College of Public Health Research Day
Oral Presentation Abstracts

Abstract Title:	**Pulmonary Function Among Latino Thoroughbred Workers - A Pilot Study**
Author(s):	J. C. Flunker, Dept of Preventive Medicine and Environmental Health, U of Kentucky J. E. Swanberg, School of Social Work, U of Maryland, Baltimore J. Miller Clouser, Dept of Health Behavior, U of Kentucky D. Mannino, Dept of Preventive Medicine & Environmental Health, U of Kentucky W. Gan, Dept of Preventive Medicine and Environmental Health, Univ of Kentucky

Abstract: Background/Objectives: Evidence suggests working in horse barns is associated with adverse respiratory effects among Latino thoroughbred workers, yet no studies to date have measured pulmonary function. We examined the prevalence of self-reported respiratory symptoms, abnormal pulmonary function, and associated occupational factors among Latino thoroughbred farmworkers. Methods: Participants were recruited via a community-based, purposive sampling strategy and participated in an interview-administered survey and spirometer test. 80 surveys and spirometry tests were administered by two trained health promoters (Promotoras) in July-September 2014. Pulmonary function (abnormal/normal) was classified by a pulmonologist. Demographic and occupational factors—such as time living in the US, time employed on current farm, hours of barn/dust exposure, and use of dust masks—were assessed for associations with respiratory outcomes. Results: Participants were primarily male (74%) and of Mexican nationality (76%). On average, participants lived in the US for 17 years, had 5 years of current horse farm employment, and worked in dusty/barn conditions 22 hours/week with infrequent dust mask utilization (94%). 79% of participants reported upper and/or lower respiratory symptoms and the prevalence of abnormal pulmonary function was 27%. Multivariate logistic regression indicates that shorter duration in both current horse farm employment (≤5 versus >5 years) and time living in the US (≤10 versus >10 years) increases the odds of abnormal pulmonary function. Conclusions: Latino thoroughbred workers may be at risk for developing adverse respiratory conditions due to chronic exposure to dusty barn environments and limited use of dust masks. For Latinos new to the US, horse farm respiratory exposures may exacerbate pre-existing respiratory conditions related to country of origin. Future research will further clarify the occupational and social factors affecting the respiratory health of this worker group.

Primary Presenter / email:	Flunker, J. C. / Johnflunker@uky.edu
Degree being pursued:	MPH/MHA
Mentor / e-mail:	Maninno, D. / dmmann2@email.uky.edu

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Abstract Title:	**Predictors of receiving guideline recommended antiretroviral treatment: infectious disease specialists are critical to providing optimum HIV treatment**
Author(s):	J.B. Allen, College of Pharmacy and Public Health, U of Kentucky E.S. Brouwer, Colleges of Pharmacy and Public Health, U of Kentucky D.C. Moga, Colleges of Pharmacy and Public Health, U of Kentucky

Abstract: Purpose: Randomized clinical trials of combination antiretroviral therapy (cART) inform the use of specific antiretrovirals (ARV) and their combination for optimizing therapeutic efficacy. Due to the increased complexity of HIV/AIDS care, it is critical to monitor the implementation of national treatment guidelines in the general population of the United States. Methods: This retrospective cohort study used a secondary administrative insurance claims database to examine factors that impact receiving initial guideline-recommended cART within a cohort of commercially insured patients in the United States (US) January 2007 through December 2009. The primary outcome was defined as an initial claim for a prescription containing recommended cART consisting of two nucleoside reverse transcriptase inhibitors and either a non-nucleoside reverse transcriptase inhibitor, protease inhibitor or an integrase strand transfer inhibitor. Modified Poisson adjusted multivariable models including patient demographic and provider characteristics evaluated predictors of receiving recommended cART. Results: Of the 2,115 patients with a new ARV claim, 59% were white and 97% were male with a median age of 42 years (Interquartile Range: 35-49). Overall, 76% received recommended cART. Receiving care from an infectious disease specialist was the strongest predictor of receiving recommended cART (Risk Ratio: 1.37, 95% Confidence Interval (CI): 1.30, 1.43). Men, those with less education, younger individuals, and no comorbidities were also more likely to receive recommended cART ($p<0.01$). Conclusions: Many HIV-infected patients that are in clinical care are not prescribed recommended cART. Increased communication and training of healthcare providers is necessary to insure patients receive a durable first-line regimen.

Supported by:	
Primary Presenter / email:	Allen, J.B. / joye.allen@uky.edu
Degree being pursued:	MPH/MHA
Mentor / e-mail:	Brouwer, E. S. / emily.brouwer@uky.edu

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Abstract Title:	**Pilot study on the effectiveness of telemedicine in improving the quality of diabetes care of the rural Nepal**
Author(s):	J. Bhattarai , Institute of Medicine, Dept of Medicine, TU, Kathmandu, Nepal S. Shakya, Dept of Health Behavior, U of Kentucky N. Shrestha, maxPro, Lalitpur, Nepal

Abstract: The use of telecommunication in the field of medicine is very limited in Nepal. Despite huge potential of improving access of the sub-urban and rural communities with the urban-based health care professionals for expert consultation, the use of the telecommunication technology remains largely unexplored. In light of the facts, a comparative study was conducted at a rural community in Makwanpur. In total 40 patients (20 in each group) were selected for the study with an objective to test the feasibility and effectiveness of telemedicine in improving the quality of diabetes care in an experimental group and control group in Makwanpur district. In the intervention group, diabetes care was provided with tele-consultation for diabetes care mediated via local doctor. The outcome was compared with a control group based in an urban community with treatment as usual in their community. The study results showed that the use of telemedicine is a feasible alternative to provide diabetes care in rural Nepal. Overall fasting blood sugar was better controlled in the control group whereas there was significant improvements in micro albumin were observed in the interventional group. Similarly, the knowledge of the respondents on various aspects of the disease was also found to be better in the interventional group than in the control group. Majority of the respondents (90%) felt telemedicine service is less expensive than the service they had taken before.

Supported by:	
Primary Presenter / email:	Shakya, S. / samjhana.shakya@uky.edu
Degree being pursued:	MPH/MHA
Mentor / e-mail:	Bhattarai, J. / jyotikunwar@yahoo.com

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Abstract Title:	**Trends In Drug Use During Suicide, 2005-2012, Kentucky**
Author(s):	J.S. Seals, College of Public Health, U of Kentucky

Abstract: Objective: With high rates of suicides worldwide more research on suicide is necessary for improved prevention strategies. This study examines the trends of positive drug tests at the time of suicide in Kentucky with respect to region, time, and intrapersonal violence. Methods: Data from the Kentucky Violent Death Reporting System was used to look at all suicides in Kentucky from 2005 to 2012 amongst individuals 10 or older (n= 4691). Trends of opiates, amphetamines, cocaine, marijuana, benzodiazepine, and barbiturates were examined. The relationship of a positive drug test and time and intrapersonal violence were evaluated with an ANOVA test and intrapersonal violence was evaluated further with a linear regression model. The effect of location change was evaluated with logistic regression models. Results: The study showed that the use of different drugs impacted the trends differently. When controlling for potential confounders, changing the location changed the odds of a positive drug test for marijuana, cocaine, and benzodiazepines with a p value <0.05. The use of opiates, amphetamines, and benzodiazepines are significantly associated with changes in intrapersonal violence. Conclusion: Understanding the trends in drug use at the time of suicide may help improve suicide prevention in Kentucky, and possibly nationwide. Local suicide prevention programs may consider targeting the drugs that have significantly higher odds of being present at the time of suicide: benzodiazepines in the Appalachian region and Marijuana and cocaine in the non-Appalachian region. Drug addiction treatments may also want to consider the changes of intrapersonal violence level for certain drugs.

Supported by:

Primary Presenter / email:	Seals, J. S. / jacqueline.seals@uky.edu
Degree being pursued:	MPH/MHA
Mentor / e-mail:	S. Brown / sabrina.brown@uky.edu

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Oral Presentation Abstracts

Abstract Title:	**Methods for studying FSW in Ukraine: RDS vs TLS**
Author(s):	V. Pravosud, College of Public Health, U of Kentucky T.I. Andreeva, School of Public Health, National University of 'Kyiv-Mohyla Academy', Ukraine

Abstract: Background: Information on NGO clients appeared to be insufficient for collecting data on the spread of particular behaviors and health problems among hidden populations. Respondent-driven sampling and time-location sampling methods are better alternatives in reaching hidden populations and collecting data on them. Object: We aimed to explore whether RDS and TLS methods gave similar estimates of behaviors and disease prevalence among representatives of female sex workers in Ukraine, stratifying for FSW being a client or not a client of any FSW or IDU NGO. Methods: The study employed data from a bio-behavioral survey among FSW, conducted in 2009, which used both RDS and TLS methods. Overall sample size was 2,278 persons (RDS – 975, TLS – 1303). Thirty parameters, demonstrating different ways of client search, social interaction, health and behavior of FSW, were included into the analysis using Pearson χ2 and CIs in order to conclude whether RDS and TLS methods gave similar results on estimates differences between clients and non-clients of FSW or IDU NGOs. Results: RDS and TLS data showed that differences among NGO clients and non-clients' for client search and behavioral estimates, hepatitis B and C, positive syphilis and HIV tests, were statistically significant ($p<.05$) for 18 and 22 parameters, respectively. Conclusion: Both RDS and TLS methods showed that most of the chosen parameters were higher for NGO clients than non-clients. However, estimates of respondents recruited by RDS were lower, demonstrating less risky behavior. TLS method allowed to collect data from more marginalized FSW.

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Primary Presenter / email:	Pravosud, V. / vera.pravosud@gmail.com
Degree being pursued:	MPH/MHA
Mentor / e-mail:	Pravosud V. / vera.pravosud@gmail.com