. Sleep problems increase with age. Decreasing the sleep disturbances of older adults may improve physical and mental health. Physical activity interventions may have a positive effect on sleep quality.

Study Objectives: To explore the effect of a physical activity intervention for older adults on participants' self-reported sleep disturbances.

Methods: The data are from a multilevel physical activity intervention (MIPARC) for older adults. Study evaluation included self-report surveys and accelerometry. Change in sleep disturbances and physical activity from baseline to 6 months were examined. To account for within group correlations, mixed effect models were used.

Setting and Subjects: Residents over the age of 65 years (N=307, mean age 84) were recruited from 11 retirement communities in San Diego.

Results: At baseline there was no significant difference between intervention and control group participants' sleep disturbance score (group means: control=53.6, intervention=52.6). Despite the increase in physical activity at 6 months, the intervention was not significantly related to a change in sleep scores. The intervention was associated with a 1-point increase in sleep disturbance scores.

Conclusion: Studies have demonstrated the relationship between increased physical activity and improved sleep. The MIPARC intervention had a significant impact on physical activity and health outcomes, but did not have significant effect on participants' sleep disturbances. This proposed relationship between physical activity and sleep may not apply to older adults. Future research using objective measures of sleep is needed to examine this relationship in older adults.

#68. LAURA REDWINE

EFFECTS OF MILD-TO-MODERATE EXERCISE INTERVENTIONS ON COGNITIVE FUNCTION AND DEPRESSION SYMPTOMS IN HEART FAILURE PATIENTS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Laura S. Redwine, Meredith S. Pung, Suzi S. Hong, Kathleen S. Wilson, Kelly S. Chinh, Paul J. Mills

ABSTRACT

Individuals with heart failure (HF) have elevated risk of cognitive impairment, with 70% or more scoring below clinical cut-points on cognitive screening tests. In addition, almost a third of HF patients exhibit clinical levels of depression symptoms, which are also related to moderate cognitive deficits. Combined, reduced cerebral blood flow associated with HF and elevated depression symptoms may put HF patients at an even greater risk for cognitive impairment. This may be important information, since even mild cognitive decrements are often a precursor to further cognitive impairment and increase dementia risk, especially among individuals with vascular pathology. Meanwhile, exercise programs are shown to be beneficial in HF patients with a range of depression symptom levels. However, it is unknown whether in HF patients mild-to-moderate exercise can improved cognitive function and whether such improvements are related to alterations in depression symptoms. The present study sought to examine the relationships among mild-to-moderate exercise modalities (Tai Chi practice or resistance band training), depression, and cognitive function. Methods: Fifty-four HF patients (mean age=66.4 +/- 10.8, and left ventricular ejection fraction (LVEF%) = 46.0 +/- 13.9) were randomly assigned to 16-weeks of Tai Chi, Resistance Band (RB) training or Standard of Care (SOC). The Montreal Cognitive Assessment (MoCA) (mean = 23.5 +/- 4.1) and the Beck Depression Inventory (BDI) (mean = 10.2 +/- 6.8) were administered to all participants before and after the 16-week intervention period. Results: A repeated measures ANOVA adjusting for LVEF% and age revealed a group X time interaction for scores on the MoCA ($F = 3.89$, $p = .032$, partial $\eta^2 = .21$), with individuals in the Tai Chi group and the RB groups demonstrating greater improvement in overall MoCA scores compared with the SOC group who showed a decline in MoCA scores. Multiple regression analyses adjusting for LVEF% and age revealed that changes in MoCA were significantly negatively related to alterations in BDI (change $R^2 = .113$, $t = -2.69$, $p = .011$). Conclusions: Our findings provide the initial evidence of the efficacy of mild-to-moderate exercise for improving neuropsychological functioning in heart failure patients.

#69. LILA M ESTRADA

RELATIONSHIP BETWEEN MATERNAL WEIGHT-RELATED MESSAGES AND EATING AND PHYSICAL ACTIVITY BEHAVIORS OF YOUNG OVERWEIGHT WOMEN

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Marisol Garcia, Becky Marquez

ABSTRACT

Background: Studies on predominately non-Hispanic Whites have found that maternal statements on weight to young women have an impact on their eating and physical activity behaviors. To date, few studies have addressed the topic among Mexican-Americans, a group disproportionately affected by obesity.

Study Objective: To determine if positive or negative maternal weight-related messages were associated with diet and physical activity of young overweight women.

Method: Participants completed measures on maternal communication and weight-related behaviors. Positive and negative maternal weight-related messages were assessed using the Parental Eating and Weight Messages Survey. The weight-related behaviors examined were servings/day of fruit and vegetables consumed, times/week of fast food consumption, and minutes/week of moderate-to-vigorous physical activity. Descriptive statistics and correlation analyses were conducted.

Subjects and Setting: Overweight Mexican-American women (N=53) were assessed in community and academic settings.

Results: Participants (age 24.7 ± 5.7 years and BMI 33.8 ± 6.9 kg/m²) on average consumed 2.7 ± 1.8 servings/day of fruit and vegetables and 1.8 ± 1.6 times/week of fast food, and engaged in 32.1 ± 74.4 minutes/week of moderate-to-vigorous physical activity. Greater positive maternal weight-related messages were significantly associated with higher fruit and vegetable consumption ($r=0.31$, $p=0.02$). Negative maternal messages were not associated with eating or physical activity behaviors ($p>0.05$).

Conclusion: Targeting mothers to promote positive communication on weight, which emphasizes health and body satisfaction, with adult daughters may help improve dietary quality of young overweight women.

#70. MARISOL GARCIA

MOTHER-DAUGHTER CRITICISM ON WEIGHT-RELATED BEHAVIORS AND INTEREST IN A WEIGHT LOSS PROGRAM

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Lila M Estrada, Becky Marquez

ABSTRACT

Background: The prevalence of obesity is high in Mexican-American women. Little is known about the application of a family-based weight loss intervention for mothers and adult daughters whose communicative interactions may influence their interest in participating together.

Study Objective: To determine if criticism on weight or weight-related behaviors is reciprocated in overweight mother-daughter dyads and whether criticism predicts interest in participating in a weight loss program together.

Method: Dyads completed questionnaires on criticism on weight, eating, and exercise, and interest in a mother-daughter weight loss program. Correlation analyses were conducted. **Subjects and Setting:** Overweight Mexican-American women (N=106; 53 dyads) were assessed in community and academic settings.

Results: On average, BMI of mothers (49.5 ± 7.5 years) was 35.7 ± 7.6 kg/m² and daughters (24.7 ± 5.7 years) was 33.8 ± 6.9 kg/m². Giving or receiving criticism was not significantly correlated within dyads ($r=0.11$, $p=0.43$) suggesting criticism was not reciprocated. Criticism was more often directed from mothers to daughters as daughters reported receiving more frequent criticism from mothers than mothers reported from daughters. There was a significant relationship between giving criticism by one dyad member and receiving criticism by the other dyad member ($r=0.43$, $p<0.01$) indicating agreement in reports of criticism. Criticism predicted interest in a mother-daughter weight loss program such that higher criticism on exercise was associated with lower interest ($r=-0.26$, $p<0.01$).

Conclusion: Strategies to engage mothers and adult daughters with high criticism in a communication-focused weight management program are needed as these families are less likely to want to participate despite the potential benefits.

#71. MICHELLE TAKEMOTO

THE CROSS-SECTIONAL ASSOCIATIONS BETWEEN OBJECTIVE TRAVEL BEHAVIORS AND HEALTH OUTCOMES IN OLDER ADULTS IN RETIREMENT COMMUNITIES

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Jordan Carlson, Kevin Moran, Katie Crist, Jacqueline Kerr

ABSTRACT

Background: Transportation behaviors are important for the activity, health and independence of older adults. Global positioning systems (GPS) provide an objective way to measure travel behavior. The purpose of this study was to use GPS data to investigate associations between travel behaviors and health outcomes in older adults.

Methods: A sample of adults (N=281) over 65 years of age wore GPS and accelerometer devices for one week. The average distance and number of pedestrian and vehicle trips were calculated. Correlations were explored between these variables and objective and subjective health outcomes including: physical functioning; cognitive functioning; psychological functioning; pain; and physical activity (PA).

Results: Participants who had more frequent or traveled longer distances in pedestrian trips had significantly higher physical functioning, quality of life, cognitive functioning and PA. Participants who had more frequent or traveled longer distances in pedestrian trips walked faster, had less pain, less fear of falling and fewer depressive symptoms. The participants who traveled further or more frequently in vehicles had significantly higher physical and cognitive functioning.

Conclusions: Older adults who participated in pedestrian trips had better health outcomes. These relationships are in part due to the physical activity involved in walking. Those who had more vehicle miles and trips had better physical and cognitive functioning but no differences in other health outcomes. Vehicle trips may help older adults maintain their independence and help with cognitive functioning through planning and reaction time activities. Providing supportive environments for walking may provide the biggest health impact for older adults.

#72. ROSEMAY A. REMIGIO-BAKER

WALKING MAY BE A VIABLE ALTERNATIVE TO RECREATIONAL PHYSICAL ACTIVITY FOR PROMOTING PHYSICAL AND MENTAL WELLBEING AMONG OLDER WOMEN: THE WOMEN'S HEALTH INITIATIVE-SAN DIEGO

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Andrea LaCroix, Jordan Carlson, Jacqueline Kerr, Matthew Allison

ABSTRACT

Background/context: Despite the physical and mental health benefits of moderate or vigorous physical activity (MVPA), it may be less common in older populations with physical limitations. Walking has similar associations as MVPA with physical outcomes, but little is known about how walking influences quality of life measures.

Study objectives: To assess the associations between MVPA and walking with physical and mental wellbeing.

Methods/design: We evaluated the cross-sectional relationships of self-reported MVPA and walking (in hours/week) with physical and mental wellbeing using multinomial logistic regression. The physical and mental components of SF-36 were assessed as tertiles. Odds ratios using the lower tertile as reference were estimated. Covariates included age, ethnicity, education, smoking status, and comorbidity.

Setting and subjects: Women's Health Initiative San Diego cohort of 2,402 ages 50-79 years.

Results: Walking (86%) was more prevalent than MVPA (57%).

There was 14% greater likelihood of scoring in the middle vs. lower tertile of physical wellbeing per hour increase in MVPA. This doubled comparing upper to lower tertile. There was 20% greater likelihood of scoring in the middle vs. lower tertile of physical wellbeing per hour increase in walking, which also increased comparing upper to lower tertile.

There was 8% and 11% greater mental wellbeing comparing middle to lower tertile per hour increase in MVPA and walking, respectively. For walking, the estimate was weaker, though significant, comparing upper to lower tertile.

Conclusion: For an older population where physical limitations may preclude MVPA, walking may be an alternative to improve physical and mental wellbeing.

#73. SELENE XU

OBJECTIVE ASSESSMENT OF PHYSICAL ACTIVITY: STATISTICAL APPROACHES TO ACCOUNT FOR MISSING VALUES IN ACCELEROMETRY DATA

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

Loki Natarajan, Jacqueline Kerr, Suneeta Godbole, Ruth Patterson, Ian Abramson

ABSTRACT

Objective: Physical inactivity is a recognized risk factor for many chronic diseases. Accelerometers are increasingly used as an objective means to measure daily physical activity. One challenge in using these devices is missing data due to non-wear, which if not accounted for, could bias study results.

Methods: We used graphical methods to examine missing data patterns of accelerometer outputs over the day to quantify when these missing data patterns tended to occur and how long they usually lasted. We developed statistical methods to design imputation and variance weighting algorithms to account for missing data effects when fitting regression models. Bias and precision of each method were evaluated and compared using simulations.

Subjects: We used accelerometer data from a cohort of ~150 overweight postmenopausal breast cancer survivors participating in an ongoing behavioral intervention trial (Reach for Health Study PI Ruth Patterson). Participants were on average 63 (SD = 6.8) years with mean BMI 31.2 (SD =5) at study entry, > 80% were White, 50% had a college degree or higher.

Results: Missing data patterns were usually concentrated during the early morning or late evening hours. Not accounting for missing data in the analysis yielded very biased estimates in the regression analysis. Initial results from the simulations indicated that incorporating variance weights and/or subject-level imputation reduced bias and improved precision by >50%, compared to ignoring missing data.

Conclusions: We anticipate that this work will result in simple statistical tools that can be used to improve analysis of accelerometer data.

#74. SUNNY SMITH

UNIVERSAL FOOD INSECURITY SCREENING AND REFERRALS WITHIN STUDENT-RUN FREE CLINICS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

David Malinak, Erica Settleowski, Steve Niemic, Sunny Smith

ABSTRACT

Background/Context: Over 50 million people in the United States suffer from food insecurity. Irregular access to food results in unhealthy eating patterns, higher rates of obesity, hypertension, hyperlipidemia, and diabetes.

Study Objectives: To assess the prevalence of food insecurity in an underserved patient population and make appropriate referrals.

Methods/Design: All patients seen at the UCSD Student-run Free Clinic Project from January 13, 2015 through February 21, 2015 were given the 6-item US Department of Agriculture Food Security Survey. This survey is scored on a scale of 0 to 6, with 0-1 representing high or marginal food security, and 2-6 as food insecurity (2-4: low food security, 5-6: very low food security).

Setting and Subjects: Three sites of the UCSD Student-run Free Clinic Project. Subjects were over 18 years of age, low-income, largely monolingual Spanish speaking Latinos.

Results: 168/226 (74.3%) of all patients reported food insecurity. The mean USDA Food Security six-item score for all patients was 3.01. Diabetic patients had higher food insecurity scores (mean 3.31, N=126) than non-diabetics (mean 2.71, N=100) ($p=0.02$). 76/226 (33.6%) of all patients reported very low food security, including 45/126 (35.7%) diabetics and 29/100 (29.0%) non-diabetics ($p=0.01$). Food insecure patients were offered referrals to food banks and Cal-Fresh when eligible and we have initiated a pilot project allowing same day Cal-Fresh enrollment onsite.

Conclusions: Food insecurity rates in this setting were even higher than previously documented in underserved clinic settings. Systematic food insecurity screening and referrals should be considered in other underserved settings.

#75. TRINA TANG

EFFECTS OF SOFT DRINK CONSUMPTION ON NUTRITION AND HEALTH: A SYSTEMATIC REVIEW AND META-ANALYSIS

CONFERENCE THEME

Physical Activity & Diet

COLLABORATORS

ABSTRACT

With increases in daily intake of sugar-sweetened beverages in the United States, there are considerations for possible ways to implement reduction of consumption through public health. Looking at 88 articles, it examines the consumption of sugar-sweetened beverages or soft-drinks to understand the primary and secondary outcomes it causes. There are associations with lower intakes of specific nutrients as well as the higher risk of certain health problems. For further understanding of consumption, study designs using longitudinal and experimental studies were compared to cross-sectional studies to distinguish the effect of size differences. There is a comparison for male vs female, as well as adults vs children to assess the impact that soft drinks have on health. The articles analyzed have clearly found that people who receive extra energy from the consumption of soft drinks do not compensate for it in other ways. The strongest health condition present as an outcome of soft drink intake was found to be type 2 diabetes. All the data analyzed has been found to find the association of soft drink intake with higher levels of energy intake. No other energy consumption has been found to provide as much energy as the consumption of soft drinks, as well being linked to other health conditions.

#76. ANNIKA MONTAG

COMMUNITY BASED RESEARCH TO REDUCE RISKY DRINKING AMONG WOMEN OF CHILDBEARING AGE

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

M. Dusek; A. Mazzetti; L. Nelson; M. Ortega; S. Toscano; D. Calac; C. Chambers

ABSTRACT

A Screening, Brief Intervention, and Referral for Treatment (SBIRT) study to reduce risky drinking was conducted among 343 Native American women of childbearing age. Women were randomized to SBIRT intervention or control (assessment alone) and followed for 6 months. Participants in both arms of the study significantly decreased risky drinking over a 6-month follow-up period ($p < 0.001$). Approximately 74% of the decrease in alcohol consumption over the 6-month follow-up could be explained by the participants' depression/functionality, binge drinking at baseline, familiarity with someone prenatally affected by alcohol, and perception of the drinking patterns of other women in their community. Among a subset of 80 women who answered questions about why or why not they chose to drink, the most important reason women chose not to drink was "children". In addition, non-drinkers cited top reasons as health and family, while current drinkers indicated immediate barriers of needing to drive and work. Nearly 40% felt pressured to drink. Feeling pressured to drink, perceptions of other women's drinking, and understanding of risks to a potential pregnancy were important predictors of the amount of alcohol consumed by participants. Results of this study provide valuable insights into risk and protective factors for risky alcohol consumption and suggest specific approaches for future interventions.

#77. CAROLINE CHEN

ELECTRONIC CIGARETTE MODEL PREFERENCES: A U.S. POPULATION STUDY

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

Yue-Lin Zhuang, Shu-Hong Zhu

ABSTRACT

Background and Aims: Electronic cigarette design continues to evolve, but they can be generally grouped into two models: cigalikes and tank systems. Cigalikes come in disposable and refillable types and mimic the appearance of traditional cigarettes. “Tank” systems feature a prominent refillable chamber which users can fill with nicotine-containing e-liquid in a wide range of flavors and nicotine concentrations. Tanks are generally capable of delivering more nicotine than cigalikes. This study examined the preference of these two models by current and former smokers.

Design and Setting: A probability sample of adult current and former smokers representative of the population of the United States

Participants: A total of 923 e-cigarette users from 3,708 current smokers and 2,852 former smokers

Measurements: The primary outcome was choice of e-cigarette model: “cigalikes” or “tank” systems. E-cigarette use is defined as “currently using” when answering the question, “do you currently use e-cigarettes everyday, some days, nor not at all?”

Findings: Former smokers were significantly more likely to use tank models than current smokers [58.0% vs. 45.6%], while current smokers were significantly more likely to use cigalikes than former smokers [61.2% versus 45.7%]. Smokers who have made at least one quit attempt in the last 12 months were more likely to use tank system than smokers who have not made a quit attempt [weighted average of 52.9% vs. 33.4%. Furthermore, among those who made a quit attempt, the rate of using tank system is higher for those who succeeded than for those who failed [60.8% vs. 52.9%].

Conclusions: We found a positive correlation between tank systems and smokers’ intention to quit smoking and their success in quitting. Findings suggest that tank models may hold promise for aiding smoking cessation and that longitudinal studies examining whether smokers switch from cigalikes to tanks as they become motivated to quit are worthy of further study.

#78. DAVID STRONG

UNDERSTANDING CESSATION AMONG SMOKERS WITH DEPRESSION: LINKING POPULATION TO CLINICAL PRACTICE

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

William Sieber, Zephon Lister, Madison Noble, Alita Newsome, Gene Kallenberg

ABSTRACT

Background: Public health efforts to understand the disproportionate tobacco related disease burden among smokers with depression may be enhanced by linking population-level surveillance to clinical practice. With 70% of all smokers visiting a primary physician each year, universal monitoring of smoking status and depression in primary care settings can be used to better characterize how changes in depressive symptoms, co-occurring chronic physical conditions and their treatments impact smoking cessation.

Method: The current study used methods based in item response theory to link Patient Health Questionnaire (PHQ-2, PHQ-9) depression screening tools across a diverse group of Hispanic (n=1,671), African American (n=899), Asian (n=2,679), and White (n=10,263) patients screened in 2011-2012 for tobacco use and depression in UCSD Family Medicine primary care clinics.

Results: Linear mixed-effects models with adjustment for age, gender, and racial/ethnicity suggested that both current smoking (b=0.23, p<0.01) and tobacco-related diseases including diabetes, obesity, asthma, arthritis, and gastroesophageal (GERD) reflux (p's<0.01) were related independently to higher depressive symptoms. Use of antidepressants (b=-0.03, p<0.05) and behavioral health service (b=-0.08, p<0.01) from collaborative care (CC) were related to greater decreases in depression over time. Among current smokers, physical illnesses including hypertension (OR=1.5, p<0.01), arthritis (OR=1.9, p<0.01) and GERD (OR=1.5, p<0.01) but not level of depression (OR=1.1, p<0.6) were independently predictive of quit attempts during the year. Level of depression (OR=0.69, p<0.01) and hypertension (OR=0.75, p<0.01) were associated with lower quitting success.

Conclusions: Smokers presentation with tobacco-related physical illness may facilitate physician-assisted attempts to quit. Primary care treatments are effective in reducing depressive symptoms. Efforts to promote more effective cessation attempts among smokers with elevated depressive symptoms may involve engaging behavioral health staff to promote combined behavioral and pharmacologic treatments for this vulnerable population.

#79. GABRIEL ANAYA

EFFECT OF ALCOHOL SALES AND HEALTHCARE ACCESS IN ALCOHOL-ATTRIBUTABLE DEATHS IN MEXICO FROM 1998 TO 2012

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

ABSTRACT

Introduction: Efforts have been undertaken across Mexico and the world to prevent mortality associated with alcohol consumption. Alcohol consumption has a costly effect in society and the economy of a country, taking young productive lives and causing chronic diseases that overburden the health system. The aim of this analysis is to evaluate the difference in alcohol-attributable mortality with sales of alcohol and access to healthcare at municipal, state and regional level.

Methods: This is a cross-sectional and longitudinal analysis, we used a dataset of seven and a half million deaths registered in Mexico for 1998 to 2012. Following the Center for Disease Control and Prevention (CDC) methodology of alcohol-attributable fractions (AAF), we calculated mortality due to alcohol-related diseases and computed age-standardized mortality rates by states and municipalities. Sales data on retail and wholesale stores was obtained for beer and liquors, calculating per capita consumption of pure liters of alcohol. Healthcare access was measured using a Geographical Information System (ArcGIS) with a grid density measurement and comparison with alcohol-attributable mortality rates.

Results: Out of the total mortality presented in Mexico, on average 12% of all cases is due to alcohol-related diseases. Minimal reduction in mortality cases has been observed, with only a 1% average less mortality over the fifteen year period studied. When we compare municipalities based on population size, we can observe that rural (<2,500 population) has the highest mortality due to alcohol-related diseases. Regional differences are obvious with the South-Central and Central/Inland regions of Mexico having the most mortality cases. Linear models of alcohol sales by beer and liquors showed a negative effect with alcohol-attributable mortality ($p < 0.001$). Covariates analyzed had more effect in alcohol-related diseases than what expected, with level of education in a municipality lowering significantly the mortality cases.

Conclusions: Based on the observation, higher alcohol sales (per capita consumption) do not reflect in higher alcohol-related mortality rates in Mexico. This might be due to the commonness of alcohol consumption and similar distribution of sales across the country. Education, region and belonging to a larger city showed an important reduction in mortality associated with alcohol consumption. Closeness to more healthcare options and sometimes more specialized, as well as faster access to health resources might be indicative of better survival as observed in non-rural communities.

#80. HIEN THAI NGUYEN

THE ENVIRONMENTAL IMPACTS OF CIGARETTE BUTT LITTER ON UC SAN DIEGO CAMPUS

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

Deborah Pino-Saballett, Kate Murray

ABSTRACT

Background: UC San Diego (UCSD) adopted a smoke and tobacco free policy in September 2013; however, smoking continues to occur on campus based on the number of cigarette butt litter observed. Cigarette butt litter continues to pose many health and environmental challenges.

Study Objectives: This project evaluates the burden of cigarette butt litter and raises awareness of the tobacco free policy and environmental impacts of cigarette butt litter on campus.

Methods/Design: Cigarette butt litter was collected at hot spot smoking areas during a 72-hour period at baseline. The intervention includes educational programming targeting Residential Advisors (RA's) and sixth college students, as well as placing signage about the smoke-free policy around the campus. A post program evaluation of the intervention will be used to analyze the satisfaction and changes of knowledge's around the policy. A post 72 hour cigarette butt clean up will also be evaluated.

Settings and Subjects: The 72-hour cigarette butt study and the RA training program will take place within the residential housing area in Sixth College at UCSD. Approximately twenty-five RA's and residential staff will participate in this program.

Results: Data will be presented on the rate of new cigarette butt litter on campus from the 72-hour pick up. Changes in knowledge, attitudes, and behaviors among RA's and residential staff will also be evaluated in this study.

Conclusions: This initiative represents an important next step in evaluating and enforcing the smoke and tobacco free policy at UCSD.

#81. MADISON NOBLE

INCREASING CESSATION OR PROLONGING THE URGE? DIFFERENCES IN MARKETING FEATURES IN NICOTINE REPLACEMENT PRODUCT ADVERTISEMENTS

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

David Strong, Annie Lei, Christine Tran, Carlo Mazzaferro, Esther Park, John Pierce

ABSTRACT

Background: The impact of nicotine replacement therapeutics (NRT) on quitting success in the US population remains unclear. Understanding of advertising messages and product features is needed to better understand the impact of cessation products on quitting in the US.

Objectives: This study examined television-marketing features of NRT and cessation medications.

Methods: We reviewed 145 advertisements on cessation products (nicotine gum, patch, lozenge, inhaler & Chantix) from 75 media markets shown in 2003-2004. Each advertisement was coded to evaluate commercials' characteristics (number/ demographics of actors) focus (statement of "quit/benefits of quitting" vs. statement of "craving/affect relief") and overall impression (quitting vs. craving relief). Raters' coding compared across 50 randomly selected ads and agreement was assessed using Krippendorff's Alpha >0.80.

Results: High inter-rater reliability was achieved for examined categories (.84-1.00) but two (benefit stated, craving/relief stated), which were removed from analyses. Majority of actors in ads were White (64%). Men were more likely to be present in nicotine, gum and patch ads while women were more likely to be in lozenge ads. Nicotine gum ads had a higher likelihood of focusing on craving relief ($X^2 = 12.59$, $p < 0.02$) while lozenge, patch, multiple NRT, and Chantix product ads were more likely than Nicotine gum ads to focus on quitting ($X^2 = 28.25$, $p < 0.001$).

Conclusions: Smokers are likely to see a significant proportion of NRT ads focusing on products that relieve craving rather than promote cessation. Further surveillance is needed to assess changes in smoking behaviors in relation to exposure to marketing of NRT products.

#82. MAYA VIJAYARAGHAVAN

BUILDING TOBACCO CESSATION CAPACITY IN HOMELESS SHELTERS

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

John P. Pierce

ABSTRACT

Background: Homeless individuals have among the highest rates of tobacco use. Few homeless shelters offer behavioral counseling for tobacco cessation. Lack of training among staff and the perception that homeless individuals are uninterested in smoking cessation pose barriers to offering cessation services in shelters.

Population of interest: Homeless individuals

Description of project: We developed and pilot tested a capacity building intervention to improve homeless shelters' capacity to facilitate smoking cessation among their clients. We partnered with 2 transitional shelters in San Diego County that had indoor smoke-free policies and designated smoking zones away from their facilities. The intervention consisted of a 1.5-hour training for shelter staff that covered methods for providing brief cessation counseling and strategies to incorporate the counseling into the daily workflow. Prior to the intervention, we administered a questionnaire on tobacco use behaviors, knowledge of and attitudes toward tobacco use, and exposure to and practices related to tobacco cessation services to staff who were working at the shelters and homeless clients who were living in the shelters. We have implemented the intervention, and we will conduct post-intervention assessments on knowledge, attitudes, services, and practices related to tobacco use with staff and client cohorts at 6- and 12-weeks follow-up. Students from the UCSD BSPH program will participate in the data collection.

Policy implication: This study will demonstrate the feasibility of collaborating with a community organization to deliver tobacco cessation services to a vulnerable population, and will set the foundation to conduct a larger scale tobacco control clinical trial for sheltered homeless adults.

#83. MEREDITH MEACHAM

PREVALENCE AND CORRELATES OF SIMULTANEOUS INJECTION OF HEROIN AND METHAMPHETAMINE IN TWO PARALLEL COHORTS OF PWID IN SAN DIEGO, CA, AND TIJUANA, BC, MEXICO

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

Steffanie Strathdee, Gudelia Rangel, Richard Armenta, Tommi Gaines, Richard Garfein

ABSTRACT

Aims: Although persons who inject drugs (PWID) in the western U.S.-Mexico border region are known to inject both heroin and methamphetamine, little is known about the prevalence and risks associated with simultaneous injection of this depressant-stimulant combination. Baseline data from parallel cohort studies of PWID conducted concurrently in San Diego and Tijuana were used to measure the prevalence and identify correlates of simultaneous injection of heroin and methamphetamine.

Methods: PWID age >18 years who reported injecting illicit drugs in the past month were recruited using street outreach and targeted advertising in San Diego (n=576) and Tijuana (n=735). Participants completed interviewer-administered questionnaires that included socio-demographics and past 6 month drug use, overdose history, and engagement in HIV-associated drug and sexual risk behaviors. Bivariate and multivariable logistic regression analyses were used to identify correlates of simultaneous heroin and methamphetamine injection.

Results: The prevalence of simultaneous injection in the past 6 months was 39.9% overall, and was higher in Tijuana (55.8%) than in San Diego (19.8%). In preliminary multivariable analyses adjusting for study site, syringe sharing, using a prefilled syringe, finding it hard to get new syringes, reporting great or urgent need for treatment, and younger age were independently associated with simultaneous injection. A significant interaction between overdose and study site showed that simultaneous injection was associated with a higher odds of past 6 month overdose in San Diego than in Tijuana.

Conclusion: These findings indicate that simultaneous heroin and methamphetamine injection is more common in Tijuana than in San Diego, yet this practice had a stronger association with overdose in San Diego than in Tijuana. Simultaneous heroin and methamphetamine injection was also independently associated with HIV injection risk behaviors and service need. Overdose prevention interventions should address simultaneous injection of depressants and stimulants.

#84. SARAH LINKE

AN EXERCISE-BASED PROGRAM FOR VETERANS WITH SUBSTANCE USE DISORDERS: FORMATIVE RESEARCH

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

Madison Noble, Samantha Hurst, David R. Strong, Laura Redwine, Sonya B. Norman, Laurie A. Lindamer

ABSTRACT

Substance use disorders (SUDs) are prevalent among veteran populations. Adjunctive treatments for SUDs are warranted for many reasons including high relapse rates. Physical exercise has broad health benefits as well as mood-enhancing, anxiolytic, and withdrawal-reducing effects, but veterans with SUDs report low rates of regular exercise. Evaluating exercise-based interventions that incorporate evidence-based behavior change strategies tailored to meet the unique needs of veterans with SUDs is warranted. This paper describes the formative research conducted to evaluate the following information among veterans receiving treatment for SUDs: 1) interest in an adjunctive exercise program to supplement their current SUD treatment and; 2) exercise program design considerations. A survey and small group interviews were conducted to obtain both quantitative and qualitative data. Results suggested that veterans with SUDs are interested in exercise, and participants provided perceptive suggestions for modifying an existing evidence-based program. These findings will be used to design an exercise-based treatment program tailored specifically for veterans with SUDs.

#85. SARAH LINKE

THE RELATIONSHIPS AMONG PHYSICAL ACTIVITY, SEDENTARY BEHAVIOR, OBESITY, AND CESSATION ATTEMPTS AMONG SMOKERS IN CALIFORNIA

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

David R. Strong, Mark G. Myers, Steve Edland, Eric Leas, Richard Hofstetter, Wael Al-Delaimy

ABSTRACT

Background: Smoking, insufficient physical activity (PA), sedentary behavior (SB), and overweight/obesity are leading risk factors for morbidity and premature mortality. Few prospective examinations of the relationship between these behavioral risk factors and quitting behaviors among smokers have been published.

Purpose: The goals of this study are to examine: 1) the cross-sectional relationships among behavioral health risk factors within a sample of smokers; and 2) the prospective relationship between these behavioral health risk factors and one-year quitting behaviors.

Method: The California Smokers Cohort (CSC), conducted from 2011 through 2013, is a population-based survey of adult smokers in California. Participants' reported health behaviors at baseline were examined cross-sectionally (using chi-square analyses) and longitudinally (using logistic regression analyses) as predictors of smoking trajectories in the subsequent year.

Results: At baseline, PA but not SB was related to weight status, and the combination of PA and SB was related to weight among healthy weight and obese but not overweight smokers. In multivariate models adjusted for sociodemographic characteristics, healthy weight smokers with higher levels of PA were more likely to make a ≥ 24 -hour quit attempt; overweight smokers were less likely to make a ≥ 1 -month quit attempt regardless of PA and SB; and smokers with higher PA levels were more likely to reduce their daily cigarette use regardless of weight status and SB.

Discussion: Overall, the results demonstrated that smokers with other behavioral health risk factors were less likely to make positive strides toward quitting. These findings are alarming considering the additive effects of multiple negative health behaviors on health outcomes. They also support the notion of risk factor clustering suggestive of overall healthy vs. unhealthy lifestyles and the potential need to address multiple health behaviors along with smoking.

#86. YUE-LIN ZHUANG

ATTITUDES TOWARD E-CIGARETTES AMONG SMOKERS WHO HAVE NEVER TRIED E-CIGARETTES

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

Shu-Hong Zhu

ABSTRACT

Most e-cigarettes users are smokers, and the majority of smokers have already experimented with e-cigarettes. A 2014 population survey showed that 53.7% of U.S. smokers have tried e-cigarettes. This study focused on the rest of the smokers: those who have never tried e-cigarettes. It examined their attitude toward e-cigarettes and their intention to use e-cigarettes in the future. The study is based on a national probability sample (N=1625) in the United States in 2014. The result shows that 58.0% of smokers who have never tried e-cigarettes would actually try e-cigarettes if offered one by a friend. The majority of these smokers, 86.2%, did not agree that e-cigarettes should be banned, and 69.8% of them believed e-cigarettes would be helpful for quitting smoking. In contrast to smokers who would not try e-cigarettes when offered one by a friend, these potential e-cigarettes users held more positive attitudes toward e-cigarettes. In particular, they were less likely to agree that e-cigarettes should be taxed like regular cigarettes (36.9% vs. 62.5%), less likely to agree that e-cigarettes advertising should be banned as regular cigarettes advertising (40.6% vs. 60.9%), more likely to expect that e-cigarettes could help them quit smoking (69.8% vs. 49.2%), and more likely to believe that e-cigarettes are less harmful (49.8% vs. 35.4%). These results suggest that an even greater proportion of smokers than those who have already tried e-cigarettes (> 53.7%) will experiment with e-cigarette in the future, likely increasing the overall e-cigarette uptake rate in the next few years. Future longitudinal studies can also examine how well the attitude measures described here predict the experimentation and the regular use of e-cigarettes among adults. Supported by a grant from National Cancer Institute U01 CA154280.

#87. YUYAN SHI

E-CIGARETTE USE, SMOKING CESSATION AND CHANGE IN SMOKING INTENSITY IN THE 2010/2011 TUS-CPS LONGITUDINAL COHORT

CONFERENCE THEME

Tobacco, Alcohol & Other Drugs

COLLABORATORS

Yuyan Shi, John Pierce, Martha White, Wilson Compton, Kevin Conway, Anna Hartman, Maya Vijayaraghavan, Karen Messer

ABSTRACT

Background: Electronic cigarettes (e-cigarettes) are heavily marketed, including for use as a smoking cessation aid. There is limited data to address impacts on US smoking behavior.

Methods: A representative cohort of US cigarette smokers (N=2,454) in 2010 Tobacco Use Supplement to the Current Population Survey (TUS-CPS) was re-interviewed 12 months later. Measures included ever-use of e-cigarettes for cessation or other reasons, use of pharmaceutical cessation aids (NRT or prescription medication), cigarette consumption level, and quitting history. The association of e-cigarettes with attempted cessation, with changes in cigarette consumption, and with 30-day abstinence at follow-up was assessed using multivariate regression models, adjusting for demographics and baseline cigarette dependence level.

Results: In this representative sample of US cigarette smokers, 11% (n=279) had ever used e-cigarettes and 42% (n=118) of ever-users reported use to help quit smoking. Among smokers who made a quit attempt, the percent abstinent 30 + days at follow-up was 11.1% (95% CI 6.0,16.2) for those who used e-cigarettes for cessation, compared to 17.8% (95% CI 8.8, 26.8) for those who used e-cigarettes for other reasons, and 21.6% (95% CI 19.4, 23.8) for those who did not use e-cigarettes. For those who used an approved pharmaceutical aid 16.0% (95% CI 13.2, 18.8) were abstinent 30+ days at follow-up compared to 22.4% (95% CI 21.8, 25.0) of those who did not use such aids. In an adjusted model, the use of e-cigarettes for cessation was associated with a 66% reduction in odds of 30 + day abstinence at follow-up (OR_{adj}=0.44, 95%CI=0.24-0.79), and the use of pharmaceutical aids with a 33% reduction in odds of 30 + day abstinence (OR_{adj}=0.67, 95%CI=0.50-0.88), compared to use of neither aid. Among continuing smokers, only lighter smokers who used e-cigarettes to quit showed an association with reduced cigarette consumption.

Conclusions: US smokers who used e-cigarettes as a cessation aid were less successful at quitting than other smokers. The effect of e-cigarette use on smoking intensity was restricted to light smokers who used e-cigarettes for a quit attempt.

#88. LAURA BUEHNING

VACCINATION PRACTICES AND BELIEFS OF ABIHM PHYSICIANS

COLLABORATOR

K MICHAEL PEDDECORD

ABSTRACT

Background:

Vaccines are one of the most effective public health interventions. At the same time, there has been a growing controversy and negative public opinion over the safety of vaccines. Patients who are seeking advice on vaccination choices often turn to integrative medicine physicians for their care. Therefore a greater understanding of the beliefs and clinical practice activities of these physicians in regards to vaccination is important.

Objectives:

The purpose of this study was to assess the beliefs and clinical practice activities of the American Board of Integrative and Holistic Medicine (ABIHM) physicians with regards to immunization.

Methods:

A voluntary and anonymous electronic web-based survey was distributed via email to all physicians who are diplomats of the ABIHM on June 19, 2013. The questionnaire included 33 items with 5 open-ended questions. We asked respondents for relevant personal and occupational data, practice characteristics, opinions on vaccination recommendations, vaccine manufacturing safety, use of alternative vaccination schedules, adverse event experiences, beliefs regarding the association between autism and other chronic diseases and vaccinations, adverse event surveillance, and vaccination mandates.

Results:

The electronic survey was completed by 290 of 1,419 diplomats for a response rate of 20%. Vaccinations are not provided by 32% of the respondents, however, 35% of them use alternative schedules on a regular basis. School and daycare mandates were supported for all vaccines by 22%, for only high communicable diseases by 33%, and 37% did not support these mandates for any vaccine. However, 57% of them support vaccination choice for all vaccines, 20% for only certain vaccines, while only 7% do not support vaccination choice. Additionally, 47% of these physicians were concerned that our present vaccination schedule is contributing to the development of chronic illnesses.

An assessment of associations between opinions and practice type showed many statistically significant associations. Integrative medicine physicians were less likely to administer vaccinations and provided fewer vaccinations than physicians in traditional allopathic medicine. Integrative physicians were less concerned about maintaining herd immunity, less supportive of school, daycare and employment mandates, and showed greater support of

vaccination choice. Toxic chemical and viral contaminants were of greater concern to a higher percentage of integrative physicians. Integrative physicians were also more likely to accept a connection between vaccinations and both autism spectrum disorder and other chronic diseases.

Conclusions:

The results of this survey have provided a greater awareness of the evolving issues regarding vaccination policy in this expanding medical specialty.

#89. ALICE E. ZEMLJIC-HARPF

PERSONALIZED MEDICINE AND STATIN SIDE EFFECTS: FACT OR FICTION?

COLLABORATORS

Joseph C. Godoy, Ingrid R. Niesman Jan M. Schilling, Anna Schwarz, Elizabeth K. Asfaw, Erika A. Alvarez, Nancy D. Dalton, Georgios Kararigas, Hemal H. Patel

ABSTRACT

Cardiovascular disease is the number one killer in the United States. Statins reduce low-density lipoprotein cholesterol (LDL-C) and decrease cardiovascular events. About 43 million Americans currently take statins, and the 2013 cardiovascular disease prevention guidelines will increase statin drug prescriptions for approximately 13 million more Americans. The FDA warns that statins may induce skeletal muscle side effects, cognitive changes and increase fasting glucose levels. Observational studies show that the incidence of skeletal muscle side effects has been underestimated in randomized trials and may affect up to 20% of patients taking statins. Some individuals are more susceptible to statin myopathy because of female gender, advanced age, drug-drug interactions or underlying genetic polymorphisms. Currently five lipophilic and two hydrophilic statins are on the market. Statin effects on cardiac muscle are currently unknown. Healthy mice received either the lipophilic atorvastatin, or the hydrophilic pravastatin daily for seven months and were compared to vehicle treated animals. Atorvastatin and pravastatin reduced LDL-C compared to vehicle. Long-term atorvastatin treatment altered the ultrastructure of cardiac muscle in healthy mice, but pravastatin did not. Only atorvastatin administration increased the mortality of mice prone to heart failure, and repressed mitochondrial genes by genome-wide expression profiling. In cultured cardiac myocytes atorvastatin treatment down-regulated survival pathways, decreased RhoA activation, and induced apoptosis.

Personalized medicine in CVD prevention should; 1) focus on lifestyle changes, 2) add investigation and documentation for possible statin-induced adverse effects, and 3) determine a treatment regimen that does not impair the patient's quality of life during healthy aging.