Farmworker Women and Pesticides in California's Central Valley

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United Farmworkers of America, AFL-CIO (UFW)

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EXECUTIVE SUMMARY

Farmworkers in California's Central Valley arguably face the greatest levels of exposure to hazardous pesticides of any farmworkers in the state. This project represents a pioneering effort, largely by farmworker women, to educate themselves and their communities about pesticide hazards, to share and document their experiences with pesticide-related health effects, and to work together to identify strategies for reducing pesticide-associated risks.

Project Design

Farmworker women from Organización en California de Líderes Campesinas and the United Farmworkers of America (UFW) worked with two staff members of the Pesticide Action Network North America (PANNA) to conduct a pilot study of farmworker women and their experiences with pesticide exposure in California's Central Valley (Fresno, Kern, Madera, Merced and Tulare counties). Project partners worked closely together to ensure that all participants were actively engaged in and felt ownership of both the process and final products. The process facilitated collaborative learning about pesticides and related health care issues. It also helped develop leadership skills necessary to create a questionnaire tool that served to help project participants explain the project to and collect information from the 47 women they interviewed. After conducting interviews and analyzing the results, project participants worked together to identify specific areas for policy recommendations and future actions to reduce health risks associated with farm work and pesticide exposure.

This report was produced to both serve the farmworker women in their continuing efforts to educate their communities and to raise awareness among state regulatory agencies responsible for protecting the health and well-being of farmworkers, and among farmworker supporters and the general public.

When Exposed to Pesticides, Farmworker Women Lack Knowledge and Means to Respond Appropriately

More than 90% of the farmworker women interviewed were Mexican or Mexican-American, 86% of whom reported little or no ability to read or write English. Forty-one respondents were field workers with a median weekly income of $250.

Of the 47 individuals interviewed, 41 reported on specific pesticide exposures they had experienced within the past five years. Over half reported they had never received legally-required pesticide training.

Of 40 individuals reporting specific exposures while at work, only 19 relayed the incident to their employer. Only four reported that the employer filed a written report of the exposure and three of those were the only cases in which the worker was provided transportation to the doctor or hospital as required by law. When asked about whether or not it is difficult to get to a doctor if necessary, only 11 (23%) said they had no problem.

Our findings support the general understanding that underreporting of pesticide-related illnesses is a serious problem in California.[1] Fifty-three percent of respondents did not report illnesses to their employer. Most described fear of job loss and a sense of not knowing what to do as the main reasons for not reporting. Only an estimated 10% of cases were reported to appropriate authorities.

Farmworker Women Empowered

From beginning to end, the project was an empowering process for all participants. In a final project meeting, participants revealed that they had learned a tremendous amount about both the dangers of pesticides and how to respond when they experience pesticide exposure. All participants were enthusiastic about how the project provided the opportunity to share experiences and to work together to improve the ability of farmworker women to recognize and demand adequate health care.

One striking discovery was that although most of the women were familiar with Social Security and unemployment benefits, most (including project team members), did not know where to call in the event of a poisoning. However, one woman's story of successful community action resulting in precedent-setting fines and partly-funded medical services, provided a powerful lesson of how information and organized community response can result in positive change.

Recommendations

Together, the group identified the following four recommendations for the farmworker community and regulatory agencies:

- When exposed to agricultural pesticides, workers need to work together to develop a plan of action including identifying witnesses.
- All agricultural workers must receive adequate pesticide training on a regular basis. Once every five years is not enough. Workers must also have adequate access to pesticide application records.
- State authorities must regularly issue maximum allowable fines for violations of worker safety laws—especially those regarding worker training, access to medical services, and poisoning case investigations.
- Medical services must be available when needed and funding should be made available from fines issued for violation of pesticide use regulations.

BACKGROUND

Pesticides and the Health of California Farmworkers

While everyone in the U.S. is exposed to pesticides on a daily basis through the air we breathe, the water we drink and the food we eat, we are not all affected equally. Our society's massive pesticide habit together with weak labor laws and racial discrimination ensures that farmworkers and their families face greater threat of suffering from pesticide-related illnessess— inclding acute poisonings[2] a nd long-term effects such as cancer and birth defects-than any other group.[3]

Farmworkers, and often their children, are regularly exposed to pesticides in many ways-mixing or applying pesticides; during planting, weeding, thinning, irrigating, pruning, harvesting, and processing crops; or living in or near treated fields. In addition to workplace exposure, most farmworkers live adjacent to agricultural fields and suffer exposure to pesticides that drift in their homes as well.

More Toxic Pesticides Used in California

In California, the nation's largest agricultural economy, intense pesticide use seriously threatens the health of the state's 700,000 farmworkers. California alone accounts for about 20% of U.S. pesticide sales. The total pounds of pesticides reported used on California cropland increased 51% between 1991 and 1998-f—om 129 to 195 million pounds of active ingredients. Approximately one-third of pesticides reported used in California are known to be particularly toxic to humans, classified as acute poisons, carcinogens, neurotoxins, reproductive or developmental toxins, or known California groundwater contaminants. Between 1991 and 1998 use of these "Bad Actor" pesticides soared from 50.4 to 63.9 million pounds.[4] In 1999, though total reported pesticide use decreased, pounds of California Bad Actors peaked at an all-time high of 72 million pounds.

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Laura Caballero, Vianey Torres, and Ruth Martinez share project coordination with PANNA staff.

Pesticide Poisioning is Underreported

Between 1997 and 2000 nearly 1,900 farmworkers reported acute pesticide poisoning from use of agricultural pesticides.[5] Despite California reporting laws requiring physicians to report known or suspected cases of pesticide poisonings, many go unreported because workers fear job loss or employer retaliation. Others are not reported because workers are unfamiliar with symptoms of pesticide exposure and do not seek medical attention, or because physicians fail to properly diagnose and report pesticide-related illnesses. Still others go unreported because farmworkers cannot afford to visit the doctor for lack of adequate wages and/or time (most services are only open during the work day), or do not have transportation to medical services.[6]

Understanding the extent of chronic or long-term pesticide-related illnesses is even more limited since such effects are rarely recognized or documented.[7] Causes of chronic illnesses are particularly difficult to determine because illnesses may take many years to develop and may result from exposure to multiple pesticides (or other environmental toxins) at multiple times and locations. Nevertheless, a growing body of evidence links farmworker pesticide exposure to chronic effects such as birth defects,[8] spontaneous abortion [9] and cancer (see "Pesticides and Cancer" box for more detail on links between pesticides and cancer).

Pesticide Problems Are Worse in California's Central Valley

Pesticide use and reported illnesses are much greater in some California counties than others. Fresno, Kern, Kings and Tulare are among the counties with the greatest pesticide use [10] and number of reported poisonings. These four counties alone accounted for 48% of all reported farmworker pesticide poisonings between 1997 and 2000. The top crops or uses for pesticides were cotton, grapes, oranges, and soil fumigation.[11]

These counties are also among the most economically disadvantaged in the state. Average per capita income in 1999 for the five counties of this study was $19, 733 compared to $29,856 for California as a whole. Contributing to low per capita incomes were farmworker wages—as low as $5.05 per hour in Bakersfield, Modesto and Fresno, substantially below the California average of $7.75 per hour. In addition, unemployment between 1990 and 2001 was consistently higher in the Central Valley (10 to 15%) compared to the state as a whole (5 to 6%). [12, 13]

Access to Health Care for California Farmworkers

A 1999 California Agriculture Worker Health Survey (CAWHS) found that farmworkers are largely outside the existing health care system and that farmworkers and their families have the worst access

to health care in the entire state. Twenty percent of those surveyed had never been to a doctor. The principle reasons were the lack of physicians, available hours and transportation, language barriers, and the lack of medical insurance or money to pay for services.[14]

The disparity in availability of health care between low-income rural agricultural areas and more affluent areas is illustrated by the fact that the ten most affluent communities in California have an average of 498 residents per primary care physician, while the ten poorest communities have an average of 3,548 residents per primary care physician. Sixteen percent of the rural Medical Service Study Areas (MSSA) in California have no primary physicians at all.[15]

When clinics are available, most are only open from 9am to 5pm. Farmworkers are frequently denied permission to leave work, fear retaliation for leaving work, or cannot afford a day without pay. Furthermore, few have necessary childcare or means of transportation.

Language barriers create additional problems when doctors do not understand workers' language and cannot communicate in a culturally sensitive way. Patients often cannot understand educational pamphlets, guidelines for medications or lengthy application forms required for services. Many farmworkers, who speak indigenous languages, can neither read nor write Spanish or English. The CAWHS study found that just 51% could read Spanish well.

Despite the fact that the overwhelming majority of farmworkers are poor, the most common way they pay for health care is "out-of-pocket". The CAWHS study reported that 56% had paid for their last medical visit using personal funds.[16] Two-thirds of surveyed farmworkers had no medical insurance including non-U.S. residents who are not entitled to insurance. Less than 20% of farmworkers had public health insurance, which often does not cover primary care or chronic illness. Furthermore, public insurance (such as MediCal) is often limited to a specific county and may end when the worker relocates across county or state lines. For migrant farmworkers, the reapplication process may be prohibitive. Alternatively, farmworkers receiving services may be disqualified when receiving peak season salaries, losing coverage when they need it most.[17] Although all California farmworkers (unlike in many other states) are covered by workers' compensation laws for workplace injuries,[18] many workers do not understand that they have these legal protections or do not know how to realize them.

Since women farmworkers generally earn less than men [19] and usually hold primary responsibility for the nutrition and health of the family, their access to health care (or lack thereof) is critical to their health and the health of the family. If women do not have access to adequate health care and/or fail to recognize the dangers associated with exposure to pesticides and the associated need for medical attention, their families suffer accordingly.

Farmworker Women Exposed at Work and Home

We used to live next to a cotton field in Huron. One year after arriving from Mexico, I went to the Fresno hospital and the doctors told me that the chemicals caused the damage to my kidneys They (my employers) didn't tell me anything about what chemicals they were spraying. We washed clothes outside and planes passed above, spraying. Once a man told me not to wash clothes because they were going to spray. It was just like in Mexico, we needed to carry water from the canals to use at home. We had no electricity and only one common bathroom. (We live in) one of the poorest areas.
- Rosa

PESTICIDES AND CANCER

A growing body of evidence links pesticide exposure to cancer among farmworkers

- Multiple studies have shown that farmers are more likely to develop leukemia, brain, prostate, and skin cancer and non-Hodgkin's lymphoma than the general population.[20] Farmworkers generally live and work under conditions of even greater pesticide exposure.

- A recent analysis of cancer among 146,000 California Hispanic farmworkers who had been UFW members showed that, compared with the general Hispanic population, they were more likely to develop certain types of leukemia by 59%, cervical cancer by 63%, uterine cancer by 68%, and stomach cancer by 70%.[21]

- Farmers and farmworkers experience similar increases in multiple myeloma and cancers of the stomach, prostate, and testis. Farmworkers show unique rises in cancers of the mouth, pharynx, lung, and liver.[22]

- Review of Central California Cancer Registry data shows an association between exposure to the pesticides 2,4-D, atrazine, and captan and leukemia among Hispanic males.[23]

- Several studies link pesticide exposure in parents to increased risk of childhood cancer.[24]

See also a recent Californians for Pesticide Reform publication examining the issue of pesticides and cancer [25] and Pesticide Education Center Cancer Study Summaries.[26]

Although the acute hazards of pesticide exposure are similar for all adults, women and men can have different types of exposure. At home, women often have primary responsibility for house cleaning and as a result may be exposed to pesticide residues in household dust,[27] when laundering pesticide-contaminated clothes,[28] and through use of home disinfectants and pest control products.[29,30] A study of Iowa farm families found that even when farmers' wives had not directly handled pesticides, they still had measurable pesticide residues on their hands.[31]

Since farmworker housing is frequently located near agricultural fields, farmworkers may risk exposure both at work and at home. Some pesticide residues persist longer indoors in the absence of soil organisms, sunlight, moisture and heat that otherwise increase their rate of break down.[32] In a Washington study, researchers compared pesticides in dust found within farmworker homes near orchards to other homes at least one-quarter mile away. Concentrations of all the organophosphate pesticides tested were significantly higher in the farmworker homes.[33]

PROJECT METHODS

This study, conducted largely by and for farmworker women in California's Central Valley, was designed to identify and define the problems they face regarding work-related exposure to pesticides and local health care services. A fully participatory process ensured that all project participants were actively engaged in and felt ownership of all stages of the project.

Preparing the Questionnaire and Conducting the Survey

In January and February 2002, two project organizing meetings involved the entire working group consisting of from two to ten women from each of our three organizations—Líderes Campesinas, UFW and PANNA. The focus of those meetings was to create a questionnaire tool that would help project participants explain the project to potential farmworker women interviewees and to facilitate the collection of information (See Appendix A, Spanish only). After completing the first four interviews in March, a third meeting was held to evaluate the interview process and make any final changes in the questionnaire before completing all interviews. Forty-seven interviews were completed by the end of July.

One of the criteria for including a given individual in the study was that she believed she had experienced exposure to agricultural pesticides at work or at home. It was also decided to interview only one individual per family and no more than two from any single poisoning incident/treatment combination. We wanted to avoid interviewing several women from the same accident who had visited the same doctor at the same clinic. As it turned out, information allowing us to identify the time and place of particular poisoning events was rarely available. Although exposure details were not clear, information regarding doctor visits and subsequent treatment often related to a particular, albeit not clearly identifiable, exposure event.

The Final Project Meeting

The group organized a final meeting to share ideas, develop a picture of common experiences and discuss both immediate needs and long-term policy recommendations. Fifteen women met at the UFW offices in Delano (Kern county) in October 2002. Ten were part of the original project team and an additional five had been interviewed as part of the project. The final meeting provided an excellent opportunity to better understand the realities and shared experiences of farmworker women. Participants also provided invaluable feedback on the project from the perspectives of interviewer, interviewee, project designer/organizer and coordinator. This report greatly benefited from the exchanges at this meeting. Several meeting participants provided statements that are presented here. In most cases, names have been changed to respect participants' privacy.

PROJECT RESULTS

The Women We Interviewed

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Teresa Deanda, Teresa Avina, and Sandra Garcia share photos of farmworker houses on the edge of fields sprayed with pesticides.

Of the 47 farmworker women interviewed in California's Central Valley, 28 were from Tulare county (60%), 11 from Madera and the remainder from Fresno, Kern and Merced. Ages ranged from 17 to 67. Thirty-three (70%) were married or living with a partner. Forty-three were Mexican (91%) and an additional two respondents were Mexican-American and Mexican-Pilipino. Thirty-six women had from one to seven children (average of three).

The number of adults living in the household ranged from one to seven with the majority of respondents reporting two (26 of 42 responses). With 29 respondents providing comparable salary information, the median income was $250 per week (average of $244). Fifteen women reported household incomes of less than $5,000 per year; 25 reported

incomes of $10,000 to $20,000; and two reported $20,000 to $40,000. There was no relationship between the level of completed education and salary received.

About two-thirds reported finishing some or all of elementary school and another third reported completing all or some high school. All but eight individuals (83%) reported good or very good Spanish reading and writing abilities. Of the 36 women who answered the question about English language skills, 31 (86%) reported little or no ability to read or write.

Forty-one respondents were field workers. Most worked in fruit production and 20 specifically in grapes. The five additional respondents worked in packing houses, canneries, or lived near agricultural fields. More than half (27 of 47) of the respondents lived next to or within 5 blocks of fields where pesticides are applied.

Experiences with Work Safety and Pesticide Exposure in the Fields

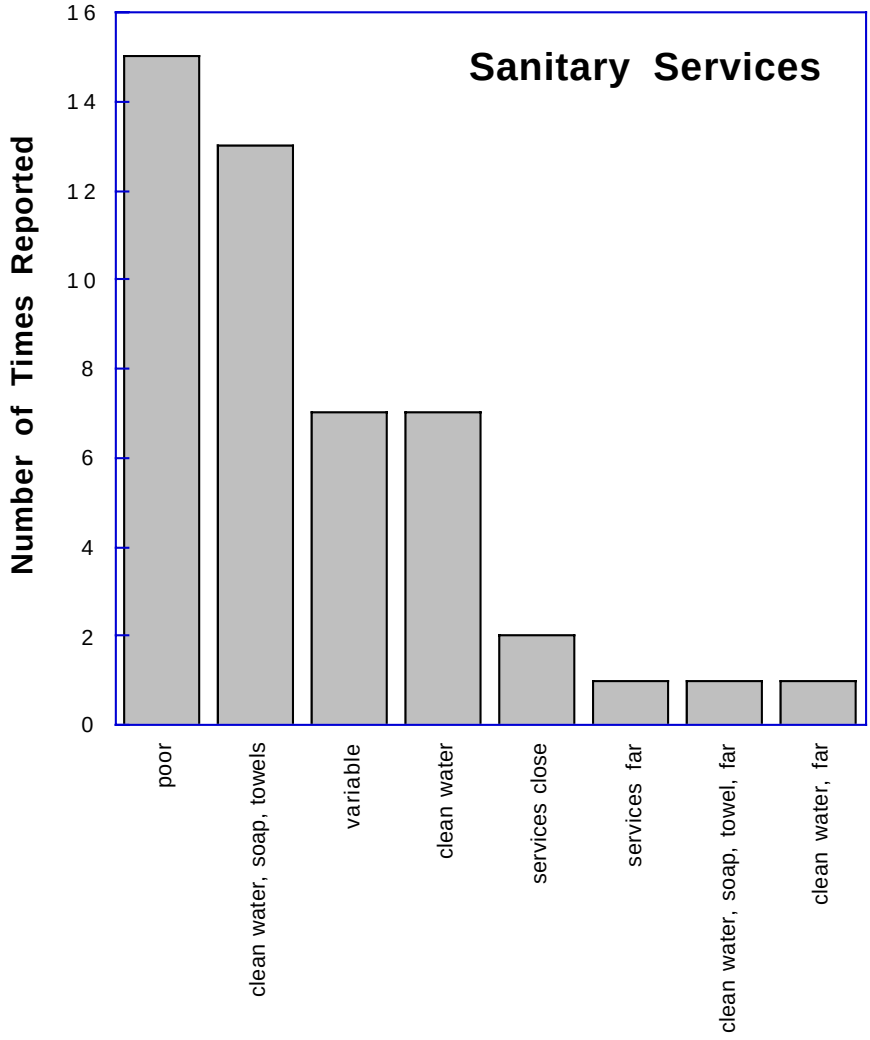
California agricultural worker safety laws require employers to provide pesticide safety training and adequate washing and decontamination facilities.[34] Although employers must provide training or verify that workers have received training within the past five years, over half of the workers (26 of 45) reported that they had never been trained. Eighteen individuals had received training from their employer (or other company) and six reported that Líderes Campesinas provided training. Of the 18, 16 reported that the training occurred at the work site, nine reported that training was offered during work hours and six reported that workers received compensation for training.

Only about half of the respondents (22 of 47) reported that clean water was provided at work (Figure 1). Fifteen workers reported that the services are generally poor (dirty, in bad repair or unavailable) and another seven reported that services are variable (some clean, others dirty, soap and water are sometimes available). Only five individuals reported that changing facilities (often just a bathroom) were available to change clothes if contaminated by pesticides.

When Farmworker Women Experience Pesticide Exposure— What happens?

I had rashes and pain all over my body. I worked in grapes, and first had problems in the packing houses. I went to the doctor, but he never told me anything. I started getting rashes and itches when I started the harvest in September 2001, and went to the doctor in November. I never reported it because I thought it was something I ate or some allergy. I didn't think it was chemicals and I didn't know that I should report it to my boss. I'd worked for two years in the fields in Porterville. I never heard anything about possible dangers of the sprays. I also worked taking the leaves off and covering grapes from the cold, so I'm not sure where the problem came from.
- Carolina

Figure 1. Rating of Sanitary Services Provided at the Work Site



Forty-one women specified that they had experienced a pesticide exposure or exposures within the past five-year period. Of 41 responses (not all the same 41 individuals) to the question, "if working, in what or where were you at the time of the exposure or incident?" 36 respondents reported being in the field harvesting crops (or harvesting plus other activities) when exposed. Other cases occurred in packing houses or canneries (4 cases), or at home (1 case).

Of 40 individuals reporting specific exposures while at work, 19 reported the incident to their employer and 21 did not (or did not answer the question). Only four reported that the employer filed a written report of the exposure and three of those were the only cases in which the worker's employer provided transportation to the doctor or hospital. In the fourth case, the worker was offered a ride to her home. In the remaining 15 cases, interviewees reported that they were generally ignored or told to go to their own doctor.

Forty-one women answered the question about how they responded to a pesticide exposure event. Individuals frequently listed more than one type of medical assistance. Their answers ranged from doing nothing (8), to use of home remedies (4), to seeking medical services including: company doctors (3), private doctors (7), hospitals (6), and clinics (11). Nineteen (70%) of the 27 individuals reporting a hospital or clinic visit in response to pesticide exposure were required to pay for all or part of the costs incurred, although the exposure was work-related. Two individuals reported going to Mexico for treatment.

Symptoms

The most commonly cited problems were: rashes, allergies, headaches, dizziness, tearing eyes and general cold symptoms (Figure 2). Chronic symptoms that the farmworker women reported and felt may have been related to their pesticide exposure included asthma (14 cases), unspecified disability (five cases), miscarriage and birth defects (four cases each), and two cases of cancer.

Visiting the Doctor

When asked about whether or not it is difficult to get to a doctor if necessary, only 11 (23%) said they had no problem. Over half reported difficulties and cited high cost, loss of work, discrimination, difficulty getting permission from work, lack of English, lack of transportation. Only nine (11%) reported available public transportation to medical services.

Of 47 cases of pesticide exposure, 26 notified the doctor. Of those, only eight were asked for the name of the pesticide and 22 were given blood and/or urine tests. Twelve individuals were diagnosed with allergies and seven with pesticide exposure. Only two women knew that the doctor had reported the exposure case to the relevant county agricultural commissioner (for subsequent investigation). Two more women were contacted by their county agricultural commissioner. In the case of four pesticide exposure diagnoses and all twelve allergy diagnoses, workers did not believe the case had been reported to the proper authorities (county health officer or agriculture commissioner). At the time of the interview, 39 women reported continued symptoms and 31 reported they continue to visit the doctor.

Thirty-one women commented on their personal experiences with the medical professionals they consulted for pesticide exposure. In general, respondents were satisfied with the medical care they received. Twenty-four (77%) rated the care they received as “good.” Four women reported that the doctor made them feel uncomfortable although the overall treatment was rated so-so or good. One woman reported inappropriate physical contact.

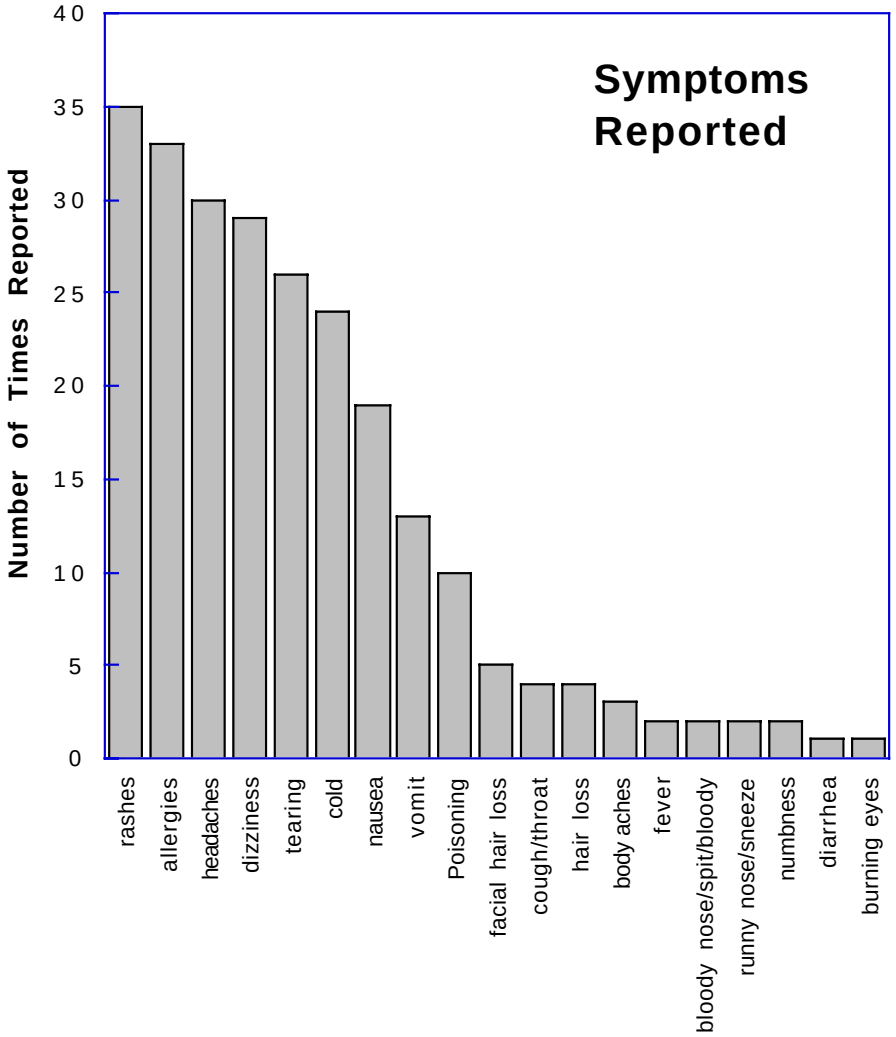
Lack of Health Insurance

Many farmworker women and their families do not have health insurance. Only 17 of 46 (37%) had insurance. Nine women had MediCal or MediCal plus another plan and one individual had Blue Cross. Seven women reported that they had company-provided insurance that was available only while employed and for which they generally had to share the cost. In terms of other services, only one of 39 knew about Workers' Compensation, only one knew about State Disability Income (SDI), and only four knew about Social Security.

Treatment in the U.S. versus Mexico

When asked to compare medical services in the U.S. with those in Mexico, the responses were mixed. Twenty-eight women said that health care services were better in the U.S. while 19 said services were better in Mexico. The explanations were the same on both sides; most said it was cheaper and faster to get help, and easier to get medication. Both sides said one could receive help without insurance or money, and that one could not get help without

Figure 2. **Self-reporting of pesticide exposure symptoms by Central Valley farmworker women.**



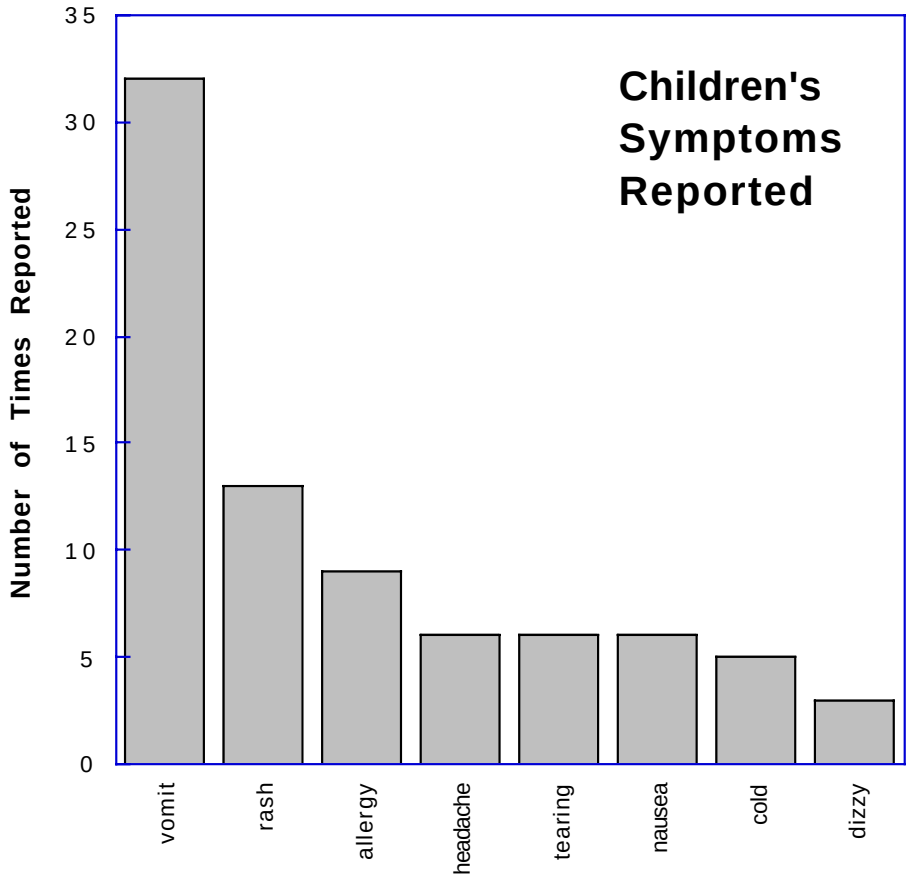
insurance and money. The results are inconclusive, but show that experiences with the health care system vary widely depending on the situation. Some work places offer coverage if employees return to Mexico for health care, but this is relevant only to legal employees living close to the border.

Children's exposure

> Case #1. *My husband carried pesticides. My daughter was born at 6 months with encephalitis. We came to the U.S. where she lived two years instead of the one month we were told in Mexico. I know now that it is probably due to pesticides. No one ever told me that.*
> - Maria

Eighteen women claimed that one or more of their children had been sickened by exposure to pesticides. Seven women said the exposure was at home, three said exposure occurred from work in the fields and six did not provide an answer. One woman said she lost a seven-year old son in 1987 to leukemia as a result of pesticide exposure. Of the 16 exposure cases with living children, all but one reported taking the child (or children) to the doctor and 12 of them told the doctor they believed pesticides were involved in causing the illness. Figure 3 shows the list of symptoms reported for the farmworker children. Of 14 reported diagnoses, 12 were allergies or allergies plus asthma and two were additional cases of leukemia. All but two women reported that their children continued to experience the reported symptoms.

Figure 3 . Pesticide-exposure symptoms in children as reported by their mothers.



> Case #2. *I have one son sick with leukemia. There was a strong smell, our eyes stung, my son had severe headache that day. I didn't want to go to the doctor. I didn't have money. I finally agreed when spots appeared on his skin. He was 18 then, now he is 20. We went to a private doctor in Earlimart. The doctors never say that pesticides are the cause. The doctors wouldn't say it could be chemicals, but the nurses all said it.*
> - Ana

Harrassment on the Job

Over 50% of the interviewed women reported that they suffered harassment on the job. Their answers implied, but did not explicitly state that the harassment was related to the exposure incident. It was only in discussion during the final project meeting that we were able to better understand the harassment they experienced. Once the subject was introduced, it appeared that every farmworker woman had a story to share. The women spoke of repeated cases of bosses or crew leaders showing favoritism in job assignments for women (especially younger women) who did not ask questions or assert their rights as workers. Others reported the bosses "punishing" workers by pressuring them to work faster and produce more—in competition with the other bosses. Humiliating name-calling and offensive, public, verbal abuse (often of a sexual nature) from the bosses seemed to be a common experience for many of the women. And finally, one woman explained how crew leaders intentionally use preferences to divide the workers.

DISCUSSION

> *I've been in Earlimart all my life. Even the soil in dust, is full of chemicals. My son has constant rashes. My 12 year old daughter lives with headaches and bloody noses. I'm always congested. There's always something — I know it's pesticides. Only two years ago I learned that pesticide drift was illegal and that one has to report (pesticide drift) to the county agricultural commissioner. For years I never knew I could complain — that there was legal protection. Now I know we have to complain, so that the state knows and so that something can change.*
> - Teresa

Teresa, quoted above, was interviewed for this project and participated in the final project meeting. She provides an excellent example of the struggles faced by farmworker women throughout California's Central Valley. Teresa's experience also provides a powerful lesson of how information and organized community response can result in positive change as illustrated by the Earlimart case described in the Recommendation Section below.

CARMEN'S STORY

Nobody told me what they were, nobody told me they were harmful.[35]

Carmen had recently immigrated from Mexico to California's Salinas Valley. On an early August morning in 1997, Carmen and a crew of workers were cutting lettuce. In response to a plane spraying pesticides two fields away, the foreman told workers to leave the field immediately. About 15 or 20 minutes later, they were told it was safe to return to work. Shortly thereafter Carmen began to feel sick, "my lips, tongue and throat were numb. I felt very weak, dizzy and nauseated." Another female co-worker also began to feel sick. "We both thought the sickness would pass, so we waited a while. But when the symptoms seemed to get worse, we went to the foreman and told him that we were feeling sick." He took the women to the company's personnel office where they were examined by a nurse. The nurse treated the incident as a pesticide poisoning, requiring them to take a shower and to wash their hands and face thoroughly. Carmen was never given the name of the pesticide to which she was exposed. After the initial examination, she was taken to a doctor who conducted various tests, but concluded that there was nothing wrong with her; she just needed rest.

But Carmen's symptoms persisted, "I kept going to see doctors and they all said that I was fine. One doctor told me that it was just my nerves, nothing else, and he gave me pills." She saw approximately five doctors between August and October 1997, yet none were willing to say that her illness was directly related to her work. The lettuce season ended, and Carmen had not recovered.

The following spring Carmen again reported for work in the lettuce fields. On her first day, she felt sick. The next day she felt even worse, experiencing weakness, chills and a sense of disorientation. She visited a doctor who gave her vitamins and told her to return to work in five days. However, she was unable to find a doctor, including the one who had prescribed the vitamins, willing to sign a form to give her the medical release required by the company.

Underreporting of Pesticide Illnesses Remains a Serious Problem

The information collected through the project supports the general understanding that underreporting of pesticide-related illnesses is a serious problem in California. Of the 40 individuals who reported specific pesticide exposures at work, 21 (53%) never reported their illness to their employer (or didn't answer the question). Another 19 (48%) did report the exposure but only four (10%) of those were apparently reported to authorities. Presentations during the final meeting repeatedly described both fear of job loss and a sense of simply not knowing what to do.

Of the 27 women who reportedly sought some kind of professional health care in the Central Valley, 19 had diagnoses that could have been reported as possible pesticide-related illnesses (allergies or pesticide exposure). Only four women knew that their case had been reported to the county agricultural commissioner (for subsequent investigation)— three pesticide illness diagnoses and one diagnosis unknown to the worker. If, for the sake of arguement, we assume that reporting is somewhat better for the state overall, and a very conservative 60% of cases go unreported, then the 1,899 California farmworker pesticide poisoning cases reported by the California Department of Pesticide Regulation for 1997-2000 [36] would be a subsample of an estimated 4,750 cases.

Unfortunately, we do not know the real extent of underreporting. We were specifically looking for examples of workers who believed they had experienced pesticide-related illnesses. In all but seven cases the relationship between pesticide use and illness was not confirmed by a physician, either because one was never consulted, the diagnosis was incorrect, or the illness was determined to be unrelated to pesticide exposure. However, to the workers' knowledge, four of the seven pesticide exposure diagnoses were never reported. It is not possible for us to determine if other cases cited in this study might be included in state reporting.

Despite the fact that most of the women interviewed worked in the fields where workers experience routine exposure to pesticides, over half received no pesticide-related training. Lack of training on the dangers and symptoms of pesticide exposure is certainly a contributing factor to underreporting— if workers fail to recognize exposure when it occurs and seek medical treatment. Additional barriers to reporting were documented in this report. Most farmworker women had limited access to health care services and 78% had to pay all or part of their health care costs. Furthermore, participants clearly explained that farmworkers will choose not to report an illness if they feel it may lead to on-the-job harassment. Over 50% of the participants reported harassment.

A Severe Lack of Health and Social Services

We expected the low rate of health insurance that we found among study participants. In fact, the figure of 37% with insurance is just above that cited in the 1999 CAWHS study. What was almost more troubling, however, was the lack of understanding about other social services– Workers' Compensation, SDI and Social Security. Workers' Compensation is available to all workers, while SDI and Social Security should be available to all farmworkers working legally in California. One partial explanation provided by project participants is the lack of social workers or other individuals in their communities who could help educate farmworkers about these services. Another reason is that the application procedures for these services are time consuming and require the completion of multiple forms, which may not be in a language the applicant can read and write

(86% of project participants could not read and write in English). Migrant workers crossing state or county lines encounter additional barriers. For these services to be effective and utilized, they must be more accessible to the population they are designed to serve.

regulations are inadequate both as they are written and in practice. Farmworkers are not receiving the information they need about the dangers of pesticides, what pesticides are used in the fields in which they work or what one can and should do in the event of a pesticide exposure.

Margaret Reeves

Angelita Leanos, Teresa Calvo, Laura Caballero, Esperanza Vialobos, Vianey Torres, and Ruth Martinez, representing Lideres Campisinas and UFW, gather for a photograph at the project's final meeting.

The meeting ended with an evaluation of the project in which participants unanimously considered the project an important learning experience. Women conducting interviews learned much more about the nature and frequency of pesticide-related illnesses than they had previously known. Two amply discussed examples included asthma and leukemia. Teresa, one of the interviewers, explained that the process also "made us reflect and think about our own experiences." Ruth explained her experience conducting interviews as emotional and sad "to learn of so many different illnesses including developmental problems, leukemia, spontaneous abortion and others."

PROJECT EVALUATION AND POLICY RECOMMENDATIONS

The final project meeting provided the opportunity for participants to share their experiences conducting interviews or being interviewed and to tell stories of personal experiences regarding pesticide exposure, related-illnesses and health care. One of the more striking discoveries was that although most of the women were familiar with Social Security and unemployment benefits, most (including project team members), did not know where to call in the event of a poisoning. On the other hand, Teresa shared the story of how the community of Earlimart (Tulare county) had formed a committee in response to a community-wide pesticide exposure incident in November 1999 and that the committee continues to meet once a month.

A brief presentation of questionnaire results led to a discussion of "what we don't know and what we most need." All participants gave resounding support to the idea of more educational meetings within their communities— including those "small, abandoned and forgotten." They also identified the need for farmworkers and community members to work together to assure that those who report pesticide exposures do so with a plan of action that includes having witnesses willing to verify the reported incident.

The group called for educating regulators and the public to "remember the workers in the field and the conditions of pesticide exposure under which we work." With respect to current worker safety regulations, there was overwhelming agreement that training

For PANNA participants the lessons were very different, but equally important. To work as effective advocates and project partners it is essential to fully understand the level of knowledge of pesticide issues among farmworkers—from health hazards to workers' rights. We can then work to provide necessary information and training to farmworker partners as we work together to maintain and build our California coalition with its focus on eliminating the use of hazardous pesticides and improving pesticide use regulations and their enforcement.

Recommendations

Together, the group identified the following four recommendations for the farmworker community and regulatory agencies. These recommendations are informed as well by those directed at the California Department of Pesticide Regulation (DPR) in the recent report, *Fields of Poison 2002: California farmworkers and pesticides.*[37]

- When exposed to agricultural pesticides, workers need to work together to develop a plan of action including identifying witnesses. County agricultural commissioners' required investigations of poisoning incidents include interviews of workers. Inadequate investigations often fail to identify: (a) lack of compliance with pesticide use and worker safety regulations that lead to pesticide-related illness, or (b) pesticide-related illness that may occur in the absence of any regulatory violation. An educated and organized worker force can help improve the outcome of investigations of agricultural pesticide exposures by assuring that all relevant information is collected in a timely fashion, in the appropriate language, and in a culturally sensitive manner.

- All agricultural workers must receive adequate pesticide training on a regular basis and have adequate access to pesticide application information. By law, employers must provide field workers with pes-

ticide training at least once every five years. They must also provide workers with on-farm pesticide application records. In practice, pesticide information is not readily available and training is much too infrequent and woefully incomplete. Adequate training should include, not only recognition of the dangers of pesticide exposure, but explicit instructions on when to seek treatment and on doctors' obligations to report known or suspected cases of pesticide poisoning.

DPR should prioritize improving farmworker training and access to pesticide spray records. It should also solicit worker input on how best to accomplish this, publicize effective programs as models, and develop crop sheets that rely heavily on pictographs that growers can customize using their own application records and make available in the field.

- State authorities must regularly issue maximum allowable fines for violations of worker safety laws. Employers should bear the responsibility of following the worker protection laws and protecting workers from exposure to toxic pesticides. This includes: (a) preventing any and all kinds of workplace harassment and retaliation against workers who report work-related illnesses, (b) ready access to easy-to-understand information about all pesticide applications in a workplace, (c) pesticide training, and (d) access to emergency medical services.

  To ensure that employers comply with laws, DPR must strengthen enforcement of existing worker safety laws by issuing the maximum allowable fines for all safety and workplace violations.

- Medical services must be available when needed and funding should be made available from fines issued for violation of pesticide use regulations. Medical services should better serve the specific needs of the farmworker community and be provided equally regardless of immigration status. This includes provision of services during non-working hours. Furthermore, employers should ensure that associated transportation and childcare needs are met.

  In addition, a state program should be created to cover medical expenses for exposure to agricultural pesticides not otherwise covered under Workers' Compensation. The program would cover all workers and affected community members. An important source of funding can and should come from fines issued for failure to comply with pesticide use and pesticide-related worker health and safety regulations. The precedent-setting response to the disastrous November 1999 contamination of the Tulare County community of Earlimart, serves as a good example. The settlement, brought about through persistent efforts of Earlimart residents and the UFW, resulted in a fine of $150,000 to the pesticide application company responsible for the accident. One half of the fine went to establish two trust funds to pay victims' medical bills.[38]

RESOURCES

What to Do If You are Exposed to Pesticides:

- Immediately rinse exposed skin with clean water.
- Go to the doctor —ask your boss to drive you. Don't drive if you are feeling sick.
- Wash with soap and water as fast as possible and put on clean clothes.
- Wash contaminated clothes separately from other clothing.
- If possible, ask your boss for the name of the pesticides. You have a legal right to ask for this information.

By California Law Doctors Must:

(1) Report any suspected pesticide-related illness to the County Health Officer:

Central Valley County	Telephone Numbers
Fresno	559-445-3202
Kern	661-868-0301
Kings	559-584-1401
Madera	559-675-7893
Merced	209-381-1010
San Joaquin	209-468-3411
Stanislaus	209-558-8804
Tulare	559-737-4533

(2) Report any suspected occupational injury or illness to the Department of Industrial Relations using the "Doctor's First Report of Occupational Injury or Illness." For a copy of the report call: 415-703-3020.

Legal Help For Farmworkers:

California Rural Legal Assistance (CRLA), Inc.
- CRLA Office in Salinas: 1-800-677-5221
- CRLA Office in Modesto: 1-800-413-4567
- CRLA Office in Fresno: 1-800-242-2752
- CRLA Office in Arvin: 1-800-639-4872

Proyecto Mixteco in Fresno: 1-800-649-8326

For More Information:

- Call the National Pesticide Telecommunication Network 1-800-858-7378
- Call the California Poison Control Center: 1-800-876-4766. For TTY service call: 1-800-972-3323. Health care professionals only may also call: 1-800-411-8080
- Refer to the EPA manual, *Recognition and Management of Pesticide Poisonings* http://ace.orst.edu/info/nptn/rmpp.htm
- Visit PANNA's pesticide web site http://www.pesticideinfo.org

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ORGANIZATION DESCRIPTIONS

The Pesticide Action Network (PAN) advocates adoption of ecologically-sound pest management methods in place of pesticide use. For 20 years, our international network of over 600 citizens groups in more than 60 countries has created a global citizen pesticide reform movement with regional coordinating centers in Africa, Asia, Europe, Latin America and North America. PAN North America's (PANNA) primary approach is to link the collective strengths and expertise of groups in Canada, Mexico and the U.S. with counterpart citizen movements in other countries, and to carry out joint projects to further our collective goals of sustainable agriculture, environmental protection, workers' rights, improved food security, and guaranteed human rights for all.

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The United Farm Workers of America, AFL-CIO (UFW), is the largest union of farmworkers in the country, with regional offices throughout California and in Texas, Florida and Washington State. Founded by Cesar Chavez and Dolores Huerta in 1963, the union now has 26,000 members and has won 16 elections since 1994. Because farmworkers are the single population most affected by pesticides, the UFW plays a central role in advocating for the ban of the most dangerous pesticides and for farmworkers' rights to a safe and healthy work place. The UFW approaches pesticide issues from an organizing perspective, and works with groups throughout North America who have joined the fight to improve the lives of millions of agricultural workers in t

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The Organización en California de Líderes Campesinas, Inc. is a nonprofit statewide organization dedicated to improving the lives of farmworker women and their families by ensuring their access to health information and services. Líderes Campesinas works with over 250 farmworker women organized into committees in 12 California communities. Líderes uses an innovative peer-based education and advocacy model that helps empower farmworker women by training them to be leaders and community advocates dealing with issues ranging from domestic violence and HIV to pesticide-related illnesses and worker protection standards. Once trained, community advocates then organize house meetings and other community outreach activities in their local areas through which they disseminate information using a combination of skits, videos and lectures. Líderes and PANNA have worked together for several years, most recently on the production of educational "crop sheets"—quick guides providing vital warnings, safety and "what to do in the case of poisoning" information to California farmworkers, their advocates and medical caregivers.
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