

Poster #3

University of California, Davis Farmer Health Study: 1993-2006

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Introduction: Although California is the leading agricultural state, few health studies have considered the broad range of Californian farmers. The UC Davis Farmer Health Study followed a randomly chosen state-wide cohort with an aim to identify the prevalence and risk factors for acute and chronic disease.

Methods: 1,947 California farmers were interviewed by telephone in 1993, with follow-up surveys in 1998 (N=1349) and 2004 (N=866). Sub-studies using pulmonary function testing were completed in 1996 and 2003. Subjects answered questions on farming tasks, environmental exposures, and their health status. Both cross-sectional and longitudinal analyses tested associations between risk factors and health outcomes, adjusting for age and relevant covariates. Death rates were compared between farmers and the general California population.

Results: A selection of major findings follow: Farming time in dusty conditions was independently associated with the prevalence of persistent wheeze in 1993 (high dust exposure OR = 1.9, (95% CI = 1.1-3.3), and persistent wheeze was associated with a decline in work ability ($p=0.0001$) in a multivariate model. Those with respiratory symptoms in 1993 significantly reduced time in dust by 14% (95% CI = 7.2-20.7), the symptomless only by 3% (95% CI = 0.5-4.7). Sprains and strains were the most common injury (42.9%). Risk factors for injury include previous injury, medium or high exertion level and workshop activity. Of 1797 tracked subjects, 233 (13%) were deceased by 2005. In 1998, adjusting for age, 35 male deaths were expected while only 22 were observed.

Conclusions: Major risk factors exist for farmers, especially with respect to injury and respiratory health. Effective communication of these risks and preventative measures must be the next priority.

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Poster #4

Farmworker Injury Research To Practice: Farmworker Injury Data Translated Into Occupational Health Training For Migrant Health Center Clinicians

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Background: Results from Northeast Center research indicate that while a substantial proportion of adult migrant farmworker visits to health centers involve a work-related injury or illness, nearly 50% of clinicians report never having had any training in occupational medicine.

Objectives: Northeast Center researchers translated an extensive body of migrant farmworker injury and occupational illness data collected over 5 years and 7 states into an occupational medicine training curriculum specifically targeted to farmworkers. A manual developed collaboratively with the Migrant Clinician's Network is the first of its kind in the nation. The current presentation relates to the formative evaluation of this manual.

Methods: Interviews were carried out with 8 Northeast migrant clinicians to determine the optimal format and content for daily use. A prototype occupational health-training module was then developed and presented at a conference of migrant health professionals. Once a final draft was approved, a formal evaluation was undertaken to ascertain the level of use and degree of usefulness in a number of Northeastern migrant health centers. The manual was disseminated to 30 providers at several migrant clinics; some providers received a one-day training in its use by an occupational medicine physician, to others with no associated training, allowing researchers to also determine the optimal dissemination method.

Results: Important content sections identified by clinicians for inclusion were: Virtual farm visits, including extensive photos and common injuries and conditions (provided in the Commodity Profiles section), Diagnosis and Treatment of farmworker injuries, Cultural Competency, Workers Compensations Forms, Patient Education.

Conclusions: Evaluation results indicate that the NEC-MCN Clinician's Manual is useful to Migrant Clinicians,

and is utilized particularly well when combined with a one-day training session with an Occupational Medicine specialist. Presentation will illustrate the manual content, the evaluation process, and the study results. Supported by NIOSH grant: 5 U01 OH07542-04.

Poster #5

Understanding acculturation, health risk behaviors and the Hispanic Epidemiologic Paradox in the context of a bi-national investigation

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Rationale: In the U.S., Mexican immigrant women often have better health outcomes than non-Latino white women despite having a higher health risk profile than many U.S. residents. Two hypotheses are often suggested to explain this “Hispanic Epidemiologic Paradox:” (1) selective migration of a healthy subgroup of persons from the sending country and (2) culturally favorable health behaviors which protect recent immigrants for some period of time after immigration. Unfortunately, many researchers have noted a relationship between adoption of negative health behaviors and subsequent impacts on health outcomes among Latinas with increasing levels of acculturation. Given the central role of the population of origin in explaining the paradox, an ideal study to investigate these two hypotheses would involve a comparison of health outcomes and risk profiles between Mexican-born women currently living in Mexico and Mexican-born women who have migrated to the U.S.

Methods: We conducted a bi-national cross-sectional pilot study comparing Mexican women living in Chavinda, Mexico and Mexican-born women living in Madera, California to characterize differences in risk factors and the role acculturation may play in these changes. Data were collected by interviewer-administered questionnaires and gathered information on major risk behaviors (smoking, alcohol and drug use, and sexual behavior) and acculturation level (U.S. women only).

Results: We interviewed 102 women from Chavinda and 93 women from Madera and found that while there were some differences in demographic characteristics and health risk behaviors, women in Chavinda and

low-acculturated women in Madera were likely to have similar health risk profiles, but these groups differed from more highly acculturated women living in Madera. Specifically, logistic regression models showed that women living in Chavinda were less likely to consume alcohol than U.S. residents (OR=0.29, 95% CI: 0.13, 0.68) and were less likely to have had more than one sexual partner (OR=0.23, 95% CI: 0.07, 0.73). High-acculturated women living in Madera were more likely to consume alcohol (OR=6.05, 95% CI: 1.79, 20.43) and have had more than one sexual partner (OR=4.44, 95% CI: 1.19, 16.59) than were less acculturated women living in Madera. We did not see differences between the relative odds of smoking, drug use or sexually transmitted diseases among the groups of women but this is most likely due to very small numbers of women reporting these events.

Conclusion: Our pilot data suggest that the process of acculturation has a more powerful impact on the observed changes in health status and health behavior when women migrate to the U.S. and the theory of selective migration seems less likely to account for these differences. Therefore, any local services or intervention programs must consider the ethnicity and acculturation level of the target audience. In addition, the ‘r2p’ applications of these findings are heavily dependent on the types of services available in the community.

Poster #6

Identifying Risk Factors for Cholinesterase Depression among Pesticide Handlers in Washington State

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In 2004, the Washington State Department of Labor and Industries (L&I), under mandate from the Washington State Supreme Court, initiated a new cholinesterase (ChE) monitoring program for agricultural workers who handle toxicity class I or II organophosphate (OP) and N-methyl-carbamate (CB) pesticides. Washington is only the second state in the union to establish a ChE monitoring program. This poster describes the methodology of a recently initiated cross-sectional study to identify risk factors for ChE depression among pesticide handlers in

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A tall, white, lattice-structured water tower with a rounded top. The words "UC DAVIS" are printed in large, bold, black letters across the top of the tower. The tower is set against a clear sky and is partially obscured by dense foliage in the foreground.

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