



## ***FARMWORKER JUSTICE EYEOPENER***

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*Welcome to Farmworker Justice's electronic newsletter, the EyeOpener, covering recent developments in policy and research relevant to migrant farmworkers in the US. Please feel free to send comments, questions, or suggestions for future issues to the address provided at the end of the newsletter.*

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### **1. Farmworker Justice Has Health and Safety Victory in Court!**

*Reynaga v. Warmerdam, CPF-06-506744 (Superior Ct. of San Francisco County, May 10, 2007)*

California Rural Legal Assistance and Farmworker Justice brought this lawsuit to challenge the California Department of Pesticide Regulation's (DPR) routine declaration of an "agricultural emergency," to allow table grape growers, who apply to reduce the restricted entry interval (REI) when using sulfur. Under this emergency exemption, grape growers using sulfur have been able to put harvest workers back in the field after one day, rather than the required three days. Exposure to sulfur causes eye, skin and respiratory illnesses. Sulfur is one of the leading causes of pesticide illness in California. In October 2006, the California Grape and Tree Fruit League (CGTFL) sought - and was granted - a declaration of an agricultural emergency, based on a showing of one day of rainfall and the prediction of three additional days of rain. Based on these facts, DPR reduced the sulfur REI for grape growers in 5 San Joaquin Valley counties for a three month period. This was the fourth year in a row that CGTFL had been granted an agricultural emergency to reduce the sulfur REI for those growers.

Under the federal Worker Protection Standard, which had been adopted in California, an agricultural emergency declaration can be granted to reduce an REI when the state determines that: (1) there has been a sudden occurrence of severe weather, (2) that the growers could not have anticipated and which is beyond their control, (3) that requires entry into treated areas during an REI, and (4) no alternative practices would prevent or mitigate a substantial economic loss. Rejecting DPR's claim that it had no mandatory duty to enforce this regulation, the Court ruled that a few days of rain, which did not exceed the area's "historic norm," did not constitute an agricultural emergency. This was especially true here, where there had been no evidence that the rainfall was unanticipated, that it resulted in substantial economic loss, or that alternative practices would not have mitigated any economic losses. In addition, the Court noted that once growers became aware of adverse weather conditions they could no longer spray pesticides and claim the benefit of the reduced REI under an "emergency" exemption.

## **2. Pesticide Exposure Increases Risk for Parkinson's Disease in Applicators and Spouses**

Kamel F, Tanner CM, Umbach DM, Hoppin JA, Alavanja MCR, Blair A, Comyns K, Goldman SM, Korell M, Langston JW, Ross GW, Sandler DP. Pesticide Exposure and Self-reported Parkinson's Disease in the Agricultural Health Study. *American Journal of Epidemiology* 165 (4): 364-374, 2007.

Evidence continues to mount that pesticide exposure increases the risk for developing neurological problems, especially among applicators. A number of studies have linked pesticide application to an increased risk for developing Parkinson's Disease (PD), a neurodegenerative disease for which the cause is not fully known. PD is most commonly diagnosed in older individuals, and making the connection with years or decades of pesticide exposure can be difficult without extensive records. One source of data for investigating the association of PD with pesticide exposure is the Agricultural Health Study (AHS), a national study of pesticide applicators and their spouses being conducted by the National Institutes of Health and the US Environmental Protection Agency.

The AHS has data on health and work histories from over 89,000 licensed pesticide applicators and their spouses from Iowa and North Carolina. Data were collected at two points in time 6 years apart using self-reporting questionnaires. Eighty-three cases were identified at the first point in time (i.e., prevalent PD), and an additional 78 cases developed during the next six years of the study (i.e., incident PD). Prevalent PD was found to be associated with use of paraquat (OR = 1.8, confidence interval 1.0) and cyanazine (OR = 2.6, confidence interval = 1.4 to 4.9). For people who developed PD during the study, the disease was associated with use of trifluralin (OR = 1.7, confidence interval = 1.0 to 3.2), 2,4,5-T (OR= 1.8, confidence interval = 1 to 3.3), and methyl bromide (OR= 2.1, confidence interval = .9 to 4.9). The strongest association with incident PD was cumulative lifetime exposure to pesticides of any type.

This study adds to the evidence that pesticides may be responsible for a host of serious, long-term health problems in individuals who are exposed on a regular basis,

including farmworkers. Educational programs on pesticide safety need to emphasize the importance of minimizing the amount and duration of exposure they are subjected to over time in order to reduce their risk of developing major health problems later in life.

### **3. Predictors of Work-Related Injuries in Farmworker Families**

Cooper SP, Burau KE, Frankowski R, Shipp EM, Del Junco DJ, Whitworth RE, Sweeney AM, MacNaughton N, Weller NF, Hanis CL. A Cohort Study of Injuries in Migrant Farm Worker Families in South Texas. *Annals of Epidemiology* 16:313-320, 2006.

Calculating injury rates among farmworkers is complicated by numerous factors including the difficulty in tracking a cohort of migrants over time. To address this problem, researchers in Texas developed and implemented a system for tracking farmworkers based on school records maintained by the Migrant Education Program. After initial enrollment in the study, participants could be tracked and located for follow-up rounds of data collection. This approach has the advantage of allowing the collection of prospective data rather than relying on retrospective data.

Over a two-year period, three sets of data were collected (initial and two follow-ups) from 267 migratory farmworker families. The mother was asked to respond for herself as well as for her husband and oldest child. Questions covered a range of work-related activities as well as transportation to and from the worksite. Twenty-five work-related injuries were reported over the two-year study period with an injury rate of 12.5 injuries per 100 full-time-equivalent (FTE, based on a 2,000 hour work year). Nine of the 25 reported injuries resulted in time lost from work. Six workers indicated they did not receive medical care because they had to continue working, lacked money, or did not have access to facilities.

The primary predictors of injury included the type of employer, general use of seat belts, and number of farm jobs held. Individuals employed by contractors rather than owners/growers were nearly seven times as likely to suffer an injury. General seat belt use dramatically decreased the risk of injury (hazard ratio = 0.02, confidence interval is 0.01 to 0.09). Surprisingly, individuals who held a greater number of farm jobs also experienced a lower injury rate (hazard ratio = 0.4, confidence interval = 0.23 to 0.69). Mothers were more likely than fathers or children to be injured.

This study demonstrates the substantial risk farmworkers face for on-the-job injuries. These results also may understate the actual incidence of injury for several reasons: one person reporting for the whole family; differing definitions of "injury"; exclusion of injuries with chronic sequelae from the study design, e.g., back pain; and increasing memory lapses, as the length of time since the injury increased. The fact that the predictors were systemic, rather than crop- or task-specific indicates that interventions to improve overall working conditions and enforcement of existing regulations may have the best chance of reducing injuries to farmworkers.

#### 4. Hispanic Farmworkers Experience Diabetes As a Condition Effecting All Aspects of Life

Heuer L, Lausch C. Living with Diabetes: Perceptions of Hispanic Migrant Farmworkers. *Journal of Community Health Nursing* 23(1):49-64, 2006.

The prevalence of diabetes among the Hispanic population in the United States is significantly higher than in the general US population. For example, the rate for Hispanic American adults is twice that of non-Hispanic white adults. As the Hispanic population continues to grow, managing this and other chronic health problems poses a significant challenge to health care providers. In order to address this epidemic, a recent study (Heuer & Lausch 2006) took an in-depth look at the perceptions and beliefs of Hispanic migrant workers about living with diabetes and compared them with the model that is taught in medical school and held by most health care providers. The goal of the study was to assist providers in adapting their health education techniques to better meet their patients' needs.

This study used an explanatory models approach, in which participants are asked to describe in their own words their understanding of the etiology, symptoms, treatment, and illness course, as well as their experience with the disease. The overarching difference between the model of diabetes as described by the farmworkers and that generally held by health care providers was that, for the farmworkers, a diagnosis of diabetes effected all aspects of their lives: physical, psychological, social, and emotional. They described the disease in terms of the symptoms and their effect on their work, family, mental health, and daily life rather than regarding it as a physical illness that affects primarily their health status. Because the participants all had family members with diabetes, they tended to view it as inevitable and ordinary, though problematic. It was not viewed as preventable, although participants did acknowledge that diet was involved in its onset. They were very concerned about the possible complications such as blindness, amputation, and kidney disease. Most significant for management purposes was that the participants viewed diabetes as an acute illness, believing that if they followed the doctor's orders, it would be cured. This belief could potentially inhibit the adoption of the lifestyle changes needed to control this chronic condition over time.

To better target education efforts and formulate treatment plans, clinicians should take into account their patients' beliefs concerning diabetes. In so doing, clinicians will be able to communicate more clearly the importance of following the treatment program consistently, and throughout the rest of the patients' lives.

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The *Farmworker Justice EyeOpener* is an electronic newsletter covering important recent developments in research and regulation on issues affecting the health and safety of migrant farmworkers. It is a joint project of Farmworker Justice and Migrant Clinicians Network, supported by the Health Resources and Services Administration's Bureau of Primary Health Care. Each issue includes summaries of recent articles and reports, as well as advice on using this information to help health professionals, outreach workers, *promotores de salud*, and advocates strengthen their efforts on behalf of farmworkers and their families.

*The contents of this publication are solely the responsibility of Farmworker Justice and Migrant Clinicians Network and do not necessarily reflect the official views of the Bureau of Primary Health Care or the Health Resources and Services Administration.*

Please send comments, questions or suggestions for future topics you would like to see covered to [prao@nclr.org](mailto:prao@nclr.org), or contact Shelley Davis or Pamela Rao, co-authors, at 202-293-5420.

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