ABSTRACTS FROM THE 92ND TEXAS PUBLIC HEALTH ASSOCIATION ANNUAL EDUCATION CONFERENCE April 11-13, 2016 in Galveston, Texas
Student Competition Abstracts

Quality of Sleep and Life after Hospitalization for Acute Coronary Syndrome
Karina Chang, BBA, Malini Udha, PhD, Stanley Cron, MS, Jennifer E. Sanner, PhD, RN

Although research indicates that poor sleep quality diminishes the quality of life (QOL) of patients after an acute coronary syndrome (ACS) event, the prevalence of disturbed sleep quality and QOL associated with an ACS event remain uncertain. Therefore, the purpose of this study is to determine the prevalence of poor sleep quality, evaluate the association between quality of sleep and QOL, and to examine gender-related differences. We hypothesized that poor self-reported quality of sleep is prevalent and associated with diminished QOL in patients after an ACS event, and women report poorer sleep quality and QOL than men. This descriptive study included 394 patients hospitalized for ACS who were prospectively followed for an average of 4 years by annual telephone interviews. The Pittsburgh Sleep Quality Index (PSQI) instrument was used to assess sleep quality during the previous 4 weeks. To evaluate QOL, we utilized the Short Form-36 Health Survey (SF36®), measuring components of physical and mental health. Pearson correlation analysis was used to test the associations between the instruments. The prevalence rate for poor sleep quality was 37% based on the PSQI. Correlations with the PSQI instrument and the SF-36 were statistically significant (p<.0001). An inverse correlation was observed between the PSQI and the SF-36 ranging from -0.345 to -0.498. Women reported poorer sleep quality (6.21±4.05) than men (4.59±3.57) (p<.0001). Women reported lower QOL physical component scores (45.17±9.64) than men (48.95±9.07) (p<.0002) and mental component scores (53.25±10.28) than men (55.70±7.38) (p<.0180). These findings indicate that poor sleep quality and diminished QOL are prevalent, show an inverse relationship, and women report poorer sleep quality and QOL than men after an ACS event. Further studies to determine the public health significance of assessing and treating sleep in ACS patients to enhance sleep and QOL requires evaluation.

Measuring Successful Disaster Recovery: A Case Study of Six Communities in Texas, United States
Bhagath Chirra, Kerry McCarthy, MBA, Jennifer Shafer, Caroline Dwyer, MCRP, Jennifer Horney, PhD, MPH

Disaster recovery is an integral part of the disaster management cycle that helps safeguard a community’s future through pre and post disaster planning. A good recovery aims to improve the process of preparation and planning, while implementing interventions that enhance a community’s resilience toward future disasters. Yet, it is difficult to determine what a “successful recovery” looks like or how to empirically measure whether it has been achieved. An online Disaster Recovery Tracking Tool was developed at the Texas A&M University School of Public Health to track recovery progress using 79 metrics encompassing financial, process, public sector, and social, recovery themes. In a pilot test of the tool sup-

Identifying factors associated with increased mortality during heat waves: Lessons from Pakistan heat wave 2015
Usman Zaheer Ghumman, MD, Jennifer Horney, PhD, MPH, CPH

In recent years, heat waves have become a growing concern to the public’s health. Many parts of Texas experienced record breaking heat in the summer of 2011. To identify risk factors associated with increased mortality during heat waves, we investigated a recent heat wave in Pakistan which caused 1,440 deaths. Data was obtained through manual review of death certificates at public hospitals and private clinics in Karachi, Pakistan, conducted by a trained physician. Demographic data for any deaths with a primary cause of death due to heat-related illness were recorded. Risk factors considered included daylight fasting for Ramadan, education, socio-economic status, and housing quality. EpiSheet was used to calculate risk differences (RD), rate ratios (RR), and 95% Confidence Intervals (95% CI). Overall, residents of Karachi were 17 times as likely to die of a heat related cause of death during June, 2015, (RR = 17.68; 95% CI: 13.87, 22.53) when compared with the reference period of June, 2014. Residents with a monthly income lower than 20,000 Pakistani Rupees ($196) (RD = 0.03; 95% CI: 0.01, 0.05) and those with less than a fifth grade education (RD = 0.03; 95% CI: 0.00, 0.05) were at significantly higher risk of death during the heatwave compared to the reference period. Low socioeconomic status, poor-quality housing, and low levels of education were associated with increased mortality from heat-related causes. Although the study was conducted in a developing country context, lessons can be applied to Texas public health programs. During heat waves, health education interventions are necessary for the public to identify and remediate early symptoms of heat stroke. Furthermore, assistance for the homeless should be a priority.
Program Implementation Effects: An Evaluation of the Texas Grow! Eat! Go!
Debra Kellstedt, MPH, Yajuan Li, MS, Samuel Towne, MPH, PhD, Michael Lopez, MUP, Caren Walton, PhD, Nalina Ranjit, PhD, Carolyn Smith, Judith Warren, MS, PhD

Intimate Partner violence is a serious public health issue. Research indicates that high levels of body fat can lead to overweight and obesity into adolescence and adulthood. Intervening with nutrition and physical activity programs in school settings can improve children’s health outcomes. Starting in 2012, several such programs, Coordinated Approach to Child Health (CATCH), Walk Across Texas (WAT), and Junior Master Gardeners (JMG) were implemented at participating schools through the Texas Grow! Eat! Go! (TGEG) project. This study examines how program implementation may impact health outcomes, such as sedentary behavior. In 2012, sixteen low-income schools in Texas implemented CATCH only, CATCH + WAT, CATCH + JMG, or all three programs in third grade classrooms. Data were collected from student pre- and post-surveys and teacher surveys/classroom logs. Process data (interviews and observations) were also collected to assign an implementation score for each program. Scores were constructed on a 1-3 scale (low, medium, high). Our primary outcome was computer screen time. We defined “improvement” as either reporting < 2 hours per day at both baseline and follow up or moving from a higher to a lower level of screen time. Our sample consisted of 3rd grade students (n=580). Approximately, 55.17% were females with an average age of 8 years. Students at schools with higher implementation scores were more likely to show improvement with regards to decreased computer screen time (p < 0.05). For every unit increase in implementation score, the probability of students being in the improvement group (versus non-improvement group) increased by 0.98 (p=0.05). Implementation of programs varied by teacher experience and familiarity with the program. Administrative support and access to volunteers may affect implementation also. School physical activity and nutrition programs, if well-implemented, can have a significant impact on behaviors.

A Cross-Sectional Study of Attitudes and Predictors of Intimate Partner Violence Among Women in Maua Kenya, Stephanie Tutak

Intimate Partner violence is a serious public health issue. The estimated lifetime prevalence of physical or sexual partner violence varies between 15% and 71% in 10 developing countries, including Kenya. Intimate partner violence has a profound impact on a survivor’s emotional, behavioral, physical, and social health, and childhood exposure predicts worse health outcomes later in life. The specific aim of this study is to quantify attitudes toward intimate partner violence among Kenyan women in North Igembe district, and to assess predictors and potential modifiable variables to reduce intimate partner violence in this population. Structured household interviews were conducted in June 2015 with 1,974 randomly selected women. The survey included questions on attitudes towards intimate partner violence and gender roles from the Demographic Health Survey and the World Health Organization Adverse Child Experiences - International Questionnaire. Validated scales on social support, family functioning, and perceived stress were included along with questions on overall health, household wealth, and food security. Experiencing sexual abuse and neglect during childhood predicted an increased support of intimate partner violence among Kenyan women. Higher levels of education, literacy, and family functioning decreased the odds of endorsing at least one reason. Further, accumulated adverse childhood experiences significantly predicted increased odds of endorsing all reasons for intimate partner violence, though they are not significantly associated with increased odds of endorsing only one reason in the study population. More years of schooling, food security, and wealth predicted lower odds of endorsing all reasons. De-motion of current attitudes toward intimate partner violence and subsequent acceptance of these behaviors requires an intersectoral approach that addresses psychosocial factors, food security, and household wealth. Adverse childhood experiences influence attitudes of intimate partner violence, indicating the importance of early childhood interventions to provide the safest environment for women and children.

Breakout Session Abstracts

Medication Adherence in a Nurse Practitioner-Managed Clinic for Indigent Patients
Suzanne Alton DNP, FNP-BC, RN

Little is published in the literature about medication adherence rates among patients who are medically indigent and patients receiving primary care from nurse practitioners (NPs). This project examined adherence rates and barriers to adherence among patients at a nurse practitioner-managed health clinic (NPCM) for uninsured and low-income patients. A cross-sectional convenience sample of patients completed surveys eliciting demographic information, self-report of medication adherence, health literacy, and barriers to adherence. Analysis of subjects demonstrated a vulnerable population, yet the mean adherence rate was surprisingly high (77%), compared to the rate usually cited in published literature. The best predictive model differentiating patients with high adherence from those with low adherence combined the total number of reported barriers, health literacy, and employment status. The barriers most frequently cited by subjects were difficulty paying for medications, and difficulty reading and understanding written prescription labels, which was particularly prevalent among Spanish-speaking patients. Clinic efforts to improve patient access to affordable medications and teamwork among clinic staff may have contributed to subjects’ high rates of adherence. These efforts included helping patients with filling out prescription assistance program paperwork, prescribing generic medications, providing samples, and providing effective patient education.
The West Africa Ebola outbreak in 2014 quickly became the most deadly hemorrhagic virus outbreak in history, spreading across Sierra Leon, Guinea, and Liberia. As the outbreak worsened, so did the potential for spreading globally. Houston — home to the most diverse population in the United States, the largest international seaport in the United States, the most Fortune 500 companies outside of New York City — had a significant risk for importing Ebola. The Houston Health Department’s (HHD) Office of Surveillance and Public Health Preparedness (OSPHP) recognized the threat to the city early in the epidemic and began preparations to prepare Houston and surrounding areas for the potential for a case or multiple in Houston. Beginning in June 2014, the OSPHP began assessing and improving epidemiologic, laboratory, and preparedness capacity to respond to the threat of Ebola. This effort continued throughout the epidemic and increased following the first case diagnosed in the United States in September 2014. The OSPHP identified critical preparedness partners throughout the greater metropolitan area and worked to collaboratively develop and implement plans; these partners included public health, emergency preparedness organizations, emergency medical services, healthcare organizations, private sector corporations, academic institutions, and others. In order to increase local capacity to identify the virus, the OSPHP adopted Ebola Virus testing for the Texas Health Service Region 6/5 South. Additionally, the OSPHP developed and implemented several epidemiologic and informatics innovations to identify, track, and respond to a potential case. The OSPHP rapidly expanded and adapted epidemiologic, laboratory, and preparedness capacity to respond to the growing threat of Ebola throughout the epidemic. Several of the activities that took place in Houston have informed future public health practice as it relates to emerging and highly infectious diseases, whenever they may arise.

Integrated Surveillance System: A Model for Improving Diseases Monitoring and Investigations in Houston, Texas
Raouf Arafat, MD, MPH, Osaro Mgbere, PhD, MPH, Salma Khuwaja, MD, DrPH, Biru Yang, PhD, MPH, Ryan Arnold, MPH

Combating communicable diseases depends upon surveillance, preventive measures and where appropriate, outbreak investigation and the institution of control measures. Typically in many health agencies, multiple surveillance systems operate in parallel, sometimes in complete independence, exacerbated by the influence of funders who may support specific surveillance and control programs. This results in disjointed and inefficient surveillance functions, extra costs with domino effects of staff becoming overloaded and demotivated. This presentation demonstrates how the Bureau of Epidemiology (BOE) in the Houston Health Department (HHD) implemented an integrated disease surveillance system (IDSS) that carries out core functions to meet a common public health service goal of keeping Houstonians safe and healthy. The process began first with a systematic review of the existing programs functions and surveillance systems and focused on two domains: activity and organizational structure. Based on the City of Houston health service areas, three teams (A, B and C) were formed with each team comprising of epidemiologists, surveillance Investigators and data entry staff and responsible for diseases surveillance and investigations in the area. Existing activities were reoriented as needed, while at the same time recognizing the special needs of individual programs and surveillance systems. IDSS assumes a “common” service with each team having the independent capacity and synergy to undertake the core surveillance functions and support functions. As part of IDSS, the informatics and data management team provides support through the use of advanced information technology and syndromic surveillance systems for collection, management, analysis, and sharing of health data with BOE surveillance teams and other partners on early warning signals and to trigger prompt public health interventions. The BOE IDSS allows for a seamless linkage among existing programs to improve core surveillance functions and the delivery of health interventions given existing commitments and resources. While a more detailed evaluation is ongoing, preliminary outcomes indicate that cross-training helped to improve staff knowledge of multi-diseases surveillance, and rapid diagnostic tests and information technology allow for early detection and better control. Although potential challenges exist, this model may help to reduce the cost and feasibility of surveillance, and help foster close linkage of control functions across local public health agencies and regional partners especially in an era of reduced funding stream.

Health Fair Kits to Go: A Health Education
Kaitlin Ashmore, MPH, CHES, Laura Rudkin, PhD, Christine Arcari, PhD, MPH

Health fairs and healthy living events can be an effective way to promote positive health behaviors in the community. University of Texas Medical Branch (UTMB) students frequently volunteer at these events to perform health screenings and some health education. The Department of Preventive Medicine and Community Health at UTMB identified a need to provide training and supplies to students to increase the effectiveness of health education efforts. The Health Fair Kits-to-Go were created to provide materials and information to make healthy living events a positive and efficacious experience. Four kits are available for check-out by UTMB students and staff. The four kit themes are: “Rethink the Drink,” “Children’s Fitness,” “Ban the Burn,” and “Catch Them Before They Fall.” Rethink the Drink encourages adolescents to drink less sugary beverages. Children’s Fitness inspires children to enjoy playing for 60 minutes per day. Ban the Burn instructs parents how to protect their skin and their children from sun burn. The last kit provides safety tips for older adults to prevent traumatic falls. Kit users are encouraged to view a video created to explain three health promotion concepts: health communication, health literacy, and cultural compe-
A strategic plan is a necessary organizational compass and a RN, MBA/HCM Stafford, MSN,RN,MBA, Francisco Javier Gonzalez, BSN, RN-BC, NE-BC, CRRN, Donna Ernst, MSN, RN, Tammy Lisa A. Campbell, DNP, RN, APHN-BC, Jeff Watson, MSN, Partnerships

Putting Mental Health on the Map: Prioritizing the Mental Health Care Needs of Texas Counties

Cate Campbell, MPH, Matthew P. Turner, PhD, MPH, Frank Gonzalez, MA

Despite Texas’ known deficit of mental health care providers, there has been a lack of attention paid to defining its population’s need for mental health care. Although the federal Health Resources and Services Administration designates Mental Health Health Professional Shortage Areas, this designation does not consider population-specific need for services. Such need is dependent on prevalence of mental health illness, the distribution of risk factors, currently available social services, and other considerations. This project uses multiple sources of data from across the Texas Center for Health Statistics to develop an index that compares the extant mental health needs and services of Texas counties and identifies those counties facing the biggest discrepancy between the two. The tool incorporates mental health outcomes, social and demographic correlates of mental illness, and mental health service and workforce data. This index improves on previous county-based tools by weighting variables based on their impact as determinants and measures of mental health. This analysis will identify Texas counties where the need for mental health services is highest and this demand is furthest from being met. It will describe the state of mental health in Texas, mental health trends over time, and the supply of and demand for health care providers, as well as allowing for comparison between counties. In order to adequately provide for the mental health needs of Texans, meaningful analytical models that identify and measure disparities need to be developed. This tool is an initial attempt to inform policymakers, service providers, and advocates on the state’s geographic mental health problem areas and to be used in the design of effective policy solutions that improve access to and delivery of mental health care services in the state.

Strategic Planning with Ease: Leveraging Academic Partnerships

Lisa A. Campbell, DNP, RN, APHN-BC, Jeff Watson, MSN, RN-BC, NE-BC, CRRN, Donna Ernst, MSN, RN, Tammy Stafford, MSN,RN,MBA, Francisco Javier Gonzalez, BSN, RN, MBA/ HCM

A strategic plan is a necessary organizational compass and a Public Health Accreditation Board requirement. However, developing one can be a challenge for an already overtaxed local public health department. We used creative strategies to leverage resources with academic partners and developed a strategic plan in six weeks. As the director of the Victoria County Public Health Department (VCPHD) and associate professor at Texas Tech Health Sciences Center School of Nursing Doctor of Nursing Practice (DNP) Program I provided technical assistance to five DNP students. The DNP students each took one division and conducted a Strengths, Weaknesses, Opportunities & Threats (SWOT) analysis. Three students traveled to Victoria from north and west Texas to facilitate the strategic planning meeting with our leadership team. The students used NACCHO’s Developing a Local Health Department Strategic Plan: A How-To Guide in the pre-facilitation planning and facilitation phases of the strategic planning session. For the first time in the history of VCPHD, a strategic plan has been developed that increases accountability, improves customer service, provides robust community education, solidifies inter-departmental integrity and promotes teamwork. Executive level DNP students gained new insights in public health administration and systems leadership.

Using Accreditation Documentation Management System (ADMS): A Free Tool Developed to Aid Accreditation Documentation

Ololade Coker, MPH, MS, Robert Hines, MSPH, Raouf Arafat, MD, MPH

The process of collecting, reviewing and organizing documentation for public health accreditation can be challenging. For most accreditation sites, the sheer volume of documentation (which can easily extend far past a thousand records) is a limiting factor in how efficiently progress can be monitored and analyzed. Beyond shared excel files and other similar tools, there is no dedicated, freely available technology for sites to use in the period prior to submitting an application for accreditation. The Houston Health Department (HHD) Performance Improvement and Accreditation Team (PIAT) obtained funding from Robert Wood Johnson Foundation to develop a simple, dedicated accreditation documentation management database system that can be used to support health departments in the process of reviewing and organizing their documentation. The system, which not only allows health departments to track and evaluate documentation but also monitor and report on progress, is freely available and modifiable. Future plans for this system include further development to support mock site visit processes and other, more complex user interactions.

It’s All Fun and Games Until Someone Gets Accredited: Using Marketing and Gamification to Prepare Staff for Accreditation

Ololade Coker, MPH, MS, Robert Hines, MSPH, Raouf Arafat, MD, MPH

Whether dealing with quality improvement (QI) or accreditation, engaging staff around new ideas can be challenging. For the majority of public health entities, the accreditation pro-
cess is unfamiliar territory. Collecting volumes of documentation which must meet detailed specifications requires a well-trained and highly engaged staff. Achieving and maintaining this level of staff involvement, while participating in such a new process can present many challenges for health departments. This presentation will provide a potential road-map of conceptual and practical resources for health departments wishing to better engage staff and colleagues around QI and accreditation. Using the Houston Health Department (HHD) as a case study and employing interactive exercises, this presentation will focus on using marketing and other strategies to engage staff in order to obtain and maintain buy-in.

The “# 2” Reason to Visit Travis County in 2015
Heather Cooks- Sinclair, MS, Laura Fox, MPH

In June 2015, the Austin/Travis County Health department received a sharp increase of laboratory confirmed cyclosporiasis cases from local laboratories, reaching the highest number of cases (n=67) reported by any county in Texas during a 3-month period. Typically, Austin/Travis County receives less than 20 cases annually. In the past three years, there have been outbreaks of cyclosporiasis in Texas linked to cilantro from Puebla, Mexico. This case study details a local health department’s perspective in a community-wide outbreak involving both case and food trace back investigation with state and federal partners. An epidemiological investigation was initiated to identify clusters of illness and potential food vehicles. Restaurant and event clusters were identified from case interviews and meal items analyzed to identify common food ingredients within each cluster. The Incident Command System (ICS) was activated to manage resources, calls from the public and media inquiries. Sixty-seven confirmed cases and 20 probable cases of cyclosporiasis that had onset between May 27, 2015 and August 26, 2015 were investigated. Disease clusters were identified at three restaurants, one local business cafeteria, two weddings and two graduations. Trace back investigation in Austin/Travis County converged on one produce supplier focusing on cilantro, basil, parsley and mint herbs. Through trace back investigations conducted by state and federal agencies in partnership with local partners, the FDA placed an import ban on cilantro from Puebla, Mexico on July 28, 2015. Key strengths of the investigation were: ICS structure was used early in the investigation to streamline processes and prioritization; communication and strong relationships with state partners that supported investigation and collaboration; and a strong focus on cluster identification through targeted interviews.

Parental Barriers and Facilitators to HPV Vaccination of 11-14 Year Old Youth
Christie Nicole Sharp Driskill, Diane Santa Maria, DrPH, MSN, RN, APHN-BC

The purpose of this research is to identify parental knowledge, beliefs, barriers, and facilitators of HPV vaccination. Current HPV vaccination uptake in children ages 11-14 is lower than CDC recommendations. Prior to launching a research program that will offer the HPV vaccine to 11-14 year olds free of charge while at an after-school care facility, we conducted focus groups to explore parental HPV vaccination constructs. The Theory of Planned behavior was used to facilitate 5 focus groups with parents of children ages 11-14, recruited from The Boys and Girls Clubs in the greater Houston area. Groups lasted 1 hour and participants received compensation. Using thematic content analysis, 2 researchers independently coded transcripts and used consensus building processes to concur on themes and exemplars. The sample (N=20) was predominantly female (90%), 30-54 years old, 50% Hispanic, and 50% African American. Most had 1-3 children (80%), completed high school (90%), lived in a two parent household (55%), and had male and female children (55%) living in the home. Themes related to HPV vaccination facilitators were provider endorsement which strongly influenced parents to vaccinate youth, and belief that the vaccine benefits outweighed the risks. Barriers to vaccination that emerged were lack of knowledge about HPV and HPV vaccination, lack of provider endorsement and a medical home, fears surrounding vaccine safety, and beliefs that the child was too young. Parents provided programmatic preferences including desire for materials to use with children, web-based resources, and message framing to target cancer prevention. Additionally, several participating parents (n=4) reported that they would now get their child vaccinated for HPV after the focus group. Results from the study will inform the design of student nurse HPV vaccination navigation preparation and the development of parent materials to increase HPV vaccination for 11-14 year old youth.

Secret of Seven Stones: Testing an innovative home-based, computer game to promote parent-child communication and prevent HIV, STIs, and Pregnancy in middle school students
Sara Dube, MPH, Laura Ceglio, MPH, Pooja Chaudhary, MD, Christine Markham, PhD, Melissa Peskin, PhD, Robert Addy, PhD, Jeffery McLaughlinBA, Ross Shegog, PhD

Serious games show promise in delivering health education to youth; yet, few interventions target skills training and parent-youth communication. The Secret of Seven Stones (SSS) is an innovative home-based, computer game to engage parents and adolescents (11-14 years) to go beyond “the sex talk” to prevent HIV, STI, and pregnancy in youth. The 18 level SSS game and parent website is being evaluated with parent-youth dyads randomly assigned to intervention (n=40) and comparison conditions (n=45). Computer-assisted questionnaires are being used to collect baseline, 3-, and 6-month data on youth sexual intentions and behaviors and dyadic communication. SSS usability and acceptability is being assessed using semi-structured interviews and questionnaires among intervention dyads. At baseline, parents had a mean age of 44.3 years (SD=5.8), were 90% female, 46% Caucasian, and 29% African American. Youth had a mean age of 12.9 years (SD=1.1), were 62% male, reported similar ethnicity to their parents, sexually inexperienced (96%), not intending to have sex in the next year (76%), and intending to talk to their parent about
sexual health (49%). To date, 58% of intervention dyads completed SSS, with an additional 10% completing >50%. Dyads rated the game and website as easy to use (76-85%), useful (62-91%), and helpful in making healthy choices (88-97%). Qualitative data indicated acceptance of SSS game and parent resources. Barriers to game play included technical problems and low parent participation. Dyads that completed 50-100% of SSS reported increased communication about more sexual health topics, and that SSS reinforced their family’s values and youths’ sexual intentions. To date, results indicate acceptability and feasibility of SSS in the home setting and provide insight into the utility of technology and serious games to deliver parent-youth sexual health education and skills training. Assessment of SSS impact is pending completion of follow-up data collection and systematic analysis.

Public Health Practice and Research at the Texas A&M School of Public Health- Impact of Texting-While-Driving Bans

Alva O. Ferdinand, DrPH, JD, Nir Menachemi, PhD, MPH, Bisakha Sen, PhD, Michael Morrisey, PhD, Justin Blackburn, PhD, MPH, Leonard Nelson, III, JD, LLM

Roadway safety continues as a major public health concern, despite being described as one of the top 10 public health achievements in the past decade. Distracted driving, including texting-while-driving, has resulted in numerous states enacting bans. Two studies were conducted to better understand the relationship of texting-while-driving bans and vehicular-related hospitalization and fatalities. Panel designs were used for both studies: the Nationwide Inpatient Sample from 19 states between 2003 and 2010 to examine the impact of texting bans on crash-related hospitalizations, and the Fatality Analysis Reporting System and a difference-in-differences approach to examine the incidence of fatal crashes in 2000 through 2010 in 48 US states with and without texting bans. In study one, we conducted conditional negative binomial regressions with state, year, and month fixed effects to examine changes in crash-related hospitalizations in states after the enactment of a texting ban relative to those in states without such bans. In study two, age cohorts were constructed to examine the impact of these bans on age-specific traffic fatalities. Results from study 1 indicate that texting bans were associated with a 7% reduction in crash-related hospitalizations among all age groups. Texting bans were significantly associated with reductions in hospitalizations among those aged 22 to 64 years and those aged 65 years or older. Marginal reductions were seen among adolescents. Study 2 found primarily enforced laws banning all drivers from texting were significantly associated with a 3% reduction in traffic fatalities in all age groups, and those banning only young drivers from texting had the greatest impact on reducing deaths among those aged 15 to 21 years. Secondarily enforced restrictions were not associated with traffic fatality reductions in any of our analyses. These findings suggest states that have not passed strict texting bans should consider doing so.

Community Health Worker’s Role in Telemedicine

Debra Flores, PhD

One of the goals at the Institute for Rural and Community Health at the Texas Tech University Health Sciences Center is to expand the role of community health workers (CHWs) into the telemedicine arena. As many are aware, rural residents face difficult barriers in accessing healthcare services and the challenges are only exacerbated by the shortage of health care providers. Trained community health workers who are able to operate telemedicine equipment, assess patients based on questionnaires developed by health care professionals, and serve as a patient navigator through telemedicine, can extend health care services to areas previously thought unreachable. Community health workers already play an integral role in healthcare not only throughout Texas and other states, but are utilized on a global scale. Chronic disease management, patient navigation, community outreach, prevention and education are only a few roles that have surfaced as keys to successful involvement of CHWs as part of team-based health. Literature is easily found about how CHWs are valuable liaisons between particular vulnerable populations and healthcare providers and systems, so why not expand that role to include telemedicine? Elements necessary to move CHWs into the telemedicine arena include, but are not limited to: 1) recruitment of individuals from rural communities to become CHWs, 2) access to online/remote CHW certification training for these individuals, 3) inclusion of specific telemedicine education in training modules, 4) partnership with existing rural health telemedicine projects that will provide onsite preceptors for CHWs, and 5) strategic recruitment and preparation for rural providers with telemedicine equipment and a dedicated CHW. Innovative models for healthcare such as this one will contribute to a bright future for the quality of care in rural areas.

Reducing Anxiety in Rural Texas through Videoconference Counseling

Usman Ghumman, MD, Elizabeth Leuthold, M.Ed., Oluwa- seun Oluwo, MD, Parth Thakkar, BDS, Carly McCord, PhD, Alejandra Sequeira, M.Ed.

Anxiety disorders have a worldwide prevalence and are one of the most common mental disorders. Mental health issues present an extra challenge for rural healthcare in Texas, and telehealth counseling addresses these issues using videoconferencing. The objective of this study is to assess telehealth counseling’s success as a viable treatment option for anxiety. The Patient Health Questionnaire (PHQ) and CORE-B Short Form survey were administered at initial intake of clientele, and repeated weekly at every session. Data was analyzed using SPSS v22, and a series of paired samples t-tests were conducted to determine if the mean difference in patient outcomes on item 10 of the CORE-B was significant over defined time points. The mean difference between Week 1 (T1) and Week 4 (T2) was 0.66 (95% Confidence Interval (95% CI), and the
mean difference between Week 4 (T2) and Week 8 (T3) was 1.06 (95% CI: 0.69, 1.44). Both of the differences i.e between T1-T2 and T1-T3 were found to be statistically significant. However, the mean difference between T2 and T3 was 0.17 (95% CI: -0.16, 0.51), which was non-significant. The effect size of therapy between T1 and T2,T1 and T3 and T2 and T3 was 0.42,0.72 and 0.13 respectively. There was significant improvement in reduction of anxiety symptoms between the first week and fourth week, as well as between first week and eighth week of counseling. On average people who gained access to counseling services via telehealth at the Telehealth Clinic report reduction of their anxiety within the first week. Telehealth services can be an effective treatment modality for anxiety and other chronic mental health issues, and provide care to populations with limited healthcare access.

Utilization of Telehealth Counseling Services by Minorities in Rural Texas
Usman Zaheer Ghumman, MD, Oluwaseun Oluwo, MD, Parth Thakkar, BDS, Semiu Gbadamosi, MBBS, Carly McCord, PhD, Jeremy Saenz, M.Ed.

Access to mental health services is a major issue in rural Texas and ethnic minorities can experience additional barriers to receiving adequate care. The Telehealth Counseling Clinic (TCC) was established to provide readily accessible psychological services to medically underserved communities across five counties in Central Texas. The study aimed to determine if the clientele seeking services at the TCC are representative of the community ethnic breakdown. Our study also assessed differences in the utilization rate of the TCC’s services over the collective treatment period between various ethnicities by determining if there were differences in rates attended appointment or of ‘No Shows’ (Failure to attend or cancel scheduled appointments). All TCC client records were reviewed to find the percentages of ethnicities represented as well as the range and average number of sessions and number of no-shows by ethnicity. The ethnic breakdown of TCC clients was similar to that found in the communities served and will be presented in table form in the poster. The range of sessions for Caucasians, Africans Americans, Hispanics and other ethnicities were 3 to 61, 3 to 37, 3 to 63 and 3 to 37 respectively. The average number of sessions attended for these ethnicities were 1.66, 1.90, 1.64 and 1.86. The average number of No-shows for each group were 1.66, 1.90, 1.64 and 1.86 for Caucasians, African Americans, Hispanics and other ethnicities respectively. The TCC client population is representative of the ethnic breakdown of the surrounding communities. Utilization rates were similar among all the ethnic groups with similar ranges and averages being found for both attended sessions and no-shows. The results from this study provide support for the current outreach and care strategies used to improve access to underserved areas and underserved populations in rural Texas.

Effects of Ethnic, Gender, Migration, Immigration, Age Distribution, Rural Residence on the Proportion of Centenarians in Texas Counties
Gordon Gong, MD, Cole Johnson, JD, Debra Curti, M.Ea, RHIA, Billy U. Philips, PhD, MPH

The number of centenarians is increasing worldwide. In the United States, the proportion of centenarians had increased from 14.2 in 1980 to 17.3 per 100,000 in 2010. However, there has been no report about factors affecting the proportion of centenarians in Texas. The number of people by age, gender, ethnicity in Texas counties was obtained from 2010 U.S. Census. Chi squared test and analysis of the general linear model were performed. The proportion of centenarians was significantly higher in rural vs. urban counties (20.9 vs. 10.3) and in females vs. males (18.4 vs. 4.7 per 100 000 residents) in Texas. Proportions of populations were lower before 50 years of age but were higher after age 50 in rural vs. urban counties regardless of region (West, South or East Texas). The proportions of migrants and foreign-born persons were higher in urban vs. rural counties but the rural/urban differences were only 0.3% (migrants) and 11% (foreign-born) in East Texas, 0.7% and 2.8% in South Texas, and 0.8% and 4% in West Texas, respectively. Such small differences in the denominators could not account for the 2.3, 1.5 and 1.8 fold differences in the proportions of centenarians between rural and urban counties in the three respective regions of Texas. Analysis with the general linear model showed that rural residence; female gender; and non-Hispanic white ethnicity (p<0.05 to <0.0001) were significant predictors of the proportion of centenarians. A higher proportion of centenarians was associated with rural residence, female gender, and non-Hispanic white race/ethnicity. Higher proportions of residents older than 50 years preceded the higher proportion of centenarians in rural Texas as a prelude. Further studies are warranted to determine the mechanisms whereby these factors affect the rate of centenarians.

Does the Introduction of a Large Grocery Store in a Food Desert Influence Food Purchasing Patterns?
Beverly J. Gor, EdD, RD, LD, Vishnu Nepal, MSc, MPH, Latreka Kingsberry, MPH, Michael Robertson, Deborah Banerjee, MS, PhD

To combat food deserts in low income neighborhoods, some cities are providing financial incentives to entice grocers to construct full scale supermarkets in underserved areas. Decreased access to nutritious food, particularly fresh fruits and vegetables, is associated with higher rates of diet-related diseases such as obesity, diabetes and some forms of cancer. In 2014, the Houston City Council provided a $1.7 million performance-based loan to a local grocer to construct a 19,000+ square foot store featuring a broad selection of quality meat,
farm fresh produce and dairy products at competitive prices in
the South Union neighborhood. The new store formally
opened on July 31, 2015. To evaluate the impact of this new
grocery store on the food purchasing and eating habits of
the neighborhood’s residents, Houston Health Department
conducted a rapid community assessment prior to the store’s
opening. A total of 196 adults (18+) living in households with-
in a one-mile radius of the store were surveyed about their
grocery purchasing pattern, frequency of buying fruits and
vegetables, and other related topics. Seventy percent of re-
pondents were female, 88% were African American and 84%
had a high school diploma or greater. However, 27% had no
car, 39% received SNAP benefits and 19% reported recent use
of a food pantry. Seventy-nine percent said they always or
often purchase vegetables and 72% said they always or often
purchase fruits. In spite of relatively high levels of education,
many residents demonstrated signs of food insecurity. How-
ever, the majority reported frequent purchase of produce. Fol-
low-up surveys will help determine if the new store has a posi-
tive and sustainable impact on the surrounding community.

People, Policy, and Place: A Model for Organizational Trans-
formation from Health Disparity to Health Equity in Harris
County Jennifer M. Hadavia, MPA, Umair A. Shah, MD,
MPH, Catherine Chennisi, MPH Harris County is one of the
nation’s fastest growing areas, facing a multitude of upstream
challenges. We have 19% poverty, only 78% HS graduation,
and 11 zip codes on an air pollution watch list. All cause poor
health and, in most cases, are avoidable, unnecessary, and un-
just (i.e., health inequities). Harris County Public Health and
Environmental Services (HCPHES) prioritized a transition
from a health disparities focus to health equity in its current
Strategic Plan. This requires a coordinated, systemic, and in-
titutionalized approach to health equity, which also positions
us to meet new accreditation requirements. We developed a four-
part evidence-informed model for organizational trans-
formation to health equity that includes culture change, policy
and workforce development, collaboration, and data as health
equity tools. This presentation will teach the HCPHES model
followed by a series of real-time examples: our web-based
learning collaborative for building health equity leadership,
how we developed a health equity policy and framework, and
our new place-based cross-sector collaborative to achieve nu-
trition equity in a local neighborhood. By applying this model,
we have achieved the following: Adopted a department-wide
Health Equity Policy outlining expectations for integrating
health equity goals into all essential public health services;
developed 35 new health equity staff champions who will fa-
cilitate future collaborative learning opportunities on health
equity; and received a national BUILD Health Challenge
implementation award (one of only 7 awarded nationally) to
help reverse inequitable determinants of health in the city of
Pasadena, TX. HCPHES has developed and is implementing
an evidence-informed model for health equity agency trans-
formation that is producing tangible results in staff capability,
departmental policy, and community health improvement. We
believe the model is applicable to other sectors and that its
replication will help move the needle on the culture change
necessary to solve health problems upstream.

Improving TB assessment and screening by nurse practi-
tioners: a clinic-based quality improvement project
Sharisse Hebert, DNP, RN, FNP-BC

The pathogenesis of Tuberculosis (TB) necessitates periodic
evaluation of TB screening policies and educational oppor-
tunities to occur in primary health care settings. TB policy
awareness and adherence may assist with identifying patients
in high risk TB groups that may benefit from therapy. The
specific aim of this QI project was to improve nurse practi-
tioner (NP) awareness and adherence to CDC TB screening
guidelines in order to improve patient outcomes. Together,
the TB educational session and clinical screening algorithm
should increase identification of patients who are in groups at
high risk for TB by the NP, ultimately resulting in a potential
decrease in the rate of LTBI conversion to TB disease. The
innovation included: (a) a TB educational session based on
CDC screening guidelines, (b) a TB risk questionnaire, and
(c) a TB clinical screening algorithm. The NP was adminis-
tered pre- and posttests to assess the knowledge before and
after participation in the TB educational session. The scores
were 92.9% and 100.0%, respectively, indicating that the TB
educational session decreased TB knowledge deficits by the
NP. A review of 10 patient charts preintervention and 20 pos-
tintervention charts was conducted. The preintervention data
collected indicated adherence to CDC TB assessment and
screening guidelines in 50% of the cases. After implementa-
tion, the NP adhered to the CDC TB assessment and screening
guidelines in 100% of the cases. Health care providers must
understand the appropriate use of each diagnostic method to
screen patients for TB exposure. Health care providers must
be cognizant of current TB screening guidelines for preven-
tion and elimination of TB. Implementation of the TB risk
questionnaire, to identify high-risk TB groups, and the TB
screening algorithm to ensure use of approved TB screening
methods may reduce rates of TB conversion and transmission.

Public Health Practice and Research at the Texas A&M
School of Public Health – EpıAssist
Jennifer Horney, PhD, MPH, CPH, Sanjana Bamrara

Although public health degree programs typically require
practica and other field experiences, service-learning cours-
es, with a focus on civic engagement and the application
of classroom learning in real world settings, can go beyond
these requirements and provide benefits to students and com-
community- based practice partners. EpiAssist is a new service-
learning program developed at the Texas A&M University
Health Science Center School of Public Health in January
2015. EpiAssist was integrated into a new course, Methods
in Field Epidemiology. The integration of service-learning
was guided by a partnership with the Texas A&M Center for
Teaching Excellence. Fifty-four of 86 registered EpiAssist
students (63%) participated in ten service-learning and three
training activities between January and June, 2015. Thirty of
54 students (57%) completed an online evaluation following
the completion of the activity. Nearly all student respondents reported EpiAssist augmented classroom training (26/30) and taught them new skills (27/30), while 24 indicated they applied classroom skills to their EpiAssist projects. Twenty-four students indicated that their EpiAssist activity sparked an interest in a career in applied public health. Partners were very satisfied with the assistance provided through EpiAssist, with an overall mean of 3.94/4.00 on seven process and outcome measures, where 1 was unsatisfied and 4 was very satisfied. Service-learning provides students with enhanced classroom learning through applied public health experience in state, regional, and local health departments. These experiences not only provide needed surge capacity to public health departments, they also provide students with valuable hands-on field experience.

Chronic Disease Prevention & HIV Programs: A Synergistic Partnership

Jessica R. Hyde, MS, CHES, Barry Sharp, MSHP, MACM, MCHES

When controlling for access to treatment, people living with HIV (PLWH) who smoke lose more years of life to tobacco use than to HIV infection. Smoking acts as an immunosuppressant, making it more difficult to fight off opportunistic infections. It can also decrease the effectiveness of antiretroviral therapy and increase the risk of developing chronic illnesses. The smoking rate among PLWH is currently 2 to 3 times higher than that of the general population. In Texas, more than two-thirds of new HIV diagnoses are among men who have sex with men (MSM). Like PLWH, those who identify as lesbian, gay, bisexual, and/or transgender (LGBT) also have disproportionately high smoking rates – 1 in 3 compared to 1 in 5. The Comprehensive Cancer Control Program, the Tobacco Prevention & Control Branch, and the TB/ HIV/STD/Viral Hepatitis Unit of the Texas Department of State Health Services have come together to improve the health of PLWH by reducing their rate of tobacco use. The primary focus of this collaboration was to guide those seeking to quit to evidence-based cessation services provided by the Texas Tobacco Quit Line (QL) either through self- or clinician referral. Related activities included the promotion of Ask, Advise, Refer (AAR) among HIV care providers and the dissemination of the “Cigarettes are My Greatest Enemy” advertisement that targets seropositive smokers. In June 2015 – the month following the AAR promotional activities and the first month of the media flight – the number of LGBT QL registrants increased by 41% over the previous three month average. The QL does not currently collect data on HIV serostatus. Acute and chronic disease programs can form synergistic partnerships that produce greater outcomes than each program can achieve alone by pooling their resources to advance the health of marginalized populations, such as PLWH and those who identify as LGBT.

Public Health Practice and Research at the Texas A&M School of Public Health- Air Pollutant Exposure and Childhood Asthma

Natalie Johnson, PhD, Genny Carrillo, MD, ScD, Joe Zietsman, PhD, PE, Kirsten Koehler, PhD, Jairus Pulczinski, BS

Prenatal exposure to air pollution has been linked with a number of adverse health outcomes, namely childhood asthma. Although there is robust evidence to support the association between exposure to traffic-related air pollution (TRAP) in utero and asthma risk in childhood, there is a lack of specific biomarkers to determine asthma susceptibility. This hampers the ability to identify children at risk for developing asthma. This project will evaluate the use of nitrate polycyclic aromatic hydrocarbon (NPAH) urinary metabolites as biomarkers of exposure to TRAP, in an at risk population living near the Texas-Mexico border. Researchers will first characterize pollutant exposure by using Environmental Protection Agency models to determine pollutant dispersion. Next, expecting mothers living in the area will wear backpack monitors that will measure air pollutants they inhale during pregnancy. In addition, biological specimens including blood, urine, and hair samples will be collected to test for the presence of various biomarkers. During this session, preliminary study findings and how they relate to the long-term goal of developing biomarkers of exposure to TRAP will be shared. These biomarkers will facilitate epidemiologic studies assessing the relationship between early-life exposure and adverse health outcomes, and serve as intermediate biomarkers of risk reduction in preventive intervention studies. Fall Prevention Among Older Adults: A Community Preventive and Health Promotion Approach

Kshitija Kulkarni, MS OTR/L, Catherine Cooksley, DrPH, Michelle Sierpina, PhD, Mary Kristen Peek, PhD Research has shown that a fall can be a detrimental event in the life of an older adult, and may result in decline in their functional capacity and independence. Falls often serve as the beginning of a downward spiral of cascading physical and psychological health events. Falls occurring in and around one’s home are the most common and cause the most serious injuries. Falls are a public health problem, which is largely preventable. Increasing awareness regarding fall hazards and other risk factors will enable older adults to live and function safely within their home environments. This will empower the individual and improve their health-related quality of life. On a larger scale this will serve to improve the health of the community and over time reduce healthcare burden and costs. A ‘fall prevention’ training seminar was developed based on evidence-based fall prevention resources including those from the Centers for Disease Control and Prevention (CDC). The seminar included a presentation, and review and dissemination of resources including the home environment safety checklist by the CDC and the contact information for local government and non-government agencies that provide in-home services for preventing falls. Four separate sessions of...
the training seminar were provided to the community-dwelling older adults of the Houston-Galveston area, at the Osher Lifelong Learning Institute, Galveston, Texas. The current phase (underway) involves a multi-level approach for fall prevention. Training seminars will be developed and provided to caregivers and healthcare providers of community-dwelling older adults in the Houston-Galveston area. The above-described completed phase and the current phase of community preventive health and health promotion is part of research conducted at the Department of Preventive Medicine and Community Health, University of Texas Medical Branch, Galveston, Texas.

**Project Saving Smiles: Houston’s Innovative Oral Health Strategy**
Teresita E. Ladrillo, DMD, MPH, DPH, Johanna K. DeYoung, BSN, DDS, MPH, Janet Aikins, PhD, MPH

The 2001 Dental Needs Assessment in Harris County revealed 45.9% of 2nd graders had untreated decay. Project Saving Smiles (PSS) is an evidenced-based, three-pronged preventive oral health strategy that provides dental screening, dental sealants, fluoride varnish and oral health education free of charge targeting 2nd graders in schools where 70% or more of the students are enrolled on the Free/Reduced Lunch Program. The participating schools provide bus transportation for their students to and from the PSS location. There are two PSS goals: 1) To reduce dental caries among school children 2) To decrease school absences due to oral health problems. The Houston Health Department spearheads this project and collaborates with partners such as Good Neighbor Healthcare Center, Department of State Health Services, Harris County Public Health and Environmental Services, Women of Rotary, Texas Oral Health Coalition - Houston Region, the University of Texas School of Dentistry, Houston Community College, Independent School Districts (ISDs), and other partners to provide these services. For children who are found to have dental problems, referrals are written and the parents contacted so they can take them for treatment. The Incident Command Structure (ICS), from the National Incident Management System (NIMS) developed by the Department of Homeland Security for public health preparedness, is used during PSS operations. The project began with three (3) missions in school year 2008 -2009 with forty four (44) schools participating and 1,955 children accessing preventive dental services. By the 7th year of operations, PSS conducts eight (8) missions a year. To date 802 schools from various ISDs have participated and 37,947 children have been provided preventive services, including health education. PSS is an efficient oral health strategy to provide primary preventive dental services to a large number of at-risk school children, resulting in cost savings.

**Time Trends in Prevalence of Gastrochisis in Texas: Subgroup Analyses by Maternal and Infant Characteristics**
Peter Langlois, PhD, Loc Uyen Vo, MPH

The prevalence of gastrochisis, a birth defect of the abdomi-nal wall, has been increasing in several areas around the world. Our goal was to see which population subgroups were exhibiting this upward trend. Data for cases of gastrochisis and live births were taken from the Texas Birth Defects Registry and Texas vital records for deliveries in 1999 to 2011. Prevalence over time was calculated for population subgroups based on: infant sex, maternal age, race/ethnicity, nativity, education, parity, plurality, BMI, and payer type. Stratified, adjusted, and interaction analyses of the trends were conducted using Poisson regression. A joinpoint trend analysis was also conducted for each subgroup. A total of 2,549 gastrochisis cases and 4,970,979 live births were delivered in 1999-2011, for an overall prevalence of 5.13 cases per 10,000 live births (95% confidence interval (CI) = 4.93–5.33). On average, the prevalence increased 4.8% each year; this overall time trend was statistically significant (pvalue< 0.0001). The time trend remained significant after adjusting for all variables, except payer type. The stratified analysis showed the increasing time trend was significant in many of the subgroups. However, there were no significant differences in the magnitude of the time trends between subgroups according to the interaction analysis. This study confirms the increasing prevalence of gastrochisis over the time period 1999-2011 in Texas. It suggests that no population subgroups are experiencing a significantly different increase in gastrochisis prevalence over time than others.

**Strengthening the Health Information System to Reduce Health Disparities: Lessons from REAL Data Project, Wei-Chen Lee, PhD, Hani Serag, MD, Karl Eschbach, PhD**

Literature provides the evidence that health disparities persist among racial and ethnic minority groups in the United States. One of the innovative approaches to identify race/ethnicity disparities nowadays is the meaningful use of electronic medical record. Through 1115 Waiver fund, the REAL (race, ethnicity, and language) Data project aims to demonstrate the development of a health information system and how it serves as a detailed and efficient source of large patients across multiple sites for identifying and monitoring health disparities. The system was redesigned to better collect information about race, ethnicity, and preferred language. Meanwhile, registration staff were equipped with knowledge and skills to collect REAL data. Patient’s health status and health outcomes were analyzed and stratified by their race and ethnicity. Finally, we developed Improvements plans to address the disparities found. The percentage of valid REAL data has been improved from 63 to 82 percent within one year (October 2013 to September 2014). Three important disparities identified are (1) high rate of low birthweight (African American: 17.8%, Hispanic: 7.2%, Caucasian: 10.7%), (2) low breastfeeding rates (African American: 11%, Hispanic: 12%, Caucasian: 34%), and (3) high rates of ambulatory care sensitive conditions (African American: 26.4%, Hispanic: 16.2%, Caucasian 13.2%). However, the challenges like HIPAA protection of patient information have hindered timely access to data. The key strategies to reduce disparities such as disseminating the findings, investigating the root causes, expanding the outreach programs, and establishing a multidisciplinary task force have...
been discussed and will be implemented. The improved information system facilitates the analysis and identification of race and ethnicity disparities. By initiating the improvement plans to eliminate disparities that are found, we expect to improve the health of vulnerable populations, improve satisfaction of both patients and clinicians, and reduce the unnecessary costs due to health inequities.

Crash-related Factors and Emergency Medical Services (EMS) Field Measures Among Motorcycle Drivers in Texas

Nina Leung, PhD, MPH

In the past decade, motorcycle deaths have more than doubled and account for 15% of all motor-vehicle traffic crash fatalities in the US. Despite advances in traffic safety, fatal and non-fatal injuries resulting from motorcycle crashes continue to increase nationally. Since September 1, 1997, when the Texas motorcycle helmet law was amended, adults >21 years are not required to wear a helmet on roadways. The purpose of this study was to identify crash-related risk factors and field health measures associated with a fatal crash among adults. 2013 motor-vehicle crash data from the Texas Department of Transportation (TxDOT) Crash Record Information System (CRIS) were linked with 2013 EMS trauma data from the Texas EMS & Trauma Registries. Multiple logistic regression with a forward selection approach (a=0.05) was used to identify factors significantly associated with fatal/non-motorcycle crashes. There were 1,817 motorcycle drivers included for analysis, of whom 107 (6.0%) were involved in a fatal crash. Motorcyclists with a Glasgow Coma Scale (GCS) score = 12 (aOR=27.1; 95% CI: 12.6-58.3), systolic blood pressure (SBP) at destination = 90 mm Hg (aOR=15.6; 95% CI: 4.7-51.5), respiratory rate < 10 or > 29 breaths/minute (aOR=9.3; 95% CI: 3.7-23.3), and of male gender (aOR=12.8; 95% CI: 1.1-143.5) were significantly more likely to be involved in a fatal crash. The odds of being involved in a fatal crash are approximately 50% less with helmet use (aOR = 0.5; 95% CI: 0.3-0.7). Light/weather/road surface conditions, age, and race/ethnicity did not remain significantly associated with fatal/non-motorcycle crashes. Individuals with sub-normal field health measurements may require specialized trauma resources. Prioritizing triage decisions with respect to the field measures evaluated among these drivers may be a point of consideration regarding field interventions. In addition, this study emphasizes the importance of helmeted motorcyclists and the impact on increasing the odds of survival.

Are Housing and Medical Payer Stability Predictive of Sustained Viral Suppression?

Rena Manning, PhD, M.Ed., LPC, Margaret Vaaler, PhD

Many studies of barriers to care among HIV+ people explore demographic differences. Additionally, patients’ perceptions have been explored in case studies. This study follows 40,000+ HIV+ adults from 2010-2014, exploring housing stability and payer access. In 2014, years of reliable longitudinal address information became available. This allowed DSHS to explore the relationship between housing stability and payer access with met need and sustained viral suppression. Data from the Enhanced HIV/AIDS Reporting System and the Texas Unmet Need project were used to select a cohort of 48,303 adults who had met need for HIV/AIDS at least once during the reporting period. A met need score ranging from 1 to 5 was tallied. A moving score was computed by counting differences between zip codes between yearly and longer time periods. Three stability categories were created for moving: rarely or never; infrequently; and frequently. A categorical suppression variable was made for continuously, sporadically, and not yet suppressed. Payer information (2014) for Ryan White, the AIDS Drug Assistance program, Medicaid and select private payers was examined. Sixty-six percent of the cohort had met need all five years and 45% were continuously suppressed. Infrequent moves were more common among those suppressed always (72%) rather than sporadically (58%) or not yet (59%). Over 55% of participants in Ryan White, ADAP or Private Insurance were always suppressed, compared to 44% of Medicaid recipients and 32% with an unidentified payer. Both moving and access to systems of care appear to be related to sustained viral suppression, which is the goal for HIV+ people. More analysis is needed to explore how Medicaid and unidentified payer groups differ from those with better outcomes. Results suggest that interventions such as expanding access to payer sources and policies that promote stable housing may lead to better health care outcomes.

The Use of Automated Defibrillator in Schools

Rahmatu Mansaray, RN

Each year in the United States, there are approximately 300,000 out of hospital cardiac arrests (OHCA) with 3% of them occurring in schools. Studies have shown that at any given point in time we will find about 20% of the population, both adult and children in schools. Given the high number of out of hospital cardiac arrests each year, a coordinated response to these emergencies should be developed in schools. A major component of such a response is the use of automated emergency defibrillator (AED). AEDs have been shown to increase the rate of survival if used within 3-5 minutes of the arrest before arrival of emergency medical services. The purpose of this program was to create an Emergency Action Plan (EAP) addressing healthcare emergencies with a focus on cardiac arrest. The Emergency Action Plan program was modeled after Project ADAM (Automated Defibrillator in Adam’s Memory). Project ADAM was piloted in Wisconsin after a series of sudden deaths in high school athletes in the area. Our program addressed staff training in CPR and AED use; education on recognition of an OHCA and responsiveness. The program was implemented at Cedar Valley Middle School. Currently, there are over 20 staff members trained in CPR/AED use. The mock drill was performed successfully and staff members expressed comfort in knowing there is a formal plan in place on how to respond to medical emergencies at schools. The program is pending a formal evaluation at its pilot location. This school was recognized as a Heart Safe school in Texas through the Project ADAM Texas Chapter.
After the evaluation, the program will be implemented at other schools within the district. This program allows the schools to be proactive in medical emergencies by keeping the community safe and being prepared.

**TWITR - Telemedicine, Wellness, Intervention, Triage, and Referral Project:** Addressing Violence in Schools

Ronald N. Martin, M.C., LPC, LaMencia BerryHill, M.Ed.; LPC, Amanda Freeman, M.Ed.; LPC

While universal school-based prevention programs help to reduce overall school violence rates, they have not been helpful in identifying those individual students who may act violently toward themselves or others. What is needed are strategies to intervene with individual students who have violence risk profiles and either intervene with them or providing treatment or by getting them out of school settings where violence can occur. Identifying violence risk in youth is no small task, however, as what is known about predicting violence risk in adults does not always apply to children. Such intervention may help to prevent students’ involvement in the criminal justice system and provide an opportunity for treatment. The Telemedicine Wellness, Intervention, Triage, and Referral Project (TWITR) was created to try and identify and intervene with those students having violence risk, determine how early-intervention prevents students from becoming a part of the criminal justice system, and examine how investing in making schools safer affects the learning and development of its students. In year one of the project (the 2013-2014 school year) there were seventy-five students referred for assessment by school counselors (female = 35, male = 40). Of those, twenty-two students were elementary school enrollees with the remainder being enrolled in either junior high or high school. During year two (the 2014-2015 school year), a total of forty-seven students were referred for assessment (female = 22, male = 27). All students referred in year two were at a junior high school or higher level of academic placement. TWITR project impact in year two was a decrease in truancy (11.75 reduced to 1) and disciplinary referrals (3-1) from pre-intervention through the third six-weeks of the school year. The GPA increased from 2.48 to 3.5 by the third six weeks.

**Starting a coalition to Improve Immunization Rates**

Debra McCullough, DNP, RN, FNP, Gordon Mattimoe, MSN, RN, FNP-C, Rekha Lakshmanan, MHA

Coalitions bring stakeholders together to advance and affect change on an issue. The methodology of coalition building is detail oriented and requires thoughtful planning and consensus building. Given limited financial and human resources, coalitions are in a unique position to pool resources to maximize effectiveness and accomplish goals. Immunization coalitions organize for multiple reasons. Common reasons include: 1) to provide education or vaccine service delivery, 2) in response to vaccine preventable disease outbreaks, and 3) to improve local immunization rates. The Andrews County Immunization Coalition (ACIC) organized because community members identified a need to improve immunization rates. Prior to establishing the coalition, the immunization rate for completing 4-Dtap, 3-polio, 1-MMR, 3-HIB, 3-HePb, 1-Varicella, 4-PCVs (4313314) by age two in Andrews County was 41%. In April 2014, two Andrews County Health Department staff members attended a coalition building training sponsored by The Immunization Partnership (TIP). TIP facilitated the coalition kick off meeting in May 2014. TIP guided the Strengths, Weaknesses, Opportunities, and Threats analysis (SWOT) with the 25 community stakeholder participants. Participants conducted a capacity building exercise to organize and advance our goal of improving immunization rates in Andrews County. In August 2014 the coalition held the first back to school immunization event. ACIC collaborated with a local non-profit organization providing school supplies to needy children. In January 2015 ACIC conducted a free influenza clinic for adults using donated vaccine. For National Infant Immunization Week April 2015 ACIC conducted a large scale public awareness campaign and collaborated with local providers to vaccinate children <36 months of age with no out-of-pocket fees. The immunization rate for completing 4313314 by age two in Andrews County increased to 45% within 9 months of establishing the coalition. Immunization coalitions can mobilize communities to improve immunization rates.

**Met and Unmet Need for Support Services among persons receiving HIV Care in Houston/Harris County: Medical Monitoring Project 2009-2013**

Osaro Mgbere, PhD, MS, MPH, Mamta Singh, PhD, Melanie McNeese, PhD, MPH, PhD, Raouf Arafat, MD, MPH, Zaida Lopez, MPH

To effectively develop programs and allocate resources, information about the types of community services needed as well as the degree to which service needs remain met or unmet is critical. This study was undertaken to identify met and unmet care needs of People living with HIV/AIDS (PLWHA) in Houston/Harris County. Data used for this study was obtained from the Medical Monitoring Project (MMP) survey conducted in Houston/Harris County, Texas and covered the period 2009-2013. The data comprised of 941 records of consented patients who received HIV medical care and were interviewed either face-to-face or by telephone during the period. The MMP provides information on risk behaviors, clinical outcomes, and identifies met and unmet needs for HIV care and prevention services. The data obtained was subjected to complex survey analysis using the SAS software version 9.4 (SAS Institute Inc., Cary, North Carolina, USA). The top five services that were needed and received by patients were: dental care (51.9%, 95%CI: 48.3-55.5), medicine through AIDS Drug Assistance Program (40.4%, 95%CI: 36.8-43.9), public benefits including Supplemental Security Income (SSI)/Social Security Disability Insurance (SSDI) (36.8%, 95%CI: 33.8-39.9), HIV case management services (36.4%, 95%CI: 32.8-40.1), and counseling on how to prevent the spread of HIV (29.2%, 95%CI: 26.0-32.4). The top five services that were needed but not received include: dental care (26.6%, 95%CI: 23.6-29.5), mealor food services (9.4%, 95%CI: 7.5-11.4), transportation assistance (8.7%, 95%CI: 6.8-10.7), pub-
lic benefits including SSI/SSDI (8.5%, 95%CI: 6.6-10.4), and shelter or housing services (8.2%, 95%CI: 6.3-10.1). The unmet needs were generally associated with education (p<0.05) and poverty level (p<0.01). Estimates of met and unmet need of PLWHA by service category will allow for a better understanding of the continuum of care dynamics and ensure that available resources are targeted or re-directed to fill gaps in HIV support services especially for marginalized population.

Minority populations and individuals receiving care in critical access hospitals are at increased risk for multiple hospital readmissions
Addie Middleton, PhD, DPT

Hospitals incur financial penalties for higher-than-expected 30-day readmission rates, and previous research has focused on this 30-day window. However, patients often have multiple readmissions over the following year. Readmissions are detrimental to the health of the individual, and the increased healthcare expenditures are costly to society. Multiple readmissions compound these negative consequences. Further research is needed to determine key patient- and facility-level characteristics associated with risk of multiple readmissions over the year following hospital discharge. Claims data for Medicare-fee-for service enrollees admitted to a Texas hospital in 2012 (N=2,279,526) were reviewed to determine number of hospital readmissions over the one-year following discharge. The patient-level variable of interest was race and the facility-level variable was hospital type (short-stay acute vs. critical access). A generalized linear model adjusted for age and sex was constructed using race, hospital type, and a cross-level interaction term (race*hospital type) to predict probability of one-year multiple readmissions. 21% of patients had multiple (=2) readmissions over the following year (range 2–38 readmissions). Race and hospital type were both associated with risk of multiple hospital readmissions. After adjusting for age and sex, multiple readmission risk was (24.7%, 33.1%, and 30.4%) in short-stay acute and (45.0%, 46.6%, and 44.0%) in critical access hospitals for Whites, Blacks, and Hispanics, respectively. The association between race and multiple readmission risk was slightly moderated by hospital type with critical access hospitals demonstrating a protective effect for minorities. Overall, minority populations and individuals receiving care in critical access hospitals are at increased risk for multiple readmissions over the year following hospital discharge. Public health programs may be effective in mitigating these potential disparities. The presentation will discuss how race/ethnicity and critical access designation impact risk for multiple hospital readmissions among Texas residents using a robust model controlling for sociodemographic and clinical severity factors.

Association between work-family conflict and depressive symptoms in working women: Do mothers of young children fare worse?
Miriam Mutambudzi, PhD

In comparison to not working, working is associated with favorable physical and psychological wellbeing, however these positive effects diminish in the presence of psychosocial factors such as work-family conflict (WFC) and negative spillover. Employees experiencing WFC report higher levels of negative emotions, depression, and anxiety, and exhibit greater risk for subsequent adverse physical health outcomes. The objective of this study is to compare the strength of the association between WFC and depressive symptoms among women of child bearing age (18-49) with children below the age of 5, and those without children in this age-group. Using data from the 2010 U.S. National Health Interview Survey (NHIS), logistic regression analyses were conducted, which accounted for occupational, socio-demographic and behavioral factors. Sampling weights that adjust for the complex design of the NHIS were applied to the analyses presented. All analyses were performed in Stata/SE 13.0 (Stata, College Station, TX). 5214 women met the inclusion criteria, and of these 23.84% had a young child. Crude odds ratios indicated that WFC was significantly associated with depressive symptoms for both women with young children (OR=1.87, 95%CI=1.34-2.61) and those without young children (OR=1.99, 95%CI=1.63-2.44). A model fully adjusted for occupational, behavioral and socioeconomic factors showed a 2-fold (95%CI=1.40-3.17) increased risk of depressive symptoms among mothers of young children, which was higher than that of their counterparts (OR=1.88, 95%CI=1.50-2.38). In comparison to working women without young children, mothers who reported WFC showed a greater significant risk of alcohol consumption, and greater risk of depressive symptoms associated with drinking alcohol (OR=5.32). This study suggests that WFC is significantly associated with depressive symptoms in working women, with greater effect evident in mothers of young children after fully accounting for covariates. Organizational family-friendly policies may be effective in reducing the psychosocial burden of WFC among women, particularly those with young children.

Reduction of Malaria Mortality in the Country of Chad, Sub-Saharan Africa from 2013 to 2014
Ndolembai Njesada, MPH

Malaria is a parasitic disease caused by the Plasmodium parasite transmitted through infected mosquitoes bite (anophelines). The parasites multiply rapidly in a human’s liver and then infect red blood cells. Symptoms including headache, fever, vomiting and vertigo appear within 10 to 15 days after mosquito bite. Worldwide, cases of malaria are estimated at 198 million (2013). Approximately 584,000 deaths occurred mostly in African Children. This equates to a child dying of malaria every minute in Africa. Despite the alarming number of cases, the mortality rate since 2000 has fallen by 47% globally with a 54% decrease in the African Region. In the Country of Chad, 27% of all morbidity and 19% of all mortality are due to malaria. The purpose of this study is to show the effectiveness of a malaria net distribution program with multi-faceted activities including multiple forms of communication, early diagnosis and treatment in the reduction of malaria mortality in Chad from 2013 to 2014. The database from
the United Nations Development Program (UNDP-CHAD) and communication activities of STOP PALU CHAD from 2013 and 2014 were examined. Confirmed cases of malaria increased by 27.28% from 2013 to 2014, primarily due to increased awareness and early detection. The mortality rate fell by 69 cases/1000 (1881 in 2013, 1729 in 2014) according to records from health facilities. Studies show in the African region many malaria cases are underreported. A multi-faceted malaria awareness and prevention campaign was shown to be effective in reduced mortality of children in Sub-Sahara Africa. The incidence of malaria continues to be underreported due to lack of awareness, health care facilities and access to facilities. Results show combined efforts are necessary to educate people in rural communities in reporting to health care facilities, when symptomatic, for proper diagnosis and treatment.

Differences in Emergency Medical Services (EMS) response among rural and urban counties in Texas
Prakash S. Patel, MD, MPH, Natalie Archer, PhD

Rural emergency medical services (EMS) providers in Texas often serve large, sparsely populated areas, which could result in longer response times (time to arrival at scene), transport times (time between departure from the scene and arrival at the hospital), and total pre-hospital times (total time from call receipt to hospital arrival), potentially affecting patient outcomes. Our objective was to compare median EMS response, transport, and total pre-hospital times among rural and urban Texas counties. EMS run data reported to Texas EMS & Trauma Registries from 2010-2014 were reviewed. Only ground transportation EMS runs requested using 911 response services with a hospital emergency department destination were included in the analysis. Median response times, transport times, and total pre-hospital times were calculated for rural and urban counties. Rural and urban county run times were compared using a non-parametric test in SAS. From 2010-2014, there were 4,360,809 ground transportation EMS responses meeting study criteria, of which 3,200,606 (74%) occurred in urban counties and 1,160,203 (26.6%) occurred in rural counties. For rural and urban counties in Texas, median EMS response times were 8 min vs. 7 min, and median transport times were 11 min vs. 12 min, respectively. Median total pre-hospitalization time was 37 minutes for both rural and urban counties. Non-parametric tests yielded either significant or near-significant p-values for each of these comparisons between rural and urban counties (p<0.001 to p=0.11), because the study was so highly powered, due to the extremely large sample size. However, there does not seem to be much practical difference between run times in rural and urban counties. Despite potentially having longer distances to travel to and from the scene of an emergency, median EMS run times in rural Texas counties appear to be similar to median run times in urban counties.

Student-Led Solutions: Applying a Problem-Solving Framework in a Public Health Informatics Course
Catherine Pepper, MLIS, MPH, Suzanne Shurtz, MLIS, AHIP, Margaret Foster, MS, MPH

An online course in public health informatics (PHI) is taught each spring to health sciences students at Texas A&M University. Students learn PHI competencies and study examples of different public health applications, including electronic health records (EHRs). A main aim of the course is to provide interdisciplinary students with community learning opportunities in an environment that promotes shared problem-solving. However, the lack of a practical application of PHI concepts to real-world situations has confined learning to lower levels of Bloom’s Taxonomy. Instructors gained permission for students to participate in a multi-institutional project that is evaluating community health information exchanges (HIEs) that facilitate information sharing for a broad group of hospitals within a region. A course assignment was designed for students to apply a published problem-solving framework to develop solutions for harvesting HIE data for public health agencies. Students will propose novel, evidence-based, and practical proposals to connect public health practitioners with information uploaded from EHRs to HIEs. Students will present to project stakeholders scholarly presentations that define problem-solving inputs and apply steps needed to arrive at workable solutions. Student and stakeholder feedback will be collected at key points in the semester. Student presentations will be assessed against a shared rubric. Student feedback, stakeholders’ input and responses, and any resulting assignment corrections will be shared. Involving students in real-world projects elevates learning to higher levels of Bloom’s and therefore increases the potential for students to retain skills and knowledge for application in their future workplaces.

Improving Local Health Department Sustainability through Revenue Generation,
Beverly Pritchett, MHA, MA, Ann Robbins, PhD, A. B. Alldrege, CHIM, Anita K. Kurian, MBBS, DrPH, Thomas M. Ricciardello, CPA, MS, Debra L. McCollough, BSN, MSN

Almost all local health departments (LHD) in Texas deliver some health services, most notably immunizations and testing and treatment for infectious diseases, but few bill third parties for these services, or limit billing to public health plans. Although LHDs have been encouraged to pursue additional or alternative sources of revenue to build more sustainable programs in the face of changes in federal, state, and local funding and other developments in the health care environment, the potential revenue from client fees and billing of private and public health plans remained untapped. Past attempts to promote local revenue generation were unsuccessful because they did not address the developmental steps that lead to billing clients and health plans. Texas LHDs want assistance that
is just-in-time and tailored to their organizational circumstances and roles. In response, the Department of State Health Services (DShS) initiated a Learning Collaborative (Collaborative) with seven Texas LHDs in May 2014. The Collaborative focuses action on building blocks (critical steps) of revenue generation, and each LHD pledged action on at least two building blocks and committed to participation through July 2015. To date, each LHD has reported significant progress on their projects, including more vigorous pursuit of health plan payments. Five factors resulted in the success of this system-level collaborative project: 1. Leadership support of staff time to participate in activities over the duration of the project; 2. Creation of a multi-disciplinary leadership team at each participating organization; 3. Goal setting, action planning and follow-through by participating organizations; 4. Tailored training opportunities that foster the development of a learning community; and 5. Regular check ins with the organizations to identify learning needs and to provide assistance. Utilization of these five factors resulted in enhanced revenue generation through development of improved business and clinical practices in six LHDs.

Paternal Exposure to Chemicals in the Environment and Effect on Children’s Development and Health
Alisa Rich, PhD, MPH, Laura Phipps, MPH, CPH, RS, Sweta Tiwari, BHMS, Hemanth Rudraraju, BDS, Philip Dokpesi

Children are highly susceptible to chemical exposure in utero and during early stages of growth due to their unique physiology, immature immune system and greater body surface area per unit of body weight. Fathers can significantly contribute to the adverse health of their children from occupational and recreational chemical exposure. The PubMed database was searched using keywords “parental chemical exposure” and “paternal occupation and chemicals.” Reference lists of articles were searched for topic appropriateness. Abstracts on chemicals with known adverse effects to humans were retrieved in full. Abstracts related to chemical exposure in other species with known health effects in offspring were reviewed and retrieved in full. Studies confirm adverse health and developmental effects in children whose fathers have been exposed to hazardous chemicals. Ecological studies support the association between chemicals in the environment and adverse health and developmental abnormalities in fish and reptiles, such as limb reduction and deformation, sexual ambiguity, sex reversal, and altered mating behavior. Chemicals associated with health and developmental effects in children include metals (mercury, lead), VOCs (benzene, toluene), organochlorides (DDT, DDE, DES), plasticizers (phthalates and bisphenol A), PCBs, and dioxins (Agent Orange). Adverse health effects include developmental disorders (low infant birth weight, congenital abnormalities, genital ambiguity/anomaly, shorter gestational age), emotional disorders (ADD/ADHD, Autism, Asperger’s/ Pervasive Developmental Disorders [PDD]), aggression and hyperactivity in females) and cancers (neuroblastoma, leukemia, brain cancer). Paternal exposure to chemicals such as metals, VOCs, organochlorides, plasticizers, PCBs, and dioxins have proven to be harmful to children, affecting their development. Even prior to conception, chemicals can cause adverse health effects to the fetus. Recommendations are for reduction or elimination of chemical exposure to men before or during conception periods.

Shigellosis increase in Bexar County, 2013-2015
Angela Rodriguez, MPH, Nikki Bradshaw, BS, Kamesha Owens, MPH, Donnie Diaz, MPA, Rita Espinoza, MPH, Anil T. Mangla, PhD, MS, MPH, FRIPH

In the past two years, the San Antonio Metropolitan Health Department (SAMHD) has observed an increase in reported cases of shigellosis in Bexar County. Shigellosis is caused by the enteric bacterial pathogen Shigella which causes disease in the large intestine and can further develop into bacillary dysentery. SAMHD extracted data from the Texas National Electronic Disease Surveillance System (NEDSS) Base System from 2013 to 2015 for reported shigellosis cases and population data from the Texas Department of State Health Services. Data were analyzed using Microsoft Excel. From January to July 2015, a total of 579 shigellosis cases with an incident rate (IR) of 30.8 per 100,000 have been reported in Bexar County resulting in more cases than in the years 2013 and 2014 combined. In 2013, there were 78 cases (IR=reported 4.3 per 100,000) and 242 cases (IR=13.1 per 100,000) reported in 2014. Of the total number of shigellosis cases reported from January to July in 2015, 157 cases were reported as probable and 422 cases as confirmed. In 2014, 228 shigellosis cases were confirmed and only 14 were reported as probable. There were no reported probable cases for 2013. SAMHD analyzed the demographics of reported shigellosis cases and found that Hispanics had the highest incident rate in 2015 at 22.4 per 100,000 compared to other years (1.8 per 100,000 in 2013 and 3.6 per 100,000 in 2014). In 2014, White non-Hispanics had the highest number of reported shigellosis cases at 5.1 per 100,000 compared to Hispanics at 3.6 per 100,000. The increase of reported cases of shigellosis in Bexar County is unknown, but population growth, annual festivities, community awareness, increased testing, and better reporting practices could be contributing factors. SAMHD will continue to further analyze the trend in order to develop future prevention measures.

High Rates of Primary and Secondary Syphilis in men who have sex with men living with HIV in Texas, 2009-2013
Emily Rowlinson, MPH

Recently published estimates of the MSM population in Texas have enabled comparisons of the rate of Primary & Secondary (P&S) syphilis infections in Men who have Sex with Men (MSM) Living with HIV (LWH) compared to HIV- negative MSM. Male P&S syphilis cases reported from January 2009-December 2013 with a risk factor of male sexual contact obtained from Texas’ Sexually Transmitted Disease Surveillance registry were matched with Texas enhanced HIV/AIDS Reporting System (eHARS) to obtain HIV status at time of syphilis diagnosis. The number of MSM LWH obtained from eHARS was subtracted from the estimate of to-
and obtain assistance for rescue, if possible. Victim extraction by an abusive “pimp” with an arrest record for trafficking. The field investigators identified the concept. In an August 2015 meeting, staff identified the need for internal and area-wide stakeholder training to recognize potential victims and implement recommended victim rescue procedures. In the near future. In September 2015, STD staff was notified of a 19 year-old pregnant girl infected with gonorrhea and chlamydia. Public health follow-up was expedited to locate the client and obtain assistance for rescue, if possible. Victim extraction is dangerous and frequently unsuccessful. The Office of the Attorney General was contacted for support. The client was successfully contacted twice by telephone and informed of the STD diagnosis. She asserted she was safe, had completed STD treatment, and denied forced prostitution. At last contact, she was in located out-of-state, continues to work as a prostitute, and reportedly has a birth plan. The Attorney General has flagged the client and pimp in the system to be notified if either is arrested. Public health staff recognized the potential trafficking victim, and responded within the limits of known resources. The lack of an established protocol for reporting to law enforcement and accessing organizations with experience in victim rescue created staff uncertainty about the most appropriate response. Public health workers in contact with clients at-risk for STDs should be aware of human sex trafficking as an issue, and plan in advance to recognize and respond to possible victims with effective reporting and rescue strategies.

Effective communication strategies in the event of public health emergencies
Hani Serag, MD, Shannon Guillot-Wright, MA, Wei-Chen Lee, PhD, Kenneth D. Smith, PhD

In the event of a public health emergency, well-coordinated, timely, credible and accurate communication is key for a successful response. Risk communication principles can be better followed when a pre-developed communication framework is considered part of overall emergency readiness at all stages of management. The project aimed to develop a framework for supporting effective communication in the event of a public health emergency. We critically reviewed the literature about communication-related practices in public health, focusing on public health emergencies at multiple levels (documenting successes and lessons learned). We also reviewed the available literature on the communication strategies during the latest major health emergency events (e.g., Ebola epidemic, H1N1 influenza pandemic and SARS1 outbreak) in addition to selected natural disasters. We consolidated principles and identified evidence effective strategies for communication during public health emergencies that will inform a comprehensive framework for effective communication strategies in the event of public health emergencies and natural disasters. A well-developed framework for communication is a critical component of the preparedness for public health emergency or natural disaster.

Demographic and Regional barriers for West Texas Veterans Health
David N. Sanders, PhD, Charles W. Ewing, PhD

Health disparities are greatly affected by the geographic region in which a senior citizen finds themselves living in their ability to access health related services. Add to that, the complications doctors have worrying over reduced reimbursement rates and it becomes an ever more turbulent sea when trying to access or find available services. This is nothing compared to the Veterans Administration structure for accessing needed services in the region of West Texas. A demographic analysis of West Texas Veterans and services findings will be reported. Recommendations for policy changes that are needed will be suggested and explored. We will also report specific examples from one case study on the effect regional differences in Veterans Administration Services have had on the health outcomes of an individual’s life. Human Sex Trafficking Victims and Sexually Transmitted Diseases – Planning for a Public Health Response Debra Seamans, MSN, RN, Shelly Repp, Sharon Melville, MD, MPH, Martha Payne, APN Regional public health nursing and sexually transmitted disease (STD) staff were recently trained in “human sex trafficking” concepts. In an August 2015 meeting, staff identified the need for internal and area-wide stakeholder training to recognize potential victims and implement recommended victim rescue strategies. Development of a training plan was targeted for the near future. In September 2015, STD staff was notified of a 19 year-old pregnant girl infected with gonorrhea and chlamydia. Public health follow-up was expedited to locate the client to ensure completion of treatment. The field investigation led staff to confirm a family member assertion: the client is advertised for sex on the internet, and probably controlled by an abusive “pimp” with an arrest record for trafficking. Regional leadership was notified to report the victimization and obtain assistance for rescue, if possible. Victim extraction

Association between prolonged breastfeeding and dental caries in children in the United States
Dishani Shah, BDS, Chandni Raiyani, BDS

Eating habits have major influence in infant’s oral health and breastfeeding is their prime source of nutrition. Milk formulas and human breast milk can be implicated in dental caries due to high lactose content especially when it is continued for a period of more than 12 months. The main objective of our study is to identify the correlation between the duration of breastfeeding and prevalence of dental caries in children aged
1 to 5 years. Data regarding the dental caries and duration of infant feeding along with other demographic characteristics such as age, gender, social economic status for children from age 1 to 5 was extracted from National Survey of Children’s Health, year 2011-12. The association of dental caries occurrence and duration of breastfeeding was analyzed using bivariate analysis and multivariable logistic analysis. After bivariate analysis, no significant association between the breastfeeding and its duration and dental caries in children. Factors like preventive care provided, socio-economic status, dental visits, and supplements or formula fed other than breast milk that might affect dental caries occurrence were analyzed and were found to be independently associated. The results were adjusted for potential confounders. There was no significant evidence provided by this data to support association between breastfeeding and dental caries in children. Although it was established that household income level, ethnic status and preventative dental care provided by dentist had a significant impact on dental caries in children. The results suggests that proper education in lactating mothers and increase in provision of preventative dental care at early age and in families belonging to low socioeconomic strata can lead to great decrease in burden of dental caries in children of United states.

From surviving to thriving in the era of reform: Emerging lessons and promising practices for safety-net hospital systems transformation
Nadia J. Siddiqui, MPH, Dennis P. Andrulis, PhD, MPH

Great uncertainty surrounds the fate of safety-net hospitals following the Affordable Care Act—will they survive or thrive in this new environment? While the ACA has created new opportunities and committed considerable dollars to help safety-net systems adapt to change, it has also introduced serious threats such as payment reductions and penalties. These threats, compounded by existing safety-net challenges, could potentially exacerbate longstanding disparities in health. We conducted an in-depth review of 13 leading safety-net systems across 11 states to identify their actions and experiences in adapting to the rapid pace of change in health care. We utilized a mixed-methods approach comprised of a review of secondary hospital data; literature review; and semi-structured phone interviews conducted in Summer 2014 with CEOs and other executives. Our review revealed that systems are undertaking four key transformations: shifting toward more value-based payment and delivery reforms; redesigning primary care with a focus on patient-centered care, care coordination, and behavioral health integration; responding to competition through collaboration and partnerships with health and non-health partners; and embracing change through organizational transformation comprised of visionary leadership, strategic reform, and staff transitions. This session will present systems transformation models, promising practices, and lessons learned. Looming challenges—such as financial viability and role of safety-net providers in this new environment—will also be discussed, along with recommendations grounded in population health and cross-sector collaboration. Safety-net hospital systems have entered into a period of transformation with their “eyes wide open.” How they survive and thrive will depend considerably on their ability to balance what has become a “two-canoe situation”—that is, continuing to run their business while also advancing their mission and population health. This session will provide policymakers, health administrators, and others with perspectives and practical lessons from leading safety-net systems across the country.

Finding Common Ground: Advancing Health Equity and Building Community Resilience to Climate Change
Nadia J. Siddiqui, MPH, Dennis P. Andrulis, PhD, MPH, Maria R. Cooper, PhD

A growing body of evidence suggests that communities of color are especially susceptible to the adverse effects of climate change, often facing greater morbidity, mortality, and loss. Our 2012 study on Southern States, including Texas, revealed that low-income communities of color are at risk of facing the “perfect storm” as social, economic, environmental and health challenges converge with fewer policies, attention, and involvement of these communities in climate change initiatives. Building on this work, the purpose of this study was to identify replicable local-level policies and models that effectively engage diverse communities to build their resilience. This study utilized a mixed-methods approach, involving the development of criteria and analysis of data on major U.S. cities to select a subset of 15 representing a range of geographic, population, and climate-related dynamics; an in-depth review and analysis of local level innovations and interventions for advancing community resilience; and semi-structured key informant interviews with local leaders and stakeholders. Findings reveal which cities are leading in working to build community resilience for disadvantaged communities, identifying common characteristics and actions from across the country. Models related to community engagement, outreach and education, cross-sector collaboration, and assessing community needs will be discussed among other actions and ingredients necessary to build community resilience and advance health equity. The session will close with a discussion of common barriers and challenges that cities face to building resilience to climate change, and offer practical strategies for overcoming them. While cities continue to vary in progress to building community resilience to climate change—perhaps the most important lesson learned is that engaging communities fully and effectively lies at the heart of any success. In a nation built on the richness of its great and growing diversity, doing so is not an option but where we must succeed in adapting to our changing climate.

Determining Targeted Locations for Childhood Blood Lead Screening Based on Two Residency Risk Factors L.J. Smith, MS

This presentation will discuss the methodology and results for the selection of targeted locations which the Texas Childhood Lead Poisoning Prevention Program has created and utilizes for recommending the screening of all children for lead in those targeted locations. The method is based on 2 calcula-
tions for each census tract in Texas. One calculation determines if a census tract meets the threshold for a specific percentage (27%) of existing residential structures built before 1950, and thus may have a high level of lead paint. Another criteria is based on prevalence, namely, if a census meets the threshold for a specific percentage (3%) of children age 1-2 years who have been tested for lead and have a blood lead level >=5 mcg/dl.

Education and Outreach for Chagas Disease in Texas
Paula Stigler Granados, PhD, MSPH, Jose Betancourt, DrPH, MS, Gerardo Pacheco, MPH, MS, Gabriel L. Hamer, PhD, MS, Sarah A. Hamer, DVM, PhD, MS, Thomas Leo Cropp, DACVP-M, MPVM, DVM, Edward Wozniak, DVM, PhD, MPH, Candelaria C. Daniels, PhD

Chagas disease is a vector borne parasitic disease affecting more than 8 million people globally. Although the disease is mostly prevalent in Latin America, it also exists in the southern portion of the United States, including Texas. However, diagnosis and access to treatment are limited in the United States due to the lack of knowledge about the disease and its vectors. Chagas is caused by a vector-borne parasite T. cruzi carried by a type of insect known as a triatomine or kissing bug. Most human infections come from contact with the feces of the infected bug, but congenital and blood-borne transmission also can occur. Chagas disease may go undiagnosed as it can take several years to enter the chronic phase, characterized by progressive degenerative heart disease. Research and disease reports show Chagas disease is present in Texas. Several working dogs, pets and other animals have tested positive for Chagas along with several human cases. Currently, it is believed that the disease is severely under reported due to the lack of screening. It is important health care providers (HCPs) in the region are aware of Chagas disease and know how to handle patients exposed to infected vectors or testing seropositive for T. cruzi. We are also working on outreach to veterinarians, pesticide applicators, blood banks and local public health agencies to assist in Chagas disease communication and prevention. Our project has put together a Chagas Task Force with experts in the field to develop specific educational materials and implement targeted outreach and education on the topic of Chagas. The overall goal of the project is to increase awareness of the presence of Chagas disease in Texas, and improve knowledge regarding appropriate diagnostics, treatment, and prevention of Chagas.

Physical Activity and Health Status at Texas Senior Centers
James H. Swan, PhD, Jennifer J. Severance, PhD, Keith W. Turner, PhD, Zhifang Yu, PhD

Promotion of physical activity to improve health status is a major function of senior centers (SC). Based on 2013 evaluation survey data from 1,417 respondents at 29 senior centers in Tarrant County, Texas, we considered engagement in center physical activity classes, reported increases in physical activity, meeting of basic requisite physical activity, and self-reported health status, based on predisposing, enabling, and need factors, including those linked to the centers. Center responses were weighted to reflect center service use. Multivariate analysis employed SAS-callable SUDAAN, to adjust standard errors for the weighting structure. A majority of respondents reported attending physical fitness classes, about half attending dance classes, and less than one-third attending chair-exercise classes; and a little less than half reported increasing their physical activity in the past year. However, only about one-fifth reported undertaking at least 30 minutes of moderate activity at least five times a week. Well over half reported their health status increased in the past year, less than 3 percent that health status declined. Attending physical fitness classes predicted reporting that physical activity had increased. Attendance at physical fitness, aerobic, and chair exercise classes all failed to predict meeting the requisite level of physical activity; but attending dance/aerobic classes did predict greater frequency of moderate exercise. Ethnicity, age, and social engagement predicted health status, but no attendance at SC physical activity classes did so – although dance/ aerobic activity came close to doing so. In sum, SC promotion of physical activity shows evidence of increasing such activity but not to the point of influencing health status, although other SC factors do so. Measuring engagement in physical activity and perceived health status is helpful in understanding the role of physical activity classes and has implications for SC programming; and we will discuss implications for SC programming.

Public Health Practice and Research at the Texas A&M School of Public Health- Cost and Geospatial Distribution of Falls Among Older Adults
Samuel D. Towne, Jr., PhD, MPH, CPH, Marcia G. Ory, PhD, MPH, Aya Yoshikawa, PhD, Matthew Lee Smith, PhD, MPH, CHES, FAAHB

With the rapid growth of the aging U.S. population, the incidence of falls and fall-related injuries is expected to rise. In the United States, 30% of older adults suffer a fall annually with tremendous personal and societal burden. Although estimates of national-level costs are available, most of these often cited estimates are dated, and less has been published about statewide estimates and where they occur. Two studies were used to explore the cost (estimated from charges) and geospatial distribution of falls. In the first study fall-related medical costs by age, sex, and different geographic regions based on admission status of 2,937,579 hospital discharges reported in 2011, with special attention to trends over time. In the second study incidence and characteristics of fall-related hospitalizations (falls) among Texans aged 50 and older, by geography and across time were examined. We calculated fall-related hospitalization incidence rates (65 and older), identified fall ‘hot spots,’ and examined availability of fall-prevention programming. The incidence of fall-related hospitalizations for older adults increased by nearly 20% from 2007 to 2011. There were 77,086 fall-related hospitalizations in 2011, of which 78.4% represent those aged 50 and older. Among this same age group, total fall-related costs rose to $3.1 billion in
Experiences Using a Targeted Approach to Encouraging Minority Students to Enter Public Health Careers

Carol Trono, MA, Steven R. Shelton, MBA, PA-C, Mark Scott, MBA, CPM

The Physician Assistant Learner Support (PALS) program is a targeted intervention for high school students in rural, underserved and primarily minority Texas counties. The program goals are to attract Black and Hispanic students to PA careers, prepare them to enter training programs, and encourage them to eventually work in MUAs or HPSAs. While focused on the PA profession, the methodology of the program is relevant to addressing disparities in workforce diversity in any public health field and can be customized for any career path. Identified factors contributing to a lack of minorities in PA and other public health training programs include minority students being unaware of career opportunities, frequently lacking academic resources, and not always having family support for pursuing post-secondary education. To address these factors, we developed and delivered a consistent curriculum and intensive activities relevant to the career field. Mentoring and shadowing were key interventions that connected minority students with practitioners and current health profession students. They visited practices and interacted with field workers. Other important interventions included a parent academy and educational sessions for high school representatives. The program was implemented in 10 high schools across 3 regions reaching 155 students, of which 41 were Black and 60 were Hispanic. In the first year of this 2-year grant, 92% of cohort students indicated increased knowledge of requirements to be a PA; 98% indicated satisfaction with activities; 85% indicated a change in academic skills; 83% indicated it was “Likely” or “Very Likely” they would pursue a career in health care, and 33% indicated they were “Interested” or “Very Interested” in becoming a Physician Assistant. Growing the public health workforce and increasing its diversity requires activities and interventions that meet the needs of minority students. Targeted programs like PALS can make a difference.

Lessons Learned from our Pilot Year: Healthy Dining Matters!, a Nutrition Equity Focused Restaurant Program

Jenny Varghese, MPH, CHES, DrPH(c)

In the United States, over half of all meals are eaten outside the home. Foods eaten outside of the home tend to be of poorer nutrition quality and higher in calories. The growing eating out trend is another related factor to the obesity problem in the United States. To help combat obesity at the restaurant environment level, the Healthy Dining Matters! Program was created. HDM is a healthy restaurant recognition program designed to motivate, local, private, non-chain restaurants in low-income areas to provide a healthy environment for their customers. HDM staff work with restaurants to offer and promote a healthy menu including drinks, entrees and sides. During this session, attendees will learn about our work in two communities and our evaluation of our pilot year. The program design is based off health education theories and evidence based programs. Our program evaluation efforts included qualitative and quantitative approaches that included, surveys, focus groups, process measures and interviews. Attendees will essentially learn how we are working to increase the accessibility and availability of nutritious options in local non-chain restaurants and how we are working to justify policies in support of equity in nutritional health.

Implementing hospital-based social media for health promotion: The University of Texas Medical Branch UTMB Health Tips experience

Christen Walcher, MPAff, Dylan Lancaster, MS

Social media, defined broadly to include interactive electronic communication fora such as Facebook, Twitter, apps, and text messaging, is becoming a popular tool for promoting patient health and shaping health behavior. Studies show health promotion interventions using social media can help patients lose weight, manage diabetes, and practice healthier behaviors. Designing and implementing health promotion programs using social media in a hospital setting presents a unique set of opportunities and challenges. We describe findings and lessons learned from UTMB Health Tips, a social media health promotion program at The University of Texas Medical Branch (UTMB), an academic medical center in Galveston County, Texas. The authors identified topics for social media content based on community health needs; selected a text message service provider based on communication features; established a Facebook page and blog; worked with medical experts within UTMB to draft four distinct message series on healthy lifestyles, breastfeeding, diabetes, and hypertension; and advertised the new service called UTMB Health Tips. Between January 2015 and September 2015, a total of 1435 individuals signed up to receive text message health tips or take a text message interactive health trivia quiz, and 1712 liked UTMB Health Tips’ Facebook page. Feedback from participants indicates message content is useful and the trivia format fun. The attrition (opt-out) rate was 4.8%. Early results indicate that UTMB Health Tips is a viable way to deliver accurate health information and encourage healthy behaviors among patients and the community. A low attrition rate suggests that message content is relevant and engaging. Implementation lessons learned include: Identifying the best text message service; crafting messages that are medically accurate, meet text message character limits, and remain culturally appropriate when translated into Spanish; and working
within existing institutional policies to protect patient privacy.

**Association between HIV Diagnosis Facility Type and Transmission Category in New HIV Diagnoses in Houston/Harris County, 2005-2014**

Weilin Zhou, MD, PhD, MPH, Jeffrey Meyer, MD, MPH, Sudipa Biswas, MD, MPH, Biru Yang, PhD, MPH, MS, Raouf Arafat, MD, MPH

A Houston study showed HIV community viral loads in men who have sex with men (MSM) were lower than non-MSM, which may suggest a higher linkage- to- care rate among MSM. A recent publication showed that patients diagnosed from inpatient facilities (IF) had a lower rate of linkage to care compared to those from outpatient facilities (OF). The objective of this study is to evaluate the association between HIV diagnoses facility type and HIV transmission category in Houston/Harris County, 2005-2014. All new HIV diagnoses from 2005-2014 from Houston/Harris County were included. Facility types were categorized as IF, OF, emergency room(ER), screening, diagnostic and referral agency (SDR), and others/unknown. Chi-square test and logistic regression were performed by using Stata and SAS. A total of 12485 new HIV diagnoses were included in this study. There was a statistically significant difference in facility types among transmission categories (p=0.000). Compared to non-MSM, MSM was less likely to be diagnosed from IF (OR 0.44, 95%CI 0.40-0.49, p=0.000) and from ER (OR 0.57, 95%CI 0.48-0.67, p=0.000), but more likely to be diagnosed from OF (OR 1.08, 95% CI 1.01-1.16, p=0.042) and from SDR (OR 2.58, 95%CI 2.39-2.80, p=0.000). To the contrary, injection drug users (IDU) were more likely to be diagnosed from IF (OR 1.84, 95%CI 1.50-2.26, p=0.000), and less likely from OF (OR 0.38, 95%CI 0.30-0.49, p=0.000) and from SDR (OR 0.45, 95%CI 0.35-0.58, p=0.000). This study showed that MSM preferred to choose outpatient medical clinics for HIV screening and diagnoses, while IDU individuals were more likely to be diagnosed in hospital- based settings. Facility preferences in different transmission categories may suggest different strategies in keeping patients in care. Further studies on linkage to care are needed to explain the different patterns of HIV community viral load and facility preferences in different transmission categories.

**Poster Presentation Abstracts**

**Assessing the Usage of Social Networking Sites in Newly Diagnosed HIV Positive Men Who Have Sex with Men (MSM) in Houston/Harris County, Texas, 2014**


Due to its relative anonymity, social networking sites have become popular choice of seeking sexual partners among MSM community. It has been reported that MSM’s prefer to use social networking sites more as a source to meet sexual partners than older MSM’s. Previous studies also described Hispanics and African Americans predominantly prefer seeking partners through social networking sites than Whites. Grindr, Adams4Adams, and Jack’D are reported to be preferred social networking sites. Data was generated from Enhanced HIV/AIDS reporting system (eHARS) for all newly diagnosed HIV positive MSM’s in Houston/ Harris County during 2014. Data regarding social networking sites usage was gathered from the Disease Intervention Specialist’s (DIS) interviews in the Sexually Transmitted Disease Management Information System (STDMIS). Descriptive analysis and logistic regression was performed for data analysis using SAS software 9.3. A total of 643 MSM were included in this study. Approximately 36.7% (236/643) of the MSM used social networking sites for finding sexual partners. Young MSM (14.52%) predominantly recruited their partners through networking sites than the older MSM (3.58%). African American’s (14.31%), followed by Hispanics (13.84%) were more likely to prefer their sexual partners from internet than Whites (6.53%). Older age groups are less likely (OR: 0.36; 95%CI: 0.15-0.82) than younger to use internet to find partners. Among social networking sites, Grindr was the preferred site by Hispanics (7.15%). On the other hand, African American preferred Adams4Adams and Jack’D (3.73% and 6.07% respectively). Overall, a trend is seen among younger MSM feeling more comfortable pursuing sexual partners off the net than older MSM. Grindr, Adams4Adams, and Jack’D are the popular sites among our study population. Popular networking sites, can be used for culturally targeted HIV prevention programs among at risk populations by sexual health organizations.

**Gastroenteritis Outbreak of Unknown Etiology at a Houston Elementary School, October 2014**


Approximately 179 million cases of acute gastroenteritis (AGE) occur in the United States each year and AGE outbreaks remain a substantial public health threat. On October 17, 2014, the Houston Health Department (HHD), Bureau of Epidemiology (BOE) was notified of ill students and staff who were ill with symptoms of gastroenteritis at an elementary school. The BOE promptly initiated an investigation to determine the cause of the illness and apply preventative measures to help contain the outbreak. The BOE conducted a site visit. A list of students from kindergarten through 5th grade was compiled by the school nurse. Telephone interviews were conducted with parents and ill staff. Data was entered in the Houston Electronic Disease Surveillance System (HEDSS) and analyzed. Five stool specimens were submitted to the Bureau of Laboratory Services (BLS) for testing. Environmental inspection of the school was conducted by the Bureau of Consumer Health (BCH). Between October 16 and 17, 2014 a total of 56 cases with abdominal pain, nausea and vomiting were identified. Twenty-eight (61%) of the cases were female, the age ranged from 5 to 50 years with a median of 7 years. All of the 56 cases (100%) had abdominal pain. Forty-one (73%) suffered nausea and vomiting and twelve (21%) had fever.
Dental caries is the most chronic condition in the U.S. population. Aikins, PhD, MPH

Outreach Events

Oral Health indicators from the Project Saving Smiles Outreach program


The need for effective weight loss approaches in AA women is immense. Nearly 82% of AA women are overweight or obese compared to 60% of Caucasian women. Current interventions with AA women show less weight loss overall, and lower maintenance over time compared to other populations. To develop effective programs, process evaluations must be conducted to determine adherence to program elements. This study evaluated church programs for adherence to curriculum elements in a NIH-funded weight loss study in African American women. Process evaluation tools were developed to measure dose of program delivered and fidelity to theoretical program constructs. Each program was considered to be adherent if dose was 75% and fidelity was 3.0 (1-4 Likert scale). Churches were evaluated approximately once per month throughout the duration of the program by an independent observer. Seven churches completed the core curriculum of the Better Me Within program. Each were assessed approximately 4 times with the process evaluation tool. The mean dose across all churches was 76%. Three out of seven churches did not meet criteria for dose (Churches: 3-66.5%, 6-70.77%, 8-69.64%). Additionally, the same 3 churches did not meet fidelity for behavioral skill building or session content. Facilitator communication skills and social support had the highest fidelity across all churches (3.50 ± 2.24, 3.48 ± 2.1, respectively). To build effective interventions for African American women, programs must be implemented as intended. Monitoring programs through process evaluations allows areas of improvement to emerge in relation to training, and curriculum development. In addition, patterns may arise that may have aerosolized through the air vents and other avenues. A public health hazard was averted with a prompt response and the timely implementation of preventative measures.

Emotional Health and Teenage Pregnancy in Galveston Independent School District

In Galveston County in 2011 there 15.9 live births per 1000 girls aged 15-17 years old, which is higher than the national average. The purpose of this research was to assess the role of emotional health, specifically depression status, suicidal ideation, and family support in pregnancies among teens aged 14-17 years in Galveston, County. The University of Texas Medical Branch and the Galveston Independent School District partnered to create the Gulf Coast Student Survey to obtain feedback on a wide range of student health topics, pertaining to risky behavior among adolescents. The high school students thus completed a survey to identify concerns in order to enable the District, the University and interested community programs to develop new student outreach programs or revise existing ones. Adolescents’ self-reported responses were used to define the study outcome, teenage pregnancy, and study exposures including depression status, suicidal ideation and family support. A multivariable logistic regression analyses were conducted to assess the association of depression, suicidal ideation and family support with teenage pregnancies adjusting for confounders. No statistical signification relationships were observed between emotional health of female students and teenage pregnancies when adjusted for age, race/ethnicity, socioeconomic status, condom use and birth...
control access in the analysis. Given the high rates of teenage pregnancies in the Galveston county and possible study limitation of low power an self-reported responses, it is important that a large comprehensive prospective cohort study is needed to further evaluate these relationships.

**EpiAssist: How do students apply volunteer experience to careers in applied public health?**
Sanjana Bamrara, MPH, Jennifer Horney, PhD, MPH, CPH

EpiAssist is a student volunteer group based in the Department of Epidemiology and Biostatistics at the Texas A&M School of Public Health. The purpose of EpiAssist is to provide students with the opportunity to gain experience at local and state health departments and other community-based partners, while at the same time, providing partners with needed surge capacity. EpiAssist program activities are evaluated via an online survey, which is completed by each student, as well as the requesting partner, following the completion of each activity. In addition to this quantitative evaluation, a qualitative evaluation consisting of interviews with graduating students about their experiences with EpiAssist were conducted to gain additional insight into the benefits of this applied experience in their job search and subsequent placement. The sample for this study includes the 22 EpiAssist members who have graduated since the program began in January 2015, and who are presently employed in applied public health. The study focuses on the impact of applied public health experience through volunteer opportunities on employment in state and local public health departments. Twenty-two EpiAssist members who graduated from the School of Public Health were contacted via email by the program coordinator. Telephone interviews of approximately 10 minutes in duration were scheduled with each member who consented to participate. Interviews were recorded, transcribed, and analyzed for themes. An interview guide was developed and used to collect data on the member’s post-graduation job, their experience with EpiAssist, and whether they applied skills learned in EpiAssist in their current position. Exposure of students to applied public health projects through groups like EpiAssist, working in collaboration with the state and local health departments, can form the groundwork for a career in public health practice post-graduation.

**Importance of Global Health Content within Health Services Curriculum**
Gail Chanpong, DrPH, CIH, CHMM, Sherdeana Owens, DDS, MPH

Global Health courses enhance health service performance by sensitizing medical, nursing, administrative, and public health students to health equity issues among vulnerable populations and emphasizing practices for improving community health outcomes and strengthening disaster risk management. Expand experiential learning and practical applications in the field of global public health, disaster preparedness, epidemiology and eco-friendly reconstruction in the health services curriculum. Objectives include: exchange of international human rights advocacy and health equity strategies among refugee/displaced populations; recognition of the value of effective implementation of evidence-based informatics and research into practice with measurable public health impact; and gaining proficiency in global health best practices. Global Health knowledge supports health equity and the well-being of all people using field-tested strategies to minimize disease threats and improve humanitarian response. Global Health focuses on critical evaluation of real-life case studies, challenging students to solve complex community health problems and respond to disaster scenarios. Inclusion of Global Health in the curriculum would foster the transfer of competencies to prepare healthcare leaders and practitioners, ensuring capacity for effective sustainable worldwide health and increased community resilience.

**How does electronic health-literacy affect patient-doctor communication?**
Jacquelyn Cheun, MS, DTR, Gul Seckin, PhD

It has been well established, in the literature, the association between low health literacy rates and poor health outcomes. More people are using the internet to look up health information. Research has shown that shared decision making between doctors and patients can improve patients’ health outcomes. How does their electronic health literacy affect their communication with their doctors? With the current policy encouraging the use of electronic healthcare records and telehealth, there is a need for electronic health literacy. Using SPSS AMOS, we tested a SEM model with data collected from a national sampling of online health and medical information users who participated in the Study of Health and Medical Information in Cyberspace (N=710). This study used a nationally representative online research panel of the US adults maintained by the Knowledge Networks. The preliminary results show that higher electronic health literacy rates are associated with better self-rated health management. Also, higher-levels of electronic health literacy are associated with better patient-doctor communications. Electronic health literacy will be important for patient-doctor communications. Program development should be established on focusing on electronic health literacy across the lifespan.

**Time Makes a Difference: Predicting Housing Loss through Case Management Visits**
Shlesma Chhetri, Emily Spence-Almaguer, MSW, PhD, Kwynn Gonzalez Pons, Danielle Rohr, MS

Permanent Supportive Housing programs in Tarrant County, Texas offer formerly homeless clients a variety of tools that assist in promoting housing stability, including case management services. Previous data analysis shows that tenants who experienced disenrollment (housing instability) demonstrated a reduction in tenant engagement over time. Three types of disenrollment are possible from the housing retention programs, including positive disenrollment, neutral disenrollment, and negative disenrollment. Negative disenrollment is associated with factors such as noncompliance, arrest, or
eviction. Neutral disenrollment includes death, reunion with family, or transferring to another housing program. Finally, positive disenrollment indicates that the client has achieved self-sufficiency. In an effort to predict negative housing loss, bivariate and multivariate tests were completed to determine the association that overall case management visit and case management minutes have on negative disenrollment (housing loss) for residents. Bivariate tests showed that participants who retained their housing received more home visits on average (1.4 home visits per month), as compared to only .97 home visits per month for participants who experienced negative disenrollment. Similarly, participants who retained their housing received more case management minutes per month during the months that they were housed (140 minutes per month compared to 84 minutes per month) as compared to those who disenrolled. Finally, the likelihood of negative housing loss significantly decreased for each additional case management minute per month. Case management minutes per month were predictive of negative housing loss, suggesting that more time spent in case management is associated with housing retention. More research is needed to understand the complexity of this association and whether increased time is a reflection of a stronger case manager-client relationship. These findings can be used to inform future practice for homelessness-centered programs aimed at housing stability.

Untapped Potential: Utilizing youth as public health volunteers
Brittani J. Clarkson, Adeolu T. Morokenji, MPH, Guy R. Gleisberg, MBA, BSEE, EMT-B

The Montgomery County Medical Reserve Corps (MCMRC) unit was established in 2010, to serve as an auxiliary branch of the Montgomery County Public Health District (MCPHD). The unit comprises extensively of adult volunteers who augment local capacity during public health emergencies and a recent recruitment needs assessment identified the necessity to expand current volunteers. Presently, a paucity of published evidence exists regarding utilizing youth for volunteers in public health. The purpose of this study was to compare the number of MCMRC youth volunteers after the implementation of an innovative public health partnership (PHP) of expanding the youth volunteer base. MCPHD conducted a retrospective analysis on all MCMRC youth volunteers from October 1st, 2014 through May 30th, 2015. Prior to deployment, MCPHD developed a tailored message, which would be delivered to three high schools. Strategic partnerships were forged between teachers who taught health classes and the Health Occupation Student Association. Through a series of meetings and presentations, MRC began distributing information, with an option for students to obtain mandatory community service hours. MRC associates served as mentors to the high school students, encouraging them to explore public health and to take advantage of the limitless opportunities, experiences and training. New volunteers were employed to attend meetings, outreach events, train and recruit friends and family members. A total of 46 MCMRC youth volunteers were included during the study period. Of these 1(2%) were pre-PHP compared with 45(98%) after PHP, a 4500% increase in youth volunteers. The mean PHP recruit was 16 years (range 15-19 years) and 39(86%) were female. The development of the PHP resulted in a significant increase within MCMRC of both the youth volunteers and base. Further studies are warranted to evaluate the impact of this PHP process on under-utilized resources in other communities.

Ethics Courses in Master of Public Health Programs
Angela Corona, MPH, Billy U. Phillips, Jr., PhD, MPH

While Public Health professionals agree that ethics plays an integral role in the profession, there seems to be a gap in the expectation of ethical skills attainment and how schools of Public Health systematically train their students. This study aimed to determine the interest level of Master of Public Health (MPH) students in taking a separate course directly focused on Public Health Ethics as part of their MPH curriculum. A group of MPH students received a 2-hour class session on the topic of Rural Health Ethics as part of a larger course. Following this class session, students completed a survey to gauge how effective the session was in helping understand ethics, as well as their opinions about whether they would consider taking a public health ethics course in the future. A total of 29 students attended the ethics class session and 27 students completed the follow-up survey. When asked if they would take an elective course in public health ethics, 28% of students stated “yes” and 64% said they would “consider” it. Moreover, 52% of students stated that a separate course in Public Health Ethics should be required as part of the MPH curriculum. Finally, 92% of students believed they were at least adequately prepared to handle ethics issues in the field. While the majority of students feel at least adequately prepared to handle ethics issues in the field, more than half of the students still felt that a separate course should be a required part of the MPH curriculum, indicating that students think it would be worthwhile to improve their skill set in this area. MPH program coordinators should consider adding a class, at least as an elective option, to meet this need in their student population.

Health Assignments and Screen-Time Rules: Exploring the Relationship
Lenna Dawkins- Moulton, PhD, Andrea McDonald, PhD, Lisa- sako McKyer, PhD, Sharon L. McWhinney, PhD

The purpose of this study was to examine the relationship between parents’ rules for screen-time and school take-home assignments that attempted to reduce screen-time and increase physical activity among children. Parents influence children’s health habits through rule setting and restrictions. Parents also play an important role in reducing sedentary behaviors, such as video- gaming and television viewing, and replacing them with physical activities that are family-oriented. Excessive Screen-time can lead to overweight and obesity. Teachers in most required health education classes reported using take home assignment to involve families in school health programs. Two hundred and ninety-eight parents of children
enrolled in the fourth grade at seven elementary schools in a rural Texas county were surveyed. Descriptive analyses were performed and chi square tests of independence were conducted to test for evidence of a relationship between school assignments and parents’ screen-time rules. Analyses showed all parents had screen-time rules for their children, but most (n = 221) had rules that were lax. Few parents reported schools gave assignments that attempted to increase physical activity (n = 89) or decrease screen-time (n = 89). Chi square test of independence showed there was no statistical significance between physical activity assignments and parents’ screen-time rules (.2 (1) = 1.870; p = .171), or screen-time assignments and parents’ screen-time rules (.2 (1) = .022; p = .883). Home school partnerships have been found to positively impact the health and academic outcomes of children, but these findings suggest sending home assignments with children is not necessarily the most effective way to engage parents in setting rules for screen-time. Additional investigation is needed to further explore this relationship and identify engagement strategies that yield reasonable returns.

A hospital-based data analysis of tumor receptor expression in invasive breast cancers among Hispanic females

Isela De la Cerda, MPH, Eugenio Galindo, MD, Ricardo Martinez, MD

Breast cancer is a heterogeneous cancer consisting of a number of subtypes that appear to have distinct risk factors, molecular characteristics, and response to treatment. Among the Hispanic female population, breast cancer is the first leading cause of cancer death as of 2014. Hispanics predominate the population in the Lower Rio Grande Valley of South Texas by making up 90.37% as of 2012. Doctors Hospital at Renaissance (DHR) located in Hidalgo County provides care for over 180,000 patients annually, 89% of which are Hispanic. We will look at the distribution of age at diagnosis, socioeconomic status, and body mass index among the subtypes of breast cancer and examine our hypothesis of triple-negative breast cancer being more common than any other subtype as compared to HR+/HER2- among Hispanic females. Utilizing the recommendations made in the corpus of triple negative breast cancer literature and DHR’s cancer registry database we will conduct a retrospective hospital-based analysis. To describe the best fitting relationship between the dependent variable (tumor subtype) and the set of independent subtypes (BMI, SES, and Age at Dx) we conducted a multinomial logistic regression. After conducting a multinomial logistic regression in STATA, statistical significance was found between tumor subtype and younger age at diagnosis. This study sets the foundation to continue carrying out studies like these in DHR to discover epidemiological congruencies and further expand the knowledge in breast cancer research. With this knowledge we can better educate our population about breast cancer subtypes and the outlook associated with each subtype. This could reduce the negative reaction towards prognosis associated with breast cancer, as well as motivating women to screen for breast cancer at a younger age.

Preconception Care and Reproductive Life Planning: Engaging Primary Care Providers

Anna Espinoza, MD, Amy Raines-Milenkov, DrPH, Kimberly Fulda, DrPH, Misty Wilder, Michelle Lee, MS, Ann Salyer-Caldwell, RDN/LD, MPH

The objective of this project is to identify barriers to providing preconception care in primary care. In 2012, Tarrant County led the state in infant deaths among Texas counties with 10,000 or more live births. At 6.87 deaths per 1,000 live births, the Tarrant County infant mortality rate (IMR) was higher than the rates of Texas (5.98 per 1,000) and the United States (5.82 per 1,000). Additionally, there are striking racial and ethnic disparities in infant deaths, with IMRs of 11.7 per 1,000 for African American infants compared to 6.35 for Hispanic, and 5.88 for Non-Hispanic Caucasian infants. This study consists of a continuing medical education event (CME), focus groups, and surveys to primary care clinicians. The CME event featured two speakers, who discussed the inclusion of reproductive life planning questions in a primary care practice and the ethical issues involved with this. The purpose of the focus groups was to evaluate perceptions and knowledge of reproductive life planning in women and men of child bearing age. Up to 10 focus groups will be conducted with participants recruited from community and faith based organizations and OB/GYN clinics. Over 1400 surveys have been delivered by e-mail to clinicians, including family medicine physicians, pediatricians, OB-GYNs, nurse practitioners, and physician assistants. The study is still in progress. Forty-seven people attend the CME event, including 15 physicians, 11 PAs/ NPs, and 32 nurses/social workers/other healthcare professionals. They believed the screening questions can be easily adapted to their practice. The focus group and survey portions of the project are currently in process. Currently, 1 focus group has been completed, and 42 clinicians have completed the survey. Integrating preconception health into routine primary care encounters with patients of reproductive age should be a significant driver in the reduction of infant mortality rates and increase in healthy families.

Barriers to Implementing The Last Drag Tobacco Cessation Program for LGBTQIA Community

Jennifer Evans, M.Ed, CHES, Ronald Williams, Jr., PhD, MCHES, Jacquelyn McDonald, PhD, MCHES, Jeff Housman, PhD, MCHES

Although research is limited, previous studies have indicated that tobacco use among LGBT community members is consistently higher than the general population. Additionally, reports have suggested that smoking prevalence may be up to 71% higher among gay and bisexual men and up to 350% higher among lesbians and bisexual women compared to similar non-LGBT identified groups. The American Lung Association has identified possible reasons for the increased smoking risk including: discrimination, social bonding within the bar culture, reduced access to quality healthcare, targeted tobacco industry marketing, and status quo acceptance by LGBT organizations. The Last Drag is a tobacco cessation program developed and
implemented in San Francisco, California which has shown promise in assisting LGBT members to quit smoking. This presentation will describe the process of adapting The Last Drag to be implemented in a southcentral Texas community. Challenges included recruiting culturally competent program facilitators, delivery of program specific training, provision of Allies training for working with LGBT population, and adaptation of program strategies for the local community. This presentation will discuss how program leaders addressed cultural competence with program facilitators through active recruitment and partnership with the local university Office of Student Diversity and Inclusion. This partnership led to a special session delivery of the Ally Training. The presentation will also discuss the strategies and significant challenges in recruiting program participants. Presenters will share their experiences to further assist community health educators who are targeting tobacco cessation in populations who may face marginalization and discrimination based on sexual identification or gender identity.

Road to Recovery - An Assessment to Evaluate a Community’s Recovery Years after a Wildfire
Bonnie Feldt, MPH, David Zane, MS, Tracy Haywood

In April 2015, the DSHS Health Service Region 7 conducted a Community Assessment for Public Health Emergency Response (CASPER) in Bastrop County, Texas to assess the long-term recovery and preparedness levels of residents in the area affected by the 2011 wildfire. The focus of this assessment on recovery and preparedness several years following a major disaster is the first of its kind in Texas. The survey was developed in conjunction with local stakeholders and focused on recovery and preparedness. CASPER methodology was used to design and conduct the assessment to provide household-level data about the community. The CASPER teams were comprised of local, regional and state health department staff, local mental health services staff, and public health students. Interview teams used a two-stage sampling technique to select households for interview. Data was entered into an EpiInfo database and analyzed by public health students. The teams selected 557 housing sites, of which 343 were considered accessible. 185 interviews were completed and included in the data analysis. Respondents were asked about their residency and damage to their home at the time of the 2011 wildfire. All households were then asked about their preparedness levels, long-term health and mental health, preferred communication methods, and recovery. Using CASPER methodology proved to be a useful way to get household-level data related to preparedness and recovery in the area affected by the 2011 wildfire. Results of the assessment were shared with local emergency management to assist them in their continued recovery and preparedness planning efforts.

Your Guess is as Good as Mine: Reproducibility of Food History Responses in a Sample of Texas Adults, 2015 Laura Fox, MPH, CPH, Joseph (Greg) Rosen, Justine Price, MPH, CPH

During investigations of foodborne illness clusters/outbreaks, epidemiologists collect detailed food histories from case-patients, whose ability to accurately recount past food consumption within the appropriate exposure period informs public health capacity to implicate potentially contaminated food sources. Oftentimes, this information may be collected days to months after illness onset, and the type of information collected during the investigation may vary as well. This study attempts to quantify dietary recall after 1 month by investigating the reproducibility of responses to a food history questionnaire in an adult population in Texas. This study also evaluates the effect of demographic and lifestyle characteristics on food history recollection. Health department employees across Texas administered two identical interviews—one month or more apart—to consenting participants in their respective agencies. Interviews consisted of demographic and lifestyle questions, a three-day meal chart, and a checklist of food items consumed in the three days prior to the initial interview. Reproducibility scores were calculated for each meal chart and food history item by comparing the respondents’ answers in the initial and follow-up interviews. Resulting scores were used to identify statistically significant lifestyle or demographic factors that influenced dietary recall. Of 82 sets of interviews, our preliminary results indicate that (1) recall of food consumed after 1 month considerably varies by food item and meal time; (2) respondents were able to correctly recall breakfast and dinner meals more frequently than lunch meals; and (3) special or distinct food items scored higher compared to common food items. With distinct variability amongst food item scores and meal chart scores, health departments across Texas can use this information to improve foodborne illness investigations, prioritize which information should be collected and when, and understand what kind of food information adults remember over time.

Using a Customized Provider Mail Out to Encourage Strong Recommendation of HPV Vaccine
Erin Gardner, MPH, Kenzi Guerrero, MPH, Lucille Palenapa, MS

The ACIP recommends three adolescent vaccines for boys and girls aged 11-12 years: one dose of tetanus, diphtheria, and acellular pertussis (Tdap) vaccine, two doses of meningococcal vaccine (MCV4), and three doses of HPV vaccine. Preventing HPV infection through immunization protects against HPV-associated cancers in males and females, including cancers of the cervix, vulva, vagina, penis, anus, and oropharynx. In Texas, while immunization coverage levels for Tdap and MCV4 vaccine have increased significantly, HPV coverage has not. Despite the safety and effectiveness of the HPV vaccine, less than one third of teens in Texas are fully vaccinated against HPV. The CDC has found that healthcare provider recommendation is the single best predictor of vaccination. Stronger provider recommendation at Texas Vaccines for Children (TVFC) clinics could lead to increased HPV immunization rates in Texas adolescents. On June 2, 2015, a customized adolescent vaccine ordering profile email was distributed to approximately 2,400 TVFC providers who serve adolescent populations. Provider emails reflected two data tables including Tdap to HPV ordering ratios as well as total doses ordered in 2013 and 2014 for each adolescent vacc-
Identifying Predictors of Suicidal Ideation in Counseling Clients Presenting for Telehealth Services in Rural Texas

Usman Zaheer Ghumman, MD, Oluwaseun Oluwo, MD, Christine Rosner, M.Ed, Parth Thakkar, BDS, Carly McCord, PhD, Trey Armstrong, MS

Suicide, the 10th leading cause of death in the United States, has a higher prevalence in rural settings for reasons such as lack of public transportation and proximity to healthcare facilities, which hinder access to mental health services. The Telehealth Counseling Clinic, by providing access to counseling services to medical shortage areas across five counties in Central Texas, offers a veritable model by which these risk factors could be addressed. The objective of our study is to determine if there are any differences in gender, ethnicity, or age between individuals who present for counseling with suicidal ideation, and those who do not report any suicidal ideation. Also, we aim to assess the effectiveness of TCC services in reduction of suicide risk. The study population (n=X) was selected from the clinic using the question that related to thoughts of self-harm on the PHQ form as an inclusion criteria. Client records were consulted for demographic information. PHQ-9 assessments were administered every other session over the course of therapy. All analyses were done using SPSS version 22. There were no significant gender differences between those with and without suicide ideation. (.2 p-value: 0.981). There were also no significant differences between Caucasians, African Americans, Hispanics and other ethnic groups. (.2 p-value: 0.341). Finally, significant differences in age between and within groups with and without suicide ideation were also not found (ANOVA: p-value: 0.297). There were no significant differences in any of the demographic variables. Future studies investigating factors that lead to increased risk of suicidal ideation in TCC clients can focus on clinical factors such as hopelessness, sleep, social support and depression severity. At the conclusion of the study the effectiveness of the TCC's services in reducing suicide risk will also be assessed.

Concentrations of inorganic arsenic species are highly correlated with the concentration of the sum of all arsenic subspecies in nails.

Gordon Gong, MD, Mohammad Allauddin, PhD, Billy U. Phillips, PhD

Arsenic (As) is highly toxic. It reduces antioxidants and increases free radicals which damage proteins, fatty acids, DNA and RNA. Inorganic arsenic commonly found in groundwater, e.g., arsenate (AsV) and arsenite (AsIII), are much more toxic than organic ones such as arsenobetaine commonly found in fish. Higher arsenic concentrations in drinking water or urine are associated with higher rates cardiovascular diseases, diabetes, hypothyroidism among others. However, two issues remain to be resolved. 1) Organic arsenic interferes with the estimate of inorganic arsenic especially at low-dose (<50 μg/L in drinking water); 2) Arsenic entering the body through water, air etc., known as “exposure”, fluctuates tremendously from one day to another. Also urinary arsenic represents its elimination. Only inorganic arsenic left in the tissues such as the heart, nails etc. represent arsenic-induced damages to the tissues. We thus propose to use inorganic arsenic in nails as a marker for its toxicity in association with diseases. However, measurements of inorganic arsenic species are very expensive. This study is to determine if total arsenic (sum of all arsenic subspecies, less expensive to measure) is correlated with inorganic arsenic in nails to justify the use of total arsenic in association studies. The participants were from Project FRONTIER, an ongoing longitudinal epidemiological study in rural west Texas counties Cochran, Bailey, Hockley and Parmer. We chose 10 from those whose drinking water had been measured for arsenic concentration (n=198) to collect their toenail clippings for arsenic speciation by ICP-MS. Nails’ concentrations of AsIII and AsV were highly correlated with the sum of all arsenic species (r2=0.9996 and 0.9367, respectively). We also performed correlation analyses according to published data and found similar results. Use of total arsenic in nails is justified in studies for potential association between arsenic exposure and diseases.

Borderlands: Enhancing Access to Healthcare for Child Refugees

Shannon Guillot-Wright, MA, Hani Serag, MD, Kenneth D. Smith, PhD

The 2014 upsurge in Central American refugee children at the U.S. - Mexico border created a media frenzy and public controversy around where refugee children would stay and the types of diseases the children carried with them. What was often left unspoken was the why and how of child migration, such as the conditions children were forced to endure in their home country, during their migration journey, and inside U.S. detention centers. This research project aims to illuminate the inhumane conditions refugee children endure and to provide policy alternatives to enhance access to quality health and medical care for refugee children. The methodology of the research project is participatory action research that combines quantitative and qualitative research methods. The team engages a wide range of participants including families of refugee children, health providers, policy makers, and legislators at district and state levels. The results of the child refugee research project are to better identify (1) the push and
pull factors that help create conditions for migration; (2) the journey’s child refugees take from Central America to Texas; (3) the rules, policies, procedures, risk factors, and opportunities within the organizations and groups that migrant children are likely interacting with; and (4) an effective set of policies to address health disparities among child refugees. The conclusions generated for the conference will be preliminary, but will illuminate the health conditions along the entire migration path, from home country to traversing land and sea to entrance in Texas. The final conclusions will be used to inform a constructive policy dialogue among relevant stakeholders to impact policy decisions.

Impact of health education: Utilizing transtheoretical model to assess perception of women towards cervical cancer screening and substance use behavior
Shuchika Gupta, MD, Oluwatosin Igenoza, MBChB, Kelechi Ukpaka, Carshandra Hollins, Opeyemi Jegede, MPH, CPH, Martha J. Felini, DC, MPH, PhD, Raquel Qualls-Hampton, MS, PhD

Women abusing substances are at higher risk of cervical cancer due in part to their risky sexual behaviors. This underscores the importance of educating these women on the importance of healthy cervical cancer screening behaviors. The effectiveness of current cancer prevention education programs toward producing higher Pap screen completion rates, however, have been attenuated in this population by a lack of trauma-sensitive language and low health literacy levels. The purpose of this study was to determine changes in cancer screening readiness among women receiving a trauma-informed cancer prevention education while in substance use treatment. A trauma-informed cancer prevention education program was developed from Seeking Safety (Najavits, 2002) – an evidence-based model that addresses both trauma and addiction together. The target population included women in substance abuse treatment and vulnerable street sex workers diverted into substance abuse rehabilitation in the Dallas-Fort Worth Metroplex. Readiness for behavior change among women receiving cancer education and cervical cancer screenings was measured using a 36 item questionnaire. We calculated readiness scores from before the trauma informed education and compared with post-education scores. Of the 220 women participating, over 80% reported a history of trauma. At the beginning of the education only 17% women were prepared to change their behavior, while at the end almost 61% were in the preparation stage for behavior change. Also, 35% women were afraid to take pap test and 15% had previous negative experiences. By the end of their education 83% were willing to get a pap test. Cancer prevention educations that are trauma informed move women to readiness in engaging in cervical cancer screening.

Characteristics and helmet use of cyclist crashes involving EMS transport
Emily Hall, MPH, Natalie Archer, PhD, Nina Leung, PhD

The popularity of bicycling has increased in the United States over the past decade. While increased physical activity is associated with multiple health benefits, cyclists are at risk of injury during collisions. Helmet use has been shown to reduce the risk of severe injuries, but Texas has no law requiring cyclists of any age to wear bicycle helmets. Accidents involving cyclists could have a significant public health impact in Texas. However, few studies have been conducted on this subject. Texas Department of State Health Services EMS & Trauma Registries (ETR) surveillance system data on EMS provider runs were linked with traffic collision data from the Texas Department of Transportation (TXDOT). We utilized these data to examine demographics, roadway characteristics, and intermediate health outcomes of cyclists involved in accidents on Texas roads for whom EMS transport was requested in 2012-2013. Additionally, we compared characteristics of cyclists who utilized a helmet vs. those who did not. 625 accidents were reported to both TXDOT and ETR in 2012-2013. Of these, 3% were fatalities, 66% were injured, and an additional 26% were possibly injured. Males comprised 80.6% of cyclists. Over 40% of accidents involved cyclists under age 20. Helmets were worn in only 16% of accidents. Significant differences in helmet use by race/ethnicity were observed; 81% of helmet users were white versus 50% of non-helmet users. There were also significant differences in helmet use by age. Median age for helmet users was 39 years versus 21 years for those not using a helmet. Analyses revealed race and age disparities in helmet use among cyclists in Texas. This points to areas where public health intervention may be needed to protect vulnerable groups of cyclists as this activity continues to increase in popularity.

Exposure to Carbon Disulfide (CS2) and Increased Potential for Schizophrenia
Rudraju Hemanth, BDS, Alisa L. Rich, PhD, MPH, Harshkumar K. Patel, BDS

Schizophrenia is a serious chronic mental disease affecting approximately 3.2 million Americans. Research has found elevated levels of CS2 in the atmosphere in areas experiencing energy extraction when compared to national background levels. Studies confirmed elevated levels of CS2 in breath samples in people diagnosed with Schizophrenia. Publications in Pub Med were searched using keywords “Carbon Disulfide” and “Schizophrenia”. Results were further narrowed by searching specific terms “Schizophrenia pathogenesis by environmental factors”. Reference articles were reviewed and abstracts retrieved. Topic appropriate articles were retrieved in full. Additional papers related to CS2 exposure in animal studies, or relationship of CS2 levels in Schizophrenia patients were retrieved. Elevated atmospheric levels of CS2 were found in areas of energy extraction when compared to national background levels. CS2 exposed workers experienced reduced levels of nitric oxide (NO) synthesis in the brain. Reduced NO levels affect processes in the cerebellum, hypothalamus and hippocampus, and is a risk factor for Schizophrenia. CS2 affects production of norepinephrine by causing a deficiency in the rate limiting enzyme-dopamine beta hydroxylase. The enzyme deficiency results in abnormal accumulation of dopamine and deficient conversion of dopa-
mine to norepinephrine. This deficiency is more prominent in Schizophrenia patients. Toxicological mechanism of CS2 has been associated with Schizophrenia at the molecular level. The limitations in this study are that CS2 is not widely recognized as a neurotoxicant and existing studies are based on animal experiments rather than human. This study recognizes the need for more research on the mechanism of CS2 toxicity in humans and increased potential for schizophrenia in areas of elevated atmospheric CS2 levels.

Active Tuberculosis in a Drug Treatment Facility: Contact Investigation Challenges and Successes
Elise Huebner, MS, Justine Price, MPH, CPH, Virginia Headley, PhD, MS

To understand the methodology and complications that arise in TB contact investigations with vulnerable populations; to inform the drug treatment facility of recommendations for updated protocols to reduce the likelihood of future transmission; to eliminate exposure of an active TB case to other individuals; and to reduce the likelihood of other TB contacts becoming active TB cases. In January 2015, WCCHD Disease Control and Prevention (DCP) began a tuberculosis (TB) contact investigation in a drug treatment facility to explain why several staff members had converted within the last year. Upon testing all staff and residents, one resident had active TB. Other contacts, such as discharged residents, volunteers, contract workers, and social visitors were also considered for testing. Residents, current or discharged, were considered a vulnerable population with many previous risk factors, such as intravenous drug use, living in shelters or long-term care facilities, time in jail(s), and now living in a congregate setting. To identify the active case, DCP staff and external partners interviewed and tested all current residents for TB, resulting in the discovery of multiple residents who tested positive and were thus considered to have a latent TB infection (LTBI). Any residents who tested negatively at baseline were re-evaluated in 8-10 weeks to confirm their case status. LTBI residents were offered DOT by WCCHD Clinical Preventive Services. Of the 799 identified potential contacts, 364 were defined as “not exposed” by TB standards of 6+ hours of exposure to the active case while the active case is infectious. The 435 remaining contacts consisted of contract workers, drug treatment facility staff, discharged residents, public health staff, jail contacts, current residents, volunteers, and social contacts of the active case. Forty-nine (49) had developed LTBI, with the majority (84%) being current or discharged residents. WCCHD or other organizations completed evaluation on an additional 202 contacts (46%) who were determined with negative follow-up tests to be not infected. Challenges presented with acceptable blood draws, locating discharged residents and jail contacts (91% of those designated “lost to follow up”), encouraging and completion of LTBI treatment, and coordinating care for the active case while still under imprisonment.

The Health Status of Texas
John Luke Irwin, MPH, Jeff Swanson, PhD, Leon Kinsey, Erin Rice, MA

The Texas DSHS Center for Health Statistics is a primary source of public health statistics and data dissemination. This poster provides a summary of many current high-interest topics. Data were from a variety of sources housed at the Center for Health Statistics. Topics were selected based on current initiatives and topics during the 84th legislative session. Results were assessed for sociodemographic, regional, and temporal differences. Smaller percentages of high school students engage in physical activity as they age. Texas has one of the highest teen pregnancy rates in the nation. Texas households with the lowest income have higher smoking prevalence rates. Prevalence of chronic obstructive pulmonary disease decrease as household income levels increase. Rates of preterm birth have been decreasing, but 2012 Texas hospital charges related to preterm births were $3.44 billion. Infant mortality rates have decreased over time but remain highest among non-Hispanic Blacks. Diabetes death rates were higher in border than non-border counties. 2012 Diabetes prevalence rates were higher in Texas than the nation. In 2012, >20% of adult Texans reported poor mental health, and prevalence was higher in the Panhandle. Mortality rates due to suicide are higher for non-Hispanic Whites. In 2013, 206 Texas counties were designated as Mental Health Health Professional Shortage Areas. The amount of Texas primary care physicians has increased since 1991, but Hispanics are under-represented. In 2014, 53.7% of Texas nurses had a bachelor’s, compared to the Institute of Medicine goal (80% by 2020). More healthcare is now outpatient, but $49 billion in charges were potentially preventable hospitalizations from 2008-2013 and uncompensated care increased 180.6% from 2002-2011. Texas has improved on a number of key indicators of health status, but these statistics highlight areas where further improvement is needed, especially, areas of higher minority status. Future interventions should focus on reducing disparities and shortage areas.

Mobilization for health: integration of hep C treatment in community based organizations using HIV models of care
Alison Johnson, MS, CHES, CHW, LCDC

Coastal Bend Wellness Foundation (CBWF) is currently implementing Hepatitis Education Program (HEP), a pilot program to enhance the ability of disenfranchised populations to access care and treatment of Hepatitis C in South Texas. HEP targets people who inject drugs living with Hepatitis C. HEP integrates community-based models to deliver targeted outreach, evidence-based risk reduction counseling, and culturally appropriate education to facilitate health promotion to improve health behaviors related to the prevention of transmission. HEP provides navigation support services to assist in linkage, transportation, and completion Hepatitis C treatment to improve engagement and retention in care that embraces an integrated, multidisciplinary model that goes beyond just treating Hepatitis C but facilitates improvements in health status and quality of life along the care continuum. HEP builds and establishes a network of service providers with a focus to improve a better system for prevention activities and access to care. HEP is an expansion to improve existing HIV models of
Hepatitis A is a highly contagious disease mainly affecting liver. It is transmitted through the fecal-oral route. A foreign cargo vessel originating from Egypt docked at the Houston port with a crew member testing positive for acute Hepatitis A. All aboard were exposed. The Houston Health Department (HHD), Bureau of Epidemiology (BOE) set up a temporary clinic on the vessel to administer prophylaxis and provide preventative measures. A hospital ICP informed the BOE regarding an acute Hepatitis A case that originated on a cargo vessel docked at the Houston port. After determining jurisdiction, an investigation was initiated to obtain the index case onset date, symptoms, and food and travel history. The CDC’s Houston Quarantine officer was contacted to obtain exposure details. The operations manager and shipping agent were contacted to learn about the travel itinerary route and crew information. A cargo vessel with a crew of 23 Filipinos; age range from 20 to 50 years travelled from New York City, NY, on June 14, to Wilmington, NC (June 16 to 18, 2015). The vessel arrived in Houston, TX on June 23, 2015. On June 20, 2015 a crew member with non-custodial maintenance and tank cleaning duties started with symptoms of jaundice, fever, abdominal pain and fatigue. Liver enzymes were significantly elevated with AST of 1895 U/L and ALT of 3914 U/L respectively. Food history obtained was vague due to multiple destinations. The BOE provided all crew members with Hepatitis A, Hepatitis B, Tdap, and HPV (for appropriate age group) vaccines. A total of 61 vaccines were provided to the crew members. An acute Hepatitis A case from a foreign cargo vessel with multiple destinations in close quarters posed a challenge to the investigation. With the prompt implementation of preventative measures a public health crisis was averted.

Acute hepatitis A case in a cargo vessel at the Houston port
Thomas Johnson, Jr., Varsha Vakil, MPH, Tavis White, MPH, Salma Khuwaja, MD, MPH, DrPh, Raouf Arafat, MD, MPH

Hepatitis A is a highly contagious disease mainly affecting liver. It is transmitted through the fecal-oral route. A foreign cargo vessel originating from Egypt docked at the Houston port with a crew member testing positive for acute Hepatitis A. All aboard were exposed. The Houston Health Department (HHD), Bureau of Epidemiology (BOE) set up a temporary clinic on the vessel to administer prophylaxis and provide preventative measures. A hospital ICP informed the BOE regarding an acute Hepatitis A case that originated on a cargo vessel docked at the Houston port. After determining jurisdiction, an investigation was initiated to obtain the index case onset date, symptoms, and food and travel history. The CDC’s Houston Quarantine officer was contacted to obtain exposure details. The operations manager and shipping agent were contacted to learn about the travel itinerary route and crew information. A cargo vessel with a crew of 23 Filipinos; age range from 20 to 50 years travelled from New York City, NY, on June 14, to Wilmington, NC (June 16 to 18, 2015). The vessel arrived in Houston, TX on June 23, 2015. On June 20, 2015 a crew member with non-custodial maintenance and tank cleaning duties started with symptoms of jaundice, fever, abdominal pain and fatigue. Liver enzymes were significantly elevated with AST of 1895 U/L and ALT of 3914 U/L respectively. Food history obtained was vague due to multiple destinations. The BOE provided all crew members with Hepatitis A, Hepatitis B, Tdap, and HPV (for appropriate age group) vaccines. A total of 61 vaccines were provided to the crew members. An acute Hepatitis A case from a foreign cargo vessel with multiple destinations in close quarters posed a challenge to the investigation. With the prompt implementation of preventative measures a public health crisis was averted.

Cryptosporidiosis and HIV/AIDS in the MSM population of Houston
Thomas Johnson, Jr., Varsha Vakil, MPH, Tavis White, MPH, Salma Khuwaja, MD, MPH, DrPh, Raouf Arafat, MD, MPH

Cryptosporidium was discovered in 1907 but it was not until the 1980’s AIDS epidemic that cryptosporidium became “widely recognized as human pathogens” (O’Connor et al, 2011, AIDS). In this study, 2013 Houston data was analyzed to understand Cryptosporidiosis co-infection with HIV/AIDS and the association to Men who have Sex with Men (MSM). Houston Electronic Disease Surveillance System (HEDSS) for the year 2013 was analyzed to obtain the number for cryptosporidium cases. The enhanced HIV/AIDS Reporting System (eHARS) was utilized to obtain the number of Cryptosporidium cases that had HIV/AIDS. The STD-MIS database was used to capture the risk behavior among these MSM populations. In 2013, the total number of Cryptosporidium cases reported were 35 and 60% of these patients had HIV/AIDS. Five percent of these HIV/AIDS patients were on Antiretroviral Therapy (ART). The cryptosporidium case age distribution was, 3% were less than 1 year old, 6% belonged to age groups 1-4 years and 5-9 years, 40% of the cases were of the age group 20-34 years, 37% was 35-54 years, 6% was 55-74 years, and 3% were above 75 years of age. The gender distribution was 71% were males and 29% were females. Race and ethnicity distribution placed African Americans at 40%, Whites at 14%; Hispanics at 17% and unknown at 29%. Among the patients with Cryptosporidiosis and HIV/AIDS, 28% displayed MSM behavior and 47% had more than two sexual partners. Educational measures specifically geared towards the MSM population to abstain from risk behaviors may help lower the number of cases with cryptosporidiosis in HIV/AIDS patients.

Investigating the Complex Relationship between Adverse Childhood Experiences and Oral Health-Related Quality of Life in US Children
Faizan Kabani, RDH, MHA, MBA

Dental caries is the most common chronic disease in childhood and continues to be a contemporary global public health concern. Chronic health-related pain, such as dental caries related orofacial pain have a seismic impact on economics and oral health-related quality of life (OHRQoL). Evidence supports the contribution of certain adverse childhood experiences (ACEs) as probable risk factors in the development and continuance of chronic pain affecting OHRQoL. Exposure to multiple life stressors, including cumulative exposures, during critical developmental years significantly contribute to long-term health outcomes. Public health interventions need to focus resources on ACEs with the most significant magnitude of influence on OHRQoL to achieve maximum benefit for vulnerable pediatric populations. We utilized data from the 2011-2012 National Survey of Children’s Health restricting the sample to children ages 1-17. The dependent variables, representing OHRQoL, included preventive dental utilization and untreated dental needs. The primary independent variables were a collection of ACEs including parental death, parental divorce, parental incarceration, financial hardship, mental illness, domestic violence, neighborhood violence, drug/alcohol abuse, racial/ethnic discrimination, and unfair treatment. Mediating variables included family structure, number of chil-
childhood, socioeconomic status, health insurance, and special health needs. Control variables included demographics such as age, sex, race, and ethnicity. A path analysis, a subcomponent of structural equation modeling, will be utilized to explore significant direct and indirect causal pathways. The research investigation is currently in process to identify the significant causal pathways. A conceptual path model will statistically measure the complex relationships between ACEs and OHRQoL. The analysis will also examine the cumulative exposure risk for multiple ACEs on OHRQoL. The implications for health policy and practice is comparable to the Pareto principle. The refined conceptual path model intends to statistically measure the complex relationship between ACEs and OHRQoL. The finalized path model will identify the ACEs with the most significant magnitude of influence on OHRQoL and recommend a niched approach where further public health research, health policy, and community health resources are aimed to focus on those particular ACEs.

Assessing Utility of Employee Health Risk Assessment Survey for Developing Public Health Interventions Amol Karmarkar, PhD, MPH, Gerald Cleveland, MA, Patrice M. Houston, MA, LPC-S, LCDC, CEAP, CTTS-M, Julie Dial, MA, CES

Optimal and healthy workplace environment has a direct impact on employee work productivity and efficiency. Identification of health risk factors is the first step for ensuring physical and mental health for employees, for limiting lost work productivity. Our objective was to present findings from a report generated by the health risk assessment surveys completed by employees of a major academic health center in Galveston, Texas during 2014-2015. The health risk assessment survey developed by the Provant Health Solutions LLC, comprised of 42 questions related to health (physical, mental etc.), lifestyle (weight management, stress management, diet etc.), and assesses individual’s readiness/willingness to change. After completion of the survey, individuals receive a ‘Wellness Score’ and an individualized wellness plan for management of their identified health risk factors. A total of 3,286 employees completed the survey during the time period, 84% of those participants were female. The top three health risk categories identified included weight (74%), nutrition (54%), and physical activity (49%). For physical health status, the top three conditions were high blood pressure (23%), allergies (21%), and high cholesterol (14%). Using the wellness score cutoff values, 23% of the responders were classified in the moderate health risk and 52% in the high health risk categories. Approximately 57% of the employee indicated willingness/readiness to healthier lifestyle changes. In spite of being aggregated findings, these results can be utilized to develop and implement a three-pronged strategy of raising awareness through educational/outreach activities; developing targeted interventions for addressing the health risk factors identified by employees; and evaluation of educational/ intervention programs to refine these strategies for effective future implementation. In partnership with Employee Health and Wellness departments, such programs can be developed, implemented, and evaluated for timely identification of such health risk factors for employee, in order to adapt suitable intervention strategies.

Do survivors of adolescent and young adult cancer value follow-up cancer care? Sapna Kaul, PhD, MA, Eddie Zamora, MPH, Rochelle Smits-Seemann, MS, Holly Spraker-Perlman, MD, Anne Kirchhoff, PhD, MPH

Survivors of adolescent and young adult (AYA) cancer, diagnosed ages 15-39 years, require life-long medical care. Cost is a known barrier. However, survivors’ valuation of follow-up care has not been investigated. We used willingness to pay (WTP), an economic tool for evaluating monetary values associated with medical services, to examine how survivors value follow-up care. AYA cancer survivors ≥18 years of age who had completed their primary therapy were identified by the Utah Cancer Registry. Of 137 randomly-selected survivors, 64 agreed to be contacted; 32 participated. We conducted 6 focus groups and 4 interviews from April-August 2015. Participants filled out a mini-survey, discussed cancer-related follow-up care, and responded to WTP questions. Focus group transcripts were coded in NVivo by 2 researchers (percent agreement=97.8%). An interval regression identified factors associated with higher WTP. 56% of participants were females and average age was 31 years. Over 45% reported ≥1 day of poor physical health in the previous month, with 15% reporting ≥10 days. Yet, 28% and 10% had no routine follow-up visit with a doctor in the previous 1-2 and 2-5 years, respectively. Focus group coding suggested that survivors valued follow-up care for early detection and management of health conditions, although this decreased over time because of other responsibilities (e.g., college/ work/family), they felt the medical visits were costly/ineffective, and because they lacked easy access to specialists. WTP analysis showed that married survivors were willing to pay $456 more for an annual follow-up visit than never-married/single/separated (p=0.05). Those with recent checkups were willing to pay more than others (p=0.07). Insurance did not affect WTP. Targeted survivorship care strategies are needed to address the needs of AYA cancer survivors who are at risk for skipping follow-up care. Survivors with no recent medical visits or who are not married need additional support.


Lipid levels are negatively impacted by menopause. Total cholesterol (TC), low density lipoproteins (LDL), and triglyceride levels have been shown to increase due to menopause, increasing risk of cardiovascular disease (CVD). Limited research indicates this relationship may be independent of weight status. This study aims to examine lipid levels (TC,
follow up increases the resistance of the microorganism to the complete tuberculosis regimens, improper medication and loss to follow up. The literature review suggests that incomplete tuberculosis regimens, improper medication and loss to follow up increases the resistance of the microorganism to the first line tuberculosis drugs which leads to the development of MDR-TB. Proper preventive programs, medication availability, effective treatment techniques and accessible quality health care services are still needed to overcome the challenges to control the MDR - TB.

Reproductive Control and Teen Dating Violence
Vi Donna Le, MPH, Elizabeth Torres, MPH, CHES, Jeff Temple, PhD

Reproductive control is a significant public health issue identified particularly among women in developing countries. This form of abuse includes pregnancy coercion and birth control sabotage and is linked to an elevated risk for unintended pregnancy and sexually transmitted infections. Unsurprisingly, studies have linked reproductive control with intimate partner violence, with the bulk of research on populations in developing countries. US studies are primarily limited to clinical samples. To address this gap in the literature, the purpose of this study is to examine 1) the prevalence of reproductive control in a sample of adolescent/young adult females, 2) race/ethnic differences in reproductive control, and 3) the association of reproductive control with physical and sexual dating violence. 320 young adult females (Mean age = 20) reported on reproductive control using The Reproductive Coercion Scale. Dating and sexual violence were measured with the Conflict in Adolescent Dating Relationships Inventory. Women self-identified as Hispanic (30.2%), White (29.8%), and African American (26.7%). 9.4% of females in the current sample reported that they were victims of reproductive control in their lifetime. Most of these victims reported pregnancy coercion (e.g. “said he would leave you if you didn’t get pregnant!”), with a small portion (2%) experiencing birth control sabotage (e.g. “put holes in the condom so you would get pregnant!”). African American and Hispanic women were overrepresented in the reproductive control category relative to their White counterparts. Logistic regression analyses showed that victims of physical or sexual dating violence were approximately 6 times as likely to experience reproductive control compared with those who had not experienced dating violence. Findings suggest that reproductive control is prevalent and should be considered in both clinical screenings as well as dating violence prevention and intervention programs.

Incomplete Tuberculosis (TB) regimens increases rate of Multi Drug Resistant Tuberculosis (MDR - TB) especially in low and middle income countries.
Balaji Kolasani, BDS, Patel Gunjanbhai Rameshbhai, BDS, Nayan Pravinbhai Patel, BDS, Jay Anjankumar Mistry, BDS

The emergence and the spread of the Multi Drug Resistant Tuberculosis (MDR - TB) is a major medical and public health concern, threatening global health. 3.6% of the total global tuberculosis burden is attributed to the Multi Drug Resistant Tuberculosis. MDR - TB is especially challenging in low and middle income countries over the last two decades due to its complex diagnostic and treatment modalities. We searched data base such as PUB MED for the articles and also collected information from the World Health Organisation (WHO) and Center for Disease Control and Prevention (CDC) websites. We have gone through literatures showing trends of MDR - TB in different countries and its association with the discontinuation of Tuberculosis medication and loss of follow up for the treatment. The estimated global incidence of MDR - TB is about 0.45 million in 2012 and of these cases, the reported mortality rate was 38%. South East Asia region is hugely affected by the MDR- TB. India, China, Russian Federation, the Philippines, Pakistan and South Africa accounts for two thirds of the global prevalence of MDR - TB. Tuberculosis is a global health problem. The literature review suggests that incomplete tuberculosis regimens, improper medication and loss to follow up increases the resistance of the microorganism to the first line tuberculosis drugs which leads to the development of MDR- TB. Proper preventive programs, medication availability, effective treatment techniques and accessible quality health care services are still needed to overcome the challenges to control the MDR - TB.

Regional Epidemiology Coordination Plan: effective use during a multijurisdictional outbreak investigation
Huai Lin, MD, PhD, Lauren Weil, PhD, MPH, Donna Evans, MPH, Derrick Shaw, MS, Greg Rosen, Julie Graves, MD, MPH, PhD, FAAFP

Health Service Region 6/5 South (HSR6/5S) includes 16 counties, 10 local health departments (LHDs), and a regional health department. Epidemiologists in HSR6/5S developed a Regional Epidemiology Coordination Plan (RECP) that describes coordination during multi-jurisdiction events. The RECP guided response efforts during a recent Hepatitis A outbreak. Two nurses who worked for the same home health care agency and lived in different jurisdictions were diagnosed with
acute hepatitis A and had onset dates three days apart. The two nurses cared for 12 pediatric patients and shared a common patient during their incubation/communicability period. The RECP guidelines facilitated a cross-jurisdictional effort. This investigation involved two cases, a home health care agency, hospital, and multiple contacts representing six jurisdictions. Conference calls were held with local, regional, and state officials to develop an action plan to promptly identify all contacts. Investigation duties were delegated across traditional jurisdictional boundaries to maximize efficiency. Tasks included case investigation, determination of vaccination status, making infection control recommendations, contact symptom monitoring, investigation of the common household, and identifying nurses who worked in the same households as the two cases. A standardized questionnaire was utilized to interview nursing staff, and nursing staff assignments were used to determine exposure dates for post-exposure prophylaxis (PEP) eligibility. Interviews were conducted with nursing staff (36/42, 85.7%). PEP was offered to household contacts within the two week eligibility window per CDC recommendations. One unimmunized child received Immune globulin (Ig), and one under-immunized child who refused Ig was given a second dose of vaccine shortly after the PEP window. Two nurses received one dose of Hepatitis A vaccine. The RECP facilitates regional communication and timely activation of regional partners. The plan provides a framework for partners to coordinate tasks that overlap jurisdictional boundaries resulting in an effective public health response.


Zaida Lopez, MPH, Osaro Mgbere, PhD, MS, MPH, Salma Khuwaja, MD, DrPH, Catherine Troisi, PhD, Paige Wermuth, PhD, Raouf Arafat, MD, MPH

Undiagnosed HIV infections contribute to the ongoing HIV incidence and late diagnoses increases the risk of adverse disease outcomes. People’s abilities and motivations to test are influenced by different factors. Some of these factors may be seen as barriers to HIV testing. With the current national focus on reinforcing HIV prevention through increased testing and treatment uptake, it is important to identify those factors.

Data from the National HIV Behavioral Surveillance System (NHBS), Houston project area was used for the analyses. Heterosexuals (HET) at increased risk for HIV were recruited using respondent-driven sampling (RDS). Participants completed a standardized anonymous questionnaire that collects information on demographics, HIV testing history, and sexual high risk behaviors, among other. We explored factors related to being tested in the past 2 years. A total of 629 participants were recruited, 457 (73%) responded that they had ever tested for HIV; 287 (46%) had tested in the past 2 years and less than 0.01% tested in the past 12 months. The prevalence of testing, at least once, in the past 2 years was higher for participants of less than 30 years of age, 75%; (p = 0.003); when stratified by sex this remained true for females 78%; (p = 0.003). Females who did not have sex with a condom with a partner whose HIV status was unknown in the past 12 months had a higher prevalence of testing in the past 2 years, 71% (p = 0.011). Sex and age were important determinants in this HET population for having tested at least once in the past 2 years. Females seem more concern and may be more proactive in ascertaining there HIV status thus engaging in preventive activities. Emphasis should be given to explore multifaceted factors that may be associated to being tested or not.

**Social Network Analysis to Examine Physician Use of Minimally Invasive Breast Biopsy on Elderly Medicare Patients**

Figaro Loresto, Jr., BSN, RN, Deepak Adhikari, MS, Hemal-kumar Mehta, PhD, Taylor Riall, PhD, Daniel Jupiter, PhD

For patients with palpable breast masses, minimally invasive biopsy (MIBB) is the gold standard. MIBB offers several advantages over open biopsy including cost effectiveness, lower rate of complications, and increased comfort. In 2009, the National Comprehensive Cancer Network established a target rate of 90% MIBB for breast biopsies; however, recent studies have demonstrated rates lower than the target. These studies showed that surgeon and facility variation in the use of MIBB was significant. Social Network Analysis is a methodology that can further explore these variations by looking at networks of physician relationships. We explore networks of physicians involved in breast cancer care and the relation of their network characteristics to MIBB rates. Using 2010 Medicare data, we identified patients treated for breast cancer. Their physicians were identified, and a network was created using a shared patient model in which physicians are nodes and shared patients are ties. We analyzed the following metropolitan areas: Houston, Austin, and the Rio Grande Valley (RGV). Using the fast greedy algorithm that determines highly connected sub-networks of physicians, communities were created. We calculated network-level network characteristics such as density and centralization. Descriptive, bivariate, and regression analyses were conducted, to understand network impact on MIBB rate. Houston was the largest network of the three. Austin had the highest MIBB rate at 89%. There was a trend toward communities with higher centralization and density having lower rates of MIBB compared to those with lower centralization and density. Previous network literature suggests that networks with high centralization and density resist diffusion of new ideas. This is echoed in our physician networks.

**Identifying Provider and Patient Barriers to the Implementation of (MeTree) Family Health History Clinical Decision Support (FHH CDS) Tools**

Jhanavi Mallariah, MBBS, MPH, Deanna Cross, PhD, Kimberly Fulda, DrPH, Anna Espinoza, MD, Julia Zhang

The University of North Texas Health Science Center (UNTHSC) in collaboration with Duke University and other sites around the country is currently conducting an implementation-effectiveness study to investigate MeTree implementa-
Food preparation literacy can sustain positive dietary habits and reduce chronic dietary diseases. However, food preparation literacy has declined and it is unclear what opportunities are available to adolescents to learn the basic techniques of preparing meals. The purpose of this study is to understand how parents involve children in home prepared meals. Purposeful sampling was used to recruit 4 families to participate in a photovoice study. Eligibility criteria: Participants reside in rural county, have at least 1 child within the age range 13-19 years, and cook at home at least once per week. Cameras were provided and participants were asked to take pictures of what they perceived as food preparation. All cameras were returned after two weeks and semi-structured interviews were conducted. The interviews were digital recorded and transcribed immediately after each session. Grounded Theory techniques (constant comparative, open coding, axial coding) were used to identify emerging categories and subcategories. All four (n=4) families resided in a small rural town for more than 10 years. There three single parent (n=2 never married & n=1 divorced) and one extended family home (grandmother, mother uncles and cousins). Four board categories emerged on how parents involve children in preparing meals at home: 1) direct engagement, 2) observation, 3) motivation, and 4) providing feedback. Food preparation literacy is maintained in the home through various practices such as parental reinforcement and motivation. More study is needed to explore parents’ foundation on food preparation literacy and evaluate the effectiveness of their teaching strategies. Community public health workers and nutritionists can collaborate to develop and test intervention strategies.

How do Adolescents’ Households in a small Texas County Promote Food Preparation Literacy? A Photovoice Inquiry
Andrea McDonald, PhD, Lenna Dawkins- Moultin, MS

Poor functional health literacy (FHL) poses a major barrier to educating patients with HIV and may represent a major cost to the healthcare industry through inadequate or inappropriate use of medicines with resultant effects on health outcomes. The aim of this study was to evaluate the association of FHL with health outcomes in adults receiving care for HIV infection. Data for this study was obtained from a cross-sectional survey of socio-demographic, behavioral and clinical outcomes of 163 adult HIV+ patients (18 years old) in Houston/Harris County, Texas who received medical care in 2009-2010. All data analyses including response variables modeling were conducted using complex sample design procedures of SAS 9.4 software (SAS Institute, Cary, NC, USA). Fourteen percent (14%) of the participants had limited (FHL) compared to 86% who reported having adequate FHL (p<0.001). One-third of the participants had less confident filling out medical forms. There were significant associations between FHL and educational level (p<0.05), common language used (p<0.001), insurance (p<0.001) and race/ethnicity (p<0.01). Patients with adequate FHL were more likely to have undetectable viral load and CD4 cell count above 200 cells/mm3 compared to those with limited FHL where the reverse was the case. Our findings highlight the important role that health literacy plays in patient self-care and empowerment, and health outcomes. Although our results have implications for patient education and treatment for people who have limited health literacy skills, more researches are needed to unveil the complex relationships linking health literacy to health outcomes. A brief assessment of culturally specific tobacco products associated with oral cancer Jay Anjankumar Mistry, BDS, Patel Gunjanbhai Rameshbhai, BDS, Nayan Pravinbhai Patel, BDS, Balaji Kolasani, BDS Oral cancer is the sixth most common cancer in the world and shows considerable geographic differences in occurrence. South Asian regions especially India, Pakistan, Bangladesh, and Sri Lanka account for approximately half of newly diagnosed cases worldwide. As immigrant population from South Asia is rising rapidly in the United States, oral cancer among this population is a major concern. We conducted a systemic electronic search through Medline and reviewed articles those were in English and published from 1995-2015. A meta-analysis has been performed on epidemiological studies presenting association between culturally specific tobacco products and oral cancer. The pervasive use of culturally spe-
specific tobacco products in South Asian immigrant population is indicated by 18% prevalence of betel quid and 12% prevalence of areca nut in New York as well as 28% prevalence of all culturally specific tobacco products in Los Angeles. Our review of the literature suggests that culturally specific tobacco products such as betel quid, areca nut, hand-rolled bidis, waterpipes (hookah), Pan masala, and Zarda are the major causes of oral cancer in South Asian immigrant population. Social acceptability, perceived health benefits, religious beliefs, and addiction are four major factors that encourage high consumption of smokeless tobacco and areca nut chewing. It is important to integrate this information to design specific intervention strategies to prevent oral cancer in South Asian immigrant population.

Statistical Analyses on Genomic Sequences: Analyses of the intestinal microbiome and metabolome followed by intervention of Rota-virus infection
Tariq Nisar, MPH, Judith Ball, PhD, Jan Suchodolski, DVM, PhD

Induction of Rota virus causes changes in the intestinal microbiota followed by modifying bacteria-derived metabolites. There are myriad of metabolites which are not been evaluated in the GI diseases. Metabolomics is a new field in human and veterinary medicine and with the use of mass spectrometry we can identify additional metabolites. Group A Rota Virus has high genomic and antigenic diversity that has hindered formulation of efficacious vaccines and drugs. For statistical analysis of microbiome data, the obtained sequences were first analyzed using a phylogenetic software package (QIIME V 1.8). Differences in the proportions of bacterial taxa (defined as percentage of total sequences) between baseline and the various post inoculation time points were determined by using Wilcoxon non parametric test. Co-relation in changes of microbiome and metabolome were performed by regression analysis and co-inertia analysis. All the resulting p values were corrected for multiple comparisons using the false discovery rate described by Benjamini & Hochberg, and a p value <0.05 at 95% confidence interval were considered significant. The conclusion of the statistical analysis was that Rota virus infection caused diarrhea in mice’s which was associated with significant reduction in microbial diversity, changes in microbiome structure and also changes in metabolic pathways.

Is the duration of breastfeeding a risk factor for ADHD?
Udoka Obinwa, MT, Subhash Aryal, PhD, MPH, Jackie Meeks, DrPH, MBA, Sheryl Fingers, MHA, Mackenzie Cutchall, MPH

Attention deficit hyperactivity disorder (ADHD) is one of the most commonly diagnosed childhood disorders characterized by inattention and hyperactivity. It affects the child’s academic performance, social relationships, self-image, and overall functioning. Currently, scientists believe that genes along with environmental factors play a major role in the occurrence of ADHD, though its exact etiological pathway is unclear. This study examined if there is a direct association between the duration of breastfeeding and the occurrence of ADHD. Data obtained from the 2012 Community-Wide Children’s Health Assessment and Planning Survey (CHAPS) conducted by Cook Children’s healthcare system in households populations in 6 counties was used for this study. A total of 3399 responses from households with children aged 4 to 15 was used in the analysis. Attention deficit hyperactivity disorder (ADHD) was treated as the outcome variable in this study, while the primary predictor was the length of breastfeeding. Other variables accounted for include age, sex, race, education, income, and body mass index. Chi-square and Logistic Regression was used for the analysis. This study observed a significant association between the duration of breastfeeding and the occurrence of ADHD (p < 0.0001). Children who had ADHD generally had a lower duration of breastfeeding than those not having ADHD. The median breastfeeding duration was 6 weeks for those with ADHD and 7 weeks to 6 months for those without ADHD. Children who were never breastfed were more than 4 times as likely to have ADHD when compared to those who were breastfed for more than 12 months. Males were 86% more likely to have ADHD when compared to females. A short duration or absence of breastfeeding may be a risk factor for ADHD. More studies need to be carried out on this subject to establish the true relationship between breastfeeding and ADHD.

Predictors of Obesity in African American College Students
Christie Osuagwu, PhD, MSPA, MSN, FNP

Obesity is the second highest cause of death in the United States due to its numerous co-morbidities, and data reveal that African Americans are at greatest risk for this disease. The study explored the multiple factors that contribute to obesity in the African American population. Using a hybrid of the PRECEDE-PROCEED and the vital renewal models, a mixed methods study design that included 142 male and female African American college students was conducted. A Likert-caled survey for the quantitative phase and a focus group interview for the qualitative arm were utilized. Constructs of attitude, culture, environment, exercise, food habits, and knowledge were measured. Descriptive and multiple logistic regression analysis were used to analyze associations among variables. Results showed that 40.1% of the students were obese. Exercise, gender, culture, self-perception, and age demonstrated strong association with obesity and were the most predictive factors of obesity. Two focus group sessions were conducted with males and females, respectively. Analysis results revealed 6 major themes: attitude, environment, money, culture, food habits, and stress. The study concluded that multiple complex factors are responsible for persistent high rates of obesity in this population, but cultural orientation and influence appear to be the most challenging. Recommendations include campus-wide culturally specific education, establishment of systems to support healthy food habits and exercise, as well as programs and research on how to deal with the cultural factors. Social change implications include policies and practices to improve health outcomes.
college students, especially in the African American college campuses.

**Exemptions to Meningococcal Vaccine in Texas Public Junior and Community Colleges**

Lucille Palenapa, MS, Kenzi Guerrero, MPH, Erin Gardner, MPH

Senate Bill 62 (SB62), passed in the 83rd Texas Legislature in 2013 required all students entering an institution of higher education in Texas to show proof of an initial meningococcal vaccination or booster dose prior to enrollment beginning January 2014. SB62 also created special provisions to allow students enrolled in Texas public junior and community colleges an alternative to requesting an exemption, separate from the standard vaccine exemption process in place through the Texas Department of State Health Services (DSHS), specifically against receipt of meningococcal vaccine. DSHS was tasked with creating an internet-based data system to allow students from Texas public junior and community colleges to enter minimal demographic information (at least name and zip code) and allow for the immediate printing of valid exemptions to meningococcal vaccine. Data was extracted from DSHS’ online meningococcal exemption system for analysis. From October 2013 to September 2015, a total of 105,712 exemptions to meningococcal vaccine were filed through the DSHS online exemption to vaccine system for Texas public junior and community colleges. Over a period of three years, one Texas public junior college represented approximately 38% of the exemptions filed to meningococcal vaccine. Among exemptions filed in 2015, five public junior colleges represented approximately 69% of all affidavits filed in the state. The streamlined, exemption to meningococcal vaccine request was created as an alternative for non-traditional college students including students living at home (not living in close proximity dorm housing, a known risk factor for meningococcal disease) and students 22 years or older (not considered among high risk groups). We must examine the repercussions of easy access systems allowing streamlined exemptions to vaccine. As exemptions to meningococcal vaccine increase among public junior and community colleges in Texas, pockets of vulnerability and susceptibility to a dangerous and deadly disease rise.

**Study of Cyclospora Outbreaks Using the Case-Chaos Study Design**

Steven Pulvino, MPH, CPH, Diana Cervantes, DrPH, MPH, MS, Witold Migala, PhD, MPH

Texas experienced outbreaks of cyclosporiasis in 2013 and 2014. Case-control studies are often employed to study large-scale outbreaks of this nature, however they often require a large amount of time and resources. The case-chaos study design is an analytic study that has the potential to reduce the time and resources needed. This method may be used to help identify vehicles associated with illness, and guide the outbreak response without the same level of time and resources required of traditional analytic study designs. Data was obtained using the National Electronic Disease Surveillance System (NEDSS), and consisted of cases and food history from outbreaks that occurred in 2013 and 2014. A case-chaos study was conducted for outbreaks within each year separately. Cases were matched to controls with a 1:3 ratio. Case-chaos results were compared to a case-control study performed in 2014. Fifty six food items were analyzed in 2013. Among those with cyclosporiasis, odds of consuming cilantro (the implicated food item) were somewhat modest at 2.41 (95% CI: 1.62, 3.59). Twenty one food items were analyzed in 2014. Among those with cyclosporiasis, odds for consuming cilantro were greater than all other food items (OR: 14.78; 95% CI: 5.77, 28.70). The odds ratio for cilantro in the case-control study were higher than all other food items as well (OR: 11.80; 95% CI: 7.51,18.54). Case-chaos was able to identify the implicated food item in 2014, and was consistent with food items identified in the case-control study. A relationship between prevalence of food items among cases and odds ratios of food items were observed in case-chaos studies for both years. However, further use and evaluation of case-chaos studies are needed to determine its utility as a tool for outbreak investigations.

**Utilizing a Web-Based Disease Surveillance System to Improve Case Management and Reporting Timeliness for Hepatitis B Cases in Pregnant Women**

Avi Raju, MPH, CPH, Essi Havor, RN, BSN, Abel Assefa, Biru Yang, PhD, MPH, MS

Since 2009, the Bureau of Epidemiology (BoE) at the Houston Health Department (HHD) has been using MAVEN to monitor reportable diseases. MAVEN receives lab reports (ELRs) for reportable conditions electronically. The HHD Perinatal Hepatitis B Prevention Program (PHBPP) monitors pregnant mothers with HBV, ensuring babies born to these mothers receive appropriate prophylaxes and vaccinations. Before MAVEN, PHBPP used paper forms to record case information, causing data entry backlogs and under-reporting of cases. The lack of ELR access hindered the ability to respond and report cases in a timely manner. In May 2015, specialized workflows were implemented in MAVEN to provide PHBPP the functionality of web-based surveillance. The BoE’s informatics team gathered variables collected by PHBPP and constructed a question package in the Extensible Markup Language (XML). The team created case-specific workflows which serve as recall-reminder systems for babies needing prophylaxes, vaccinations, and/or post-vaccine serology testing. The team built customized reports that can generate pre-populated reporting forms. Individual interviews were conducted with PHBPP nurses to assess advantages and disadvantages of implementing MAVEN. PHBPP nurses (n=9) indicated an increased data entry burden. Three nurses reported that MAVEN allowed for enhanced accessibility to case information. Five stated that MAVEN decreased the time to receive lab reports, allowing more time for patient follow-up. Four indicated it improved reporting of cases to the state health department (DSHS). Prior to MAVEN, the program reported 8 cases/month; since MAVEN implementation, the
program has reported 20 cases/month. The survey revealed initial time costs that previously did not exist. However, after the initial time burden, there was improvement in the ability to access and update patient information. Before MAVEN, PH-BPP faxed completed case forms to DSHS. MAVEN’s automated report functionality has increased the cases reported to DSHS. Efficacy of a Parent-Based Adolescent Sexual Health Intervention: A Pilot Study Evan Reagan, BSNs, Diane Santa Maria, DrPH, MSN, RN, APHN-BC Adolescents have the largest burden of sexually transmitted infections (STI), human immunodeficiency (HIV), and unplanned pregnancies of any age group. Families, particularly parents, play a pivotal role in adolescent sexual behavior. Research has shown that low parent-child communication, especially in minority youth, results in higher risk behaviors. Researchers have documented that parent-child communication is a protective factor for adolescent sexual health outcomes. Yet, dissemination to hard-to-reach families is limited. Using a randomized controlled trial design, we conducted a pilot study with 39 parents of 11-14 year olds to determine the impact of a student- nurse led evidence-based sexual-health education intervention on parental beliefs, parent-child communication, and parental monitoring. Intervention group parents received the Families Talking Together program during a 30 minute face-to-face session followed by a booster call 2 weeks post intervention. The sample (N=39) was predominately female (79%), between 28-66 years old, and 98% African American or Hispanic. Most parents had 1-3 kids (90%), lived in single parent households (62%), and had completed high school (76%). Parents in the intervention arm showed a significantly larger increase in the frequency of parent-child communication in the past 3 months (t=-2.13, p = .0399) than control arm parents. Differences in parental perceived susceptibility of their adolescent to sexual and parental monitoring were approaching significance. No differences were seen between the groups for parent-child connectedness, or communications intentions, beliefs, or barriers. This pilot study demonstrates initial efficacy and feasibility of a student nurse-led model of delivery for a parent-based adolescent sexual health intervention despite the small, underpowered sample size. The delivery of a brief parent-based adolescent sexual health intervention such as Families Talking Together has potential to increase parent-child communication and reach underserved families in the community setting while engaging student nurses in public health research.

Investigation of Pertussis Outbreak in a Hispanic Family in Houston, TX: Success Story and Lessons
Syed Fahad Rizvi, MD, MPH, CCRP, Yufang Zhang, MD, MPH, Eileen Collet, Teresa Garcia, CMA, Tristan Broussard, MPH, Salma Khuwaja, MD, MPH, DrPH, Raouf Arafat, MD, MPH
Between July 16 and August 12, 2015, four cases of pertussis were reported to Houston Health Department Bureau of Epidemiology (BOE) among a Hispanic family of eight (four adults and four children). An investigation was conducted to determine the extent of the outbreak, identify potential sources, provide prophylaxis and actively monitor contacts both at home and at work. Cases were defined using State Epi Case Criteria Guide, 2015. Multiple phone interviews and home visits were conducted to investigate source, time-line, to resolve address dispute, to provide prophylactic treatment, public health education and implement active surveillance. The first two cases were initially reported to BOE on July 16 and 17, 2015. The third case was reported on July 30, that lead to discovery of epidemiologically linked fourth case. The first two cases had different physical addresses from the latter two cases and they were all epidemiology linked together during field visits. Three out of four children (ages ranging between 10 months to 4 years old) were PCR positive and clinically compatible with pertussis. All four children were current on immunization and received prophylaxis. During the investigation three out of four unimmunized adults remained asymptomatic. Father was identified clinically symptomatic since July 20. He denied testing and medical treatment due to financial constraints and continued to work in the kitchen at a local restaurant along with 42 co-workers. Father received initial prophylaxis on July 24, 2015 but remained symptomatic. He received second prophylaxis on August 17, 2015. Restaurant was followed up for 21 days and no new case was identified. Though the source of this outbreak was never identified, timely identification, intervention and meticulous follow-up played a pivotal role in preventing further outbreaks both at home and at work. Early epi-linking among cases with different addresses will enhance outbreak recognition.

Assessing Health Status of Galveston County Using Secondary Data Sources: Supporting Data-Driven Community Health Priority Setting
Esther Robbins, John Prochaska, DrPH, MPH
The health of Galveston County (like many other areas outside of the largest urban cities) is not fully summarized in a single report. However, a descriptive analysis would benefit community partners who are interested in developing community health plans and for setting goals aimed at improving community health. The objective of this analysis is to compare reported health measures for Galveston County against Texas and the United States to identify the most pressing public health challenges and their related determinants. Secondary data for 70+ indicators were collected from the Texas Behavioral Risk Factor Surveillance System for 2010, the RWJF County Health Rankings, the 2013 American Community Survey 5-year estimates, and mortality data from CDC Wonder. Differences were calculated for each indicator between Galveston County, DSHS public health region, and Texas and/or the Nation (for some measures). To focus on the greatest health concerns, only indicators with the largest differences were examined in detail. Galveston County’s leading cause of death is cancer, compared to Texas and the US (where cardiovascular disease is the leading cause). Data show that Galveston County’s premature mortality rate was higher than Texas’s rate. The greatest disparities for Galveston County included cancer screening, immunizations, tobacco and alcohol use, mental and physical health, and access. Key determinants associated with worse health outcomes included Black/African American...
American race and no high school diploma. This study reinforces known health disparities such as minority status and lack of education, and their association with negative health outcomes. Cancer deaths and access to cancer screenings seem to be the greatest health issues in Galveston County; however, sub-county level data needs to be collected to better understand more specific population health needs.

**Increasing awareness about advanced public nursing career**
Abimbola Sadibo, Alex Garcia, PhD, RN, APHN-BC, CNE, FAAN

There is a lack of awareness of public health nursing careers, which decreases the overall public health workforce. Public health nursing works with communities and populations to address health, problems and social conditions. Insufficient public health nursing workforce reduces the effectiveness of population-based nursing interventions. A focus group and paper survey were conducted to assess awareness of the role of advanced public health nurses. Internet blog was developed to disseminate content about general and advanced public health nursing. Internet survey was linked to the blog to evaluate knowledge and attitudes about public health nursing. There was a consensus from the focus group (n=8 public health nurses) that participants did not know the roles and responsibilities of advanced public health nurses. Survey (n=30 randomly selected university undergraduate students) result indicated that 81% of respondents were not interested in a career in advanced public health nursing. An average of over 70% of students surveyed were interested in pursuing a profession that encompasses the roles and responsibilities of advanced public health nursing. The blog is currently open and recruitment to attract people to the site is ongoing. Process and impact evaluation of the blog will be reported by Dec. 2015. There is need to increase awareness of advanced public health nursing as a career choice within communities, and among registered nurses with bachelor’s degree looking for opportunities/ advanced roles in nursing. Blog sites may be an effective way to affect knowledge and attitudes about public health nursing.

**Health Status, Health Practices, and Readiness to engage in Lifestyle counseling among freshman students of Texas College of Osteopathic Medicine**
Vishaldeep kaur Sekhon, BAMS, Jenny Lee, PhD, MPH, CHES

The burden of lifestyle-related chronic diseases and their associated healthcare cost in the United States is reducible through preventative and healthy lifestyle practices. It is imperative that medical schools should be equipped with evidence-based knowledge, attitudes, and skills to improve patients’ lifestyle habits for health promotion, disease prevention, and therapeutic effects. GoodNEWS Wellness and Lifestyle Program, “I am also a co-author of published paper “The role of Chiropractor Care in the Treatment of Dizziness or Balance Disorders: Analysis of National Health Interview Survey Data.” A cohort baseline survey was conducted among the Texas Osteopathic College of Medicine freshman students at orientation to examine their health status, health habits practices, and readiness to engage in healthy lifestyle counseling. Descriptive and inferential analysis (chi-square, t-test, and logistic regression) were used to analyze data. More than 94% of students reported their overall health status as good to excellent. White students showed four times higher odds for excellent and good health status than Asian-American. Obese students were 86.3% more likely to have fair and poor health than normal weight. In terms of statistically significant values of healthy lifestyle practices, 45% of students adhered to healthy eating habits; both genders drank on average one to two drinks per drinking occasion; both genders exercised for 4-5 hours/week for strenuous and mild exercise; and more than 70% students reported that they felt stressed during the past year. More than 80% of students reported that doctors need more training in prevention, while 96% of students reported that medical schools should encourage their students and residents to practice healthy lifestyles. During the orientation, most of the medical students found healthy, while half of students practiced healthy lifestyles in nutrition, exercise, sleep, or routine checkup; but female students found more engaged in healthy behaviors than males. Most of students expressed that medical schools should facilitate lifestyle counseling competences in medical education and agreed that physician must adhere to a healthy lifestyle practice to effectively encourage patient adherence to it.

**Texas Vital Statistics, 2013**

The Center for Health Statistics and Vital Statistics Unit at the Texas Department of State Health Services work collaboratively to collect, screen, and disseminate vital events data. By continuously documenting changes in Texas vital events, we are able to paint a picture of the health status of Texas. This poster provides a summary of the current trends and statistics on births, deaths, fetal deaths, marriages, divorces, and abortions among Texas residents. This update of the previous TPHA conference poster additionally provides comparison data between 2012 and 2013. Vital events records were submitted to the Vital Statistics Unit and the Center for Health Statistics. These data were screened for accuracy, and statistical files were produced for use in public health research. Summary frequencies and statistics were calculated among residents of Texas and assessed for changes across time. Since 2003, birth rates have decreased from 5% (White) to 26% (Hispanic). The most commonly registered baby names in 2013 were Sophia for females, and Jacob for males. Deaths from diseases of the heart and malignant neoplasms (cancer) were each approximately four times more prevalent than the next most common cause (chronic lower respiratory diseases). Infant mortality rates have decreased by 89% since 1943, but recent declines have been smaller. Since 1970, the average age at marriage and divorce has increased by approximately 7.7
years. Finally, induced abortions represented approximately 14% of all pregnancies in 2013. Recent vital events data show that the makeup and health of Texans is changing. Declines in rates of births and infant mortality, and increases in age at marriage, are signs of improvement in Texans’ quality of life. Diseases of the heart and malignant neoplasms remain primary targets of intervention.

The Effect of CHW Led Diabetes Self-Management Education in a Community Setting
Stephanie Taylor, Joy Johnson, CHES, George Roberts, MHA

On October 15, 2013, the Center for Healthy Living opened in a vacant fire station with the goal of providing chronic disease prevention and self-management services to uninsured residents of Northeast Texas. Two days later, the Certified Community Health Workers, trained in diabetes self-management education, began offering DSME classes at the Center. A convenience sample of 78 individuals was recruited from the East Texas community to participate in the program. All interested individuals were eligible to participate regardless of age, income, insurance status or any other factor. DSME was offered to participants free of charge using the Diabetes Empowerment and Education Program (DEEP). Participants were asked to attend weekly classes for 6 weeks. Biometric assessments, including blood pressure, glucose, cholesterol and BMI, were administered to participants before and after participation in the DEEP program. Additional pre and post data was collected using the Problem Areas in Diabetes (PAID) Scale and a self-management instrument provided by TMF Health Quality Institute. Individuals who attended 5 of the 6 classes graduated with a certificate of completion. 61.5% (n=48) of participants graduated from the DEEP program. 90% of participants responded “Agree” to the statement “I can handle my diabetes” in the post-test (a 10% increase from the pre-test). Additionally, biometric assessments improved with BMI decreasing 1 point between the pre (37.6) and post (36.6) time point. Community Health Worker led DSME in a community setting can improve outcomes for patients with diabetes.

Tobacco Smoking Knowledge, Attitudes, and Beliefs Among Cambodian College Students
Christina Tuell, William Sorensen, PhD, Cheryl Cooper, RN, MSN, PhD

The World Health Organization (2013) reports 36.9% of Cambodian men smoke tobacco cigarettes, while 3.1% of females smoke tobacco cigarettes. The Phnom Penh Post (2014) mentions the only regulation on smoking is a memo from the Prime Minister that has been circulated to business owners encouraging them to adopt smoke-free policies. This is not a law or enforceable. A cross sectional survey design was used. There were 41 participants who met inclusion criteria: being 18 years or older, a current student at a public University in Cambodia, and ability to speak, read, and write English. The survey consisted of 37 questions that included attitudes, beliefs, knowledge, and demographics. To protect confidentiality, authority figures were not present during the survey. Using factor analysis, beliefs were categorized as follows: Personal Choice (to smoke), Consideration of Others, and Normative (what ought to be). Chi Square tests revealed associations. The sample was composed of 29 (72.5%) male, 11 (27.5%) female, 24 (68.5%) single 11 (31.4%) married, and the average age was 25.5 years (range 20-38). There were significant associations between marital status, residence, and gender when tested against personal choice: that is higher-than-expected personal choice scores for single respondents compared to married respondents; rural residents presented a higher-than-expected personal choice score compared to urban residents; and females had a lower-than-expected personal choice and knowledge score. A significant relationship was found between smoking behavior of the father and other social norms. Although the general population has a high rate of smoking, this sample had 14% ever-smokers. Education therefore seems to have an effect on smoking behaviors. Interventions for the general population should consider family experience and social norms about smoking.

Exploring Access to Care in Diverse Populations
Matt Turner, PhD, MPH, Nadia Siddiqui, MPH, Anna Schellhase, Dennis Andrulis, PhD, MPH

Similar to many of Texas’ urban areas, the poorer, multiethnic population of South Sacramento experiences a disproportionate burden of ill-health, including elevated rates of chronic disease, mental health issues, and violence. And while rates of uninsuredness have declined, ongoing challenges to accessing care remain. This study’s purpose is to identify underlying barriers and facilitators to accessing health care in a post-reform era and to inform health policymakers and stakeholders on strategies to improve the provision of health services. Building upon previous analyses, this study focuses on seven South Sacramento zip codes that experience considerable health inequities. In collaboration with a representative advisory group of community stakeholders, we developed a focused survey to answer the research question. Following a train-the-trainer program, community members will administer the survey in four languages (English, Spanish, Hmong and Vietnamese) in October 2015. The survey sample will be stratified to compare differential experiences by insurance status, race/ethnicity, and zip code. Results will identify how current access-related needs are being met (or not met) for uninsured and newly insured populations post-reform. With a strong focus on social determinants, the survey will identify what role race, culture, and language play in shaping health-seeking behaviors as well as how broader health systems and community factors—such as built environment, transportation, and neighborhood crime—shape ability to access care. Findings will also reveal what community assets may facilitate access among populations of concern. As Texas’ health care providers look to align service delivery with the requirements of the ACA, successful efforts will rely on eliciting community-specific needs that provide the rationale for a collaborative delivery model. Such a model would seek to integrate and coordinate care across health care and social service providers in a manner that recognizes the need for patient-centeredness long before the in-
Induced seismicity (earthquakes) from energy extraction activity in North Texas: A community perspective
Uloma Uche, MPH, CPH, Alisa Rich, PhD, MPH

Recent rare seismic events (earthquakes) have occurred in Dallas in an area not known historically for quake activity. Induced seismicity is caused by stress changes in the Earth’s geologic plates from water table fluctuations, surface and underground mining, withdrawal of subsurface fluids (oil, natural gas, water) and underground fluid injection. It is characterized by smaller earthquakes with shorter time intervals, persisting as long as changes in stress, pore pressure, volume and load in the underground rock formations occurs. The purpose of this study is to examine induced seismic events in Irving, Farmer’s Branch and Dallas, Texas between 2002 and 2015 and energy extraction activity associated with these events. Potential impacts to critical infrastructure and perception to the public is examined. The US Geologic Survey Earthquake Hazard Program database was searched for seismic events in Irving, Farmer’s Branch and Dallas occurring 2002-2015. Well locations were retrieved from Texas Railroad Commission database. Studies related to impacts of earthquakes on infrastructure, and perception of hazard were searched in Scopus, Google Scholar, Web of Science and PubMed. Between 2002-2015, 83 earthquakes occurred in the Irving, Farmer’s Branch, Dallas area. 86% of earthquakes (71) occurred in Irving. In January 2015, 25 earthquakes occurred within a 2 mile radius of the Old Texas Stadium. Potential structural damage to critical infrastructure including roadways, bridges, tunnels, water and gas lines, and buildings can occur. Smaller earthquakes are not life-threatening but studies confirm a public perception of fear, anxiety, physical harm, and decreased property values related to earthquakes frequency. Induced seismicity was consistent with energy extraction activity. The area with highest earthquake activity exists at the intersection of 2 geologic fault; the Muenster Arch and Ouachita Fault. Frequency of earthquakes within a short time interval in this area is consistent with features of induced seismicity.

Salmonellosis in Houston by Race: Five-year data (2010 to 2014)

The US Census Bureau ranked Houston second in population gain with 35,752 new inhabitants in 2013-14, following New York City (52,700). The 2013 City of Houston census data projects that 28% of Houston residents are foreign born compared to 16% and 13% in Texas and the United States respectively. Monitoring disease trends among the growing diverse Houston population is crucial. Salmonellosis is the leading foodborne disease in Houston and can be indigenously or is travel related. The Houston Health Department (HHD), Bureau of Epidemiology (BOE) receives Salmonella cases through electronic laboratory reporting (ELR), fax and mail. The Bureau of Laboratory Services (BLS) serotypes the Salmonella and reports them to the BOE. Salmonella cases are investigated and are documented on the Houston Electronic Disease Surveillance System (HEDSS). The total number of Salmonella cases in 2010, 2011, 2012, 2013 and 2014 were 301, 285, 298, 264 and 225 respectively. The Salmonellosis Incidence Rate (per 100,000 population) among the three main race for 2010 to 2014: among Whites it was 7, 9, 11, 10, and 9; African Americans it was 5, 5, 6, 6 and 3, and Asians it was 6, 6, 8, 6 and 3 respectively from 2010 to 2014. Among Hispanics (identified only by ethnicity) the 5-year Salmonellosis trend from 2010 to 2014 was 6, 8, 9, 6 and 4. Salmonellosis among Houston’s White population was noted to be the highest in the five-year data, followed by Hispanics, Asians and African Americans. Due to the unavailability of Race and Ethnicity 58% of Salmonella cases in 2010 were categorized as “unknown”. Accuracy in the disease trend among Houston’s diverse population may be achieved with improved reporting practices.

The Aging of Birth Mothers in Texas, 2000-2013
Anna Vincent

The ages of birth mothers were assessed to determine changes over time for the average age of women at the time of delivery and for problems that might be increasing as the birth mother’s age increases. As society demands that more women work, women have been “putting off” having children. We need to learn how long women are delaying childbirth, and whether newborns suffer more adverse effects as a result. We have taken birth data from the publicly available data for the years 2000-2013 (the latest year made available), used the General Fertility ages of 15-44 (to eliminate outliers), then separated the ages into two groups (15-29 and 30-44 for comparisons). We shall compare each age group with Risk Factors in Pregnancy, Method of Delivery, Use of Fertility Enhancing Methods or Drugs, Mother’s Morbidity, and Congenital Anomalies in the Newborn. This study is still in progress as of this writing, but we have found that the age of the birth mothers has increased over the years. Data so far seem to indicate that the advancing age of the birth mothers may correlate with problems, not only to the mother but the baby as well.

Measurement of Particulate Matter in Pubs and bars both Pre and post implementation of a smoke free ordinance
Ronald D. Williams, Jr, PhD, CHES, Jeff M. Housman, PhD, MCHES, Jennifer L. Evans, M.Ed., CHES, Barry P. Hunt, EdD

Exposure to secondhand smoke is a primary occupational health risk among employees who are not protected by comprehensive smoke-free policies. The purpose of this study was to measure indoor air quality in pubs/bars prior to the adoption of a comprehensive, city-wide smoke-free ordinance, as well as at multiple time points after adoption. It was hypothesized that at 1-month post-ordinance, PM2.5 would be reduced to within the , with further reductions at 3- and 6-month post-ordinance. A total of 10 pub/bar venues in one Southern U.S. city was sampled. Each venue was measured
HIV risky behaviors were observed supporting the need for awareness of sero-status and sexual risk behaviors among high-risk heterosexuals.

Tay Za Kyi Win, MBBS, Paige Padgett Wermuth, MPH, PhD, Catherine L. Troisi, MS, PhD

The Houston Metropolitan Area (HMA) is a participant in the National HIV Behavioral Surveillance Study (NHBS) and surveys groups at high risk for HIV. CDC estimates that one-fifth of HIV infected individuals are unaware of their infections. Awareness of sero-status may lead to decreases in risky sexual behaviors. HIV infection resulting from heterosexual transmission may be underestimated and may be increasing. Few studies on risk behaviors among heterosexuals have been conducted, particularly those comparing behaviors based on knowledge of HIV sero-status. To assess the awareness of HIV sero-status among high-risk heterosexuals and evaluate differences in risk behaviors between those who knew or did not know their HIV status prior to testing at study entry. A secondary data analysis was performed using HMA NHBS HET-3 data collected in 2013. Analysis was conducted using Stata software 10.3. The prevalence of knowing or not knowing HIV status was determined. We then assessed whether there are statistical differences in HIV risk behaviors between those two groups by using a Chi-squared test. The risk factors measured included multiple sexual partners, exchange partners, unprotected sex, and use of illicit drugs. Almost three-quarters of participants knew their HIV status prior to enrolling in the study. Those who did not know their HIV status were significantly more likely to engage in sex with multiple partners (p<0.001; η²=0.889) in PM2.5 levels for the four measurement points. PM2.5 was 202.17±97.89 (Mean±SD) at 1-month pre-ordination, 25.53±14.18 at 1-month post-ordination, 18.00±8.43 at 3-month post-ordination, and 10.77±2.45 at 6-month post-ordination. At the pre-ordination measurement, no venue was found to be in the “Good” (minimal risk) range of the U.S. EPA Air Quality Index. At 1-month post-ordination, 30% of venues were in the “Good” range with this increasing to 80% at 6-month post-ordination. The results of this study indicate that pubs/bars that are not protected by comprehensive smoke-free ordinances expose patrons and employees to significant environmental health risks. Adoption of smoke-free ordinances yields immediate reductions in health risks with continued improvements up to 6-months post-ordination.

Comparison of occupational household and industrial cleaner exposures reported to the Texas Poison Control Network during 2000-2014

Thandi Ziqubu-Page, MSPharm, MPH, PhD, Mathias B. Forrest

Cleaners, particularly when misused, can cause serious morbidity such as respiratory diseases (bronchitis, pneumonia), may lead to cancer, and may even be fatal. There is limited literature on occupational exposures to cleaning products. The purpose of this study was to characterize occupational household and industrial cleaner exposures reported to poison centers. Cases were occupational household and industrial cleaner exposures reported to Texas poison centers during 2000-2014. Cases were divided into household and industrial cleaners. The distribution of the cases was determined for various factors and comparisons made between the two product groups. There were 4,747 household cleaner and 2,201 industrial cleaner occupational exposures. Patients 20 years or older accounted for 87.2% of household and 89.3% of industrial cleaner exposures; 53.6% of household cleaner patients were female while 52.9% of industrial cleaner patients were male. The most common exposure routes among household and industrial cleaner cases, respectively, were ocular (35.5% vs 40.8%), inhalation (28.7% vs 23.9%), dermal (20.1% vs 29.7%), and ingestion (24.4% vs 16.3%). Most (51.4%) of household cleaner exposure patients were on site while 54.7% of industrial cleaner exposure patients were already at/en route to a healthcare facility. The outcome was not serious in 75.2% of household cleaner and 68.4% of industrial cleaner exposures.

Almost 70% of occupational cleaner exposures reported to Texas poison centers involved household cleaners. The preponderance of patients were adults. While the majority of patients exposed to household cleaners were female, most of the patients exposed to industrial cleaners were male. The most common routes of exposure were ocular, inhalation, dermal, and ingestion, although the proportion and order of these routes differed by type of cleaner. Most household cleaner exposures were managed on site while the majority of industrial cleaner exposures were managed at a healthcare facility. Most exposures did not result in serious outcomes.

Assuring a competent public and personal health care workforce for Texas. The case of Sam Houston State University Miguel A. Zuniga, MD, DrPH, Stephen Brown, PhD, Amanda Scarbrough, PhD, William Hyman, PhD, Jack Turner, PhD, Rosanne Keathley, PhD

Sam Houston State University (SHSU) created the College of Health Sciences in 2013 and the Department of Health Services and Promotion in 2014 to contribute...
to the optimization of health at the individual and population health levels. The purpose of this presentation is to disseminate the comprehensive approach to the development of professional degrees to address the continuum of individual, system, and population health needs in Texas. At the undergraduate level, the BS in Health Sciences with concentrations in pre-professional programs (i.e. pre-medicine) is directed to increase the competitiveness of applicants to health science professional degrees; the BA in Bilingual Health Care Studies focuses on improving health one patient at the time by training patient navigation professionals that are culturally and linguistically competent in Spanish and other cultures and languages; the BS in Health Care Administration emphasizes education in business and health sciences to enhance efficiencies at the system level of health care delivery, the BS in Wellness Management is directed to preparing health and wellness professionals for the corporate and government-wide environments, and the BS in Public Health focuses on population health improvement by offering three tracks, the community health, the pre-nursing, and the pre-occupational health concentration. At the graduate level, the department is training the next generation of health promotion professionals through an MS in Health Education and is implementing the MS in Health Care Quality and Safety to support excellence in health care delivery; and the MPH in Correctional Health to train specialists in health administration for the offender populations across the nation. The spectrum of educational programs at SHSU is supported by the high level of employment opportunities projected for health professionals in Texas and the nation. SHSU is committed to fulfilling the promise of assuring a competent public and personal health care workforce for Texas.