

streamline

The Migrant Health News Source

A Pilot Program Using Promotoras de Salud to Educate Farmworker Families About the Risks from Pesticide Exposure

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According to data collected from the American Association of Poison Control Centers, in 2004 alone, an estimated 71,000 children were involved in common household pesticide-related poisonings or exposures.¹ A survey by the U.S. Environmental Protection Agency (EPA) regarding pesticides used in and around the home showed that 47% of all households with children under the age of 5 had at least one pesticide stored in an unlocked cabinet, within the reach of children.¹

Moreover, children from agricultural families are exposed to higher levels of pesticides than those whose parents do not work in agriculture and do not live close to farms.^{2,3} Migrant farmworker children and children living in agricultural areas may be exposed to higher pesticide levels than other children because pesticides may be brought into their homes by working parents or by pesticide drift.⁴⁻⁷ Additionally, some children are exposed to pesticides by playing or working in nearby fields. Children face particular risks from pesticides as their developmental patterns, behavior and physiology make them more susceptible than adults.^{8,9} First, children are more exposed to pesticides than adults because of their smaller size; pound-for-pound, children eat more food, drink more water and breathe more air than adults. Second, children are more exposed to pesticides due to their behavior. They engage in hand-to-mouth activity, increasing their ingestion of any toxic chemicals in dust or soil. Children also crawl and play on the

ground, increasing their exposures to contaminants in dust, soil and carpets. Lastly, children's developing bodies are less able to detoxify and excrete certain toxins.

Exposure to pesticides is one of the numerous environmental and occupational health issues facing farmworkers and their families. This poor, mobile, primarily Mexican-born population faces additional risks. Substandard housing, poor working conditions (e.g., lack of drinking water, hand-washing facilities or toilets) and limited access to health care services are among the problems confronting agricultural workers.^{10,11}

The Worker Protection Standard (WPS) is the EPA's primary means to reduce farmworker risk from exposure to pesticides. EPA established the WPS in 1974 and made major revisions to the Standard in the 1990s, including the prohibition of spraying pesticides while anyone is working in the field. Additionally, the WPS now requires employers to provide farmworkers with: (A) information about when and where pesticides were applied; (B) basic pesticide safety training; and (C) supplies such as soap and water to use to decontaminate themselves.

EPA and others have assessed several aspects of the WPS in recent years. Improvements are needed to ensure the safety of farmworkers and their children.¹² Compliance with workplace regulations, including the provision of pesticide safety training, varies considerably. Some of the important preventative aspects of the WPS, such as training, reach only a portion of farmworkers. Several studies have found that as few as 35-60% of the farmworkers interviewed participated in some type of pesticide safety training.¹³⁻¹⁵ This is due to several reasons, including the high turnover of farm-

workers as well as employer failure to comply with the regulations.

The content and quality of the training also vary significantly. Some workers participate in a formal class, while others are shown a video or receive informal training from their supervisors. The trainings tend to focus primarily on farmworker protection, and the effectiveness of the training varies, depending on quality.⁽¹⁶⁾ More importantly, there is limited emphasis on ways to protect family members of farmworkers from pesticide exposure.⁽¹⁷⁾ Few trainings have integrated theories of non-formal, participatory adult education into their curriculum and used *promotoras de salud* or lay health workers to promote pesticide education and safety practices.

The pilot intervention took place in small, mostly rural communities and neighborhoods in Doña Ana County, New Mexico, where many farmworker families reside. Only one of the towns, Sunland Park, is more peri-urban than rural. While the county is largely agricultural, the families who participated in this project generally did not reside on the farm where they worked. The majority of the families were first-generation Mexican immigrants. The legal status of the household members was mixed with some of the family members having proper authorization to live and work in the United States and other members in the same family not having proper authorization. Many of the families' children, however, were U.S. citizens.

With funding from the Paso del Norte Health Foundation, in 2004 Migrant Clinicians Network (MCN) developed and piloted a culturally sensitive training curricu-

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lum and outreach project to educate farmworker families in Southern New Mexico. The project addressed pesticide safety for the entire family, not just the farmworker. The approach emphasized education to the primary caregiver, mainly the mother, as a means to help prevent exposure to children in the home. The curriculum included information regarding why children are vulnerable to pesticide exposure and ways to minimize farmworker children's exposure to pesticides. Additionally, the curriculum employed popular education techniques and considered local health information and the general border milieu. Using the curriculum, MCN worked with lay health educators or promotoras de salud from local agencies to educate them in both pesticide safety and in ways to successfully promote safety information in the farmworker community. The promotoras trained farmworkers and their families during home visits and small group workshops. To help reinforce pesticide safety messages, each family received *Aunque Cerca... Sano*, a 16-page, Spanish language comic book targeting farm-worker families to educate parents about children's risks to pesticide exposure and ways to minimize these risks. The comic book was developed in 2002 by MCN and Farm Safety 4 Just Kids with funding from the National Children's Center for Rural and Agricultural Health and Safety. The majority of families participated in two educational encounters.

Project staff developed a six-hour bilingual pesticide and community education curriculum for promotoras. The curriculum incorporated theories of participatory adult education so that it could train promotoras with a minimum of an eighth-grade education.

In the training, project staff suggested ways the organizations could develop effective interventions and assess families to determine the families' needs and any changes as a result of the intervention. The partnering organizations were asked to develop a work plan and evaluation methods. Within a month of the training, project staff reviewed the assessment forms the organizations developed.

The promotoras conducted two home visits per family. A total of 190 farmworker families participated in the project and the promotoras conducted 358 home visits. Approximately 10 percent of the participating families could not be located for the second home visit. The home visits primarily involved one-on-one educational talks between the promotora and the primary caregiver, generally the mother. The promotoras did not follow a predetermined script, but

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Figure 1. Understand the Uses of Pesticides

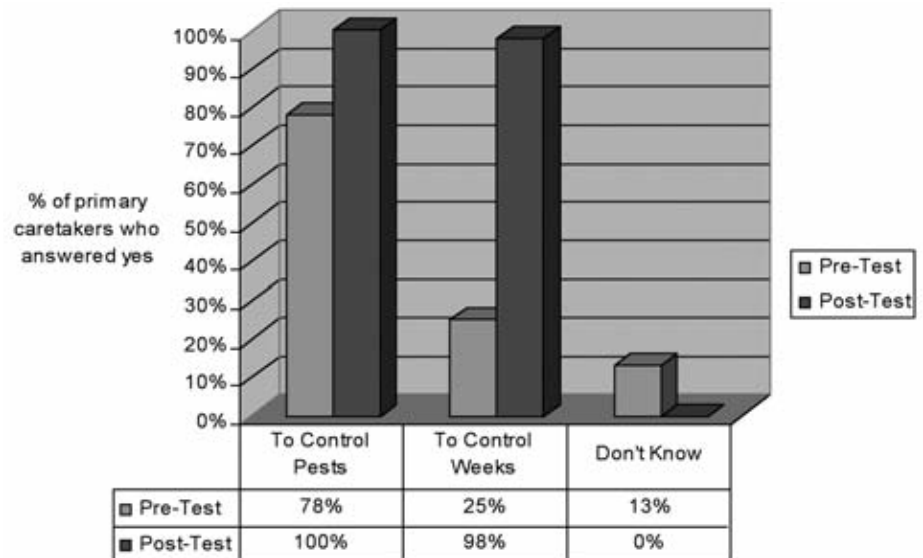


Figure 2. Understand Routes of Exposure

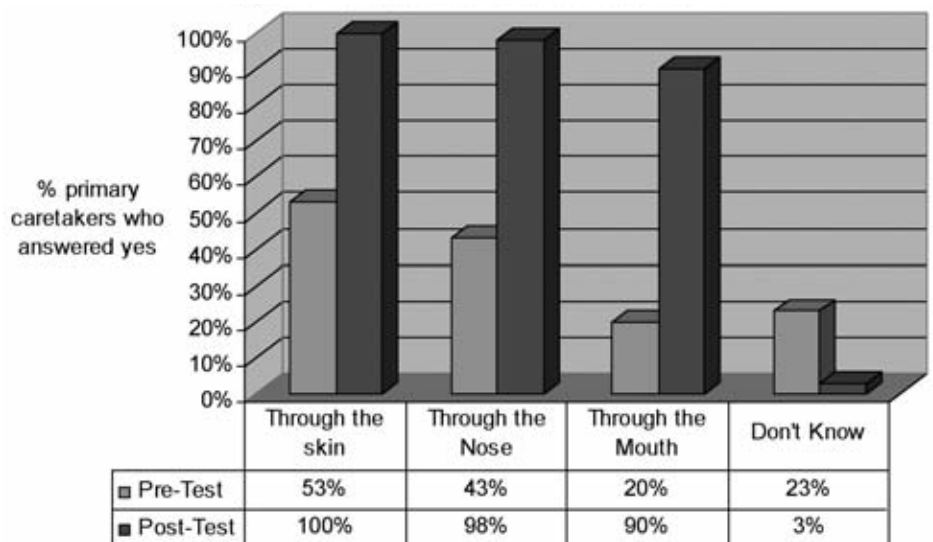
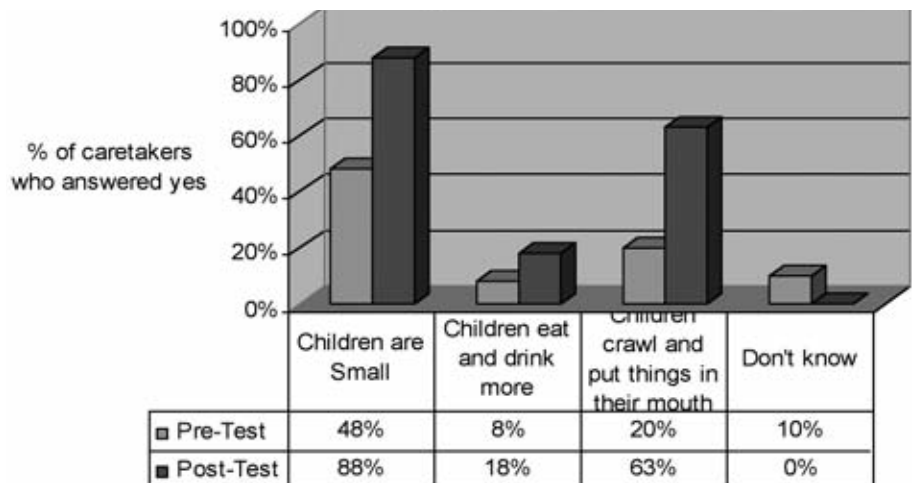


Figure 3. Understand Why Children are Vulnerable to Pesticide Exposure



had a check list of topics to discuss. Emphasis on children was a critical component of the educational intervention.

Prior to delivering the educational intervention during the first home visit, the promotoras orally administered a simple one-page pre-assessment instrument with the primary caretaker in the home. The entire first visit lasted between 20 minutes and one hour. Within four weeks, the promotoras returned to the home for a second visit and administered a post-assessment instrument. The *promotoras* offered additional education if they saw that the primary caregivers did not understand critical concepts.

RESULTS

The project team examined the results of the pre-and post-assessments that the *promotoras* administered during the home visits to determine participant gain in knowledge. While the project reviewed all of the assessments conducted in 190 households, we include 40 results only from the promotora who was directly trained by project staff to administer the assessment.

While 78% of primary caretakers understood that pesticides are used to control or kill pests, the use of such chemicals for weed control was not as widely understood prior to the intervention (Figure 1). Since the majority of pesticides used in the United States are herbicides, this lack of understanding is important to clarify, as farmworkers may potentially perceive the risk differently if there is any confusion that herbicides are pesticides with similar human health effects as insecticides.

The pilot intervention resulted in a dramatic increase in knowledge regarding the routes of exposure (Figure 2). Prior to the education, only 53% of the caregivers understood that pesticides may enter the body through dermal absorption and 43% knew that pesticide exposure could occur due to inhalation. Even fewer (20%) understood that ingestion of pesticides was another possible route of entry. All or almost all of the caregivers understood that pesticides could enter the body through dermal absorption (100%) and inhalation (95%) after receiving education.

The pilot intervention also showed an increase in knowledge regarding the reasons why children are more vulnerable than adults. The concepts that children are smaller and engage in different behavior than adults were much better understood than the idea that pound per pound children actually eat more food and drink more liquids than adults (Figure 3).

After the intervention the primary caretakers showed a significant increase in knowl-

Figure 4. Understand Symptoms of Pesticide Poisoning

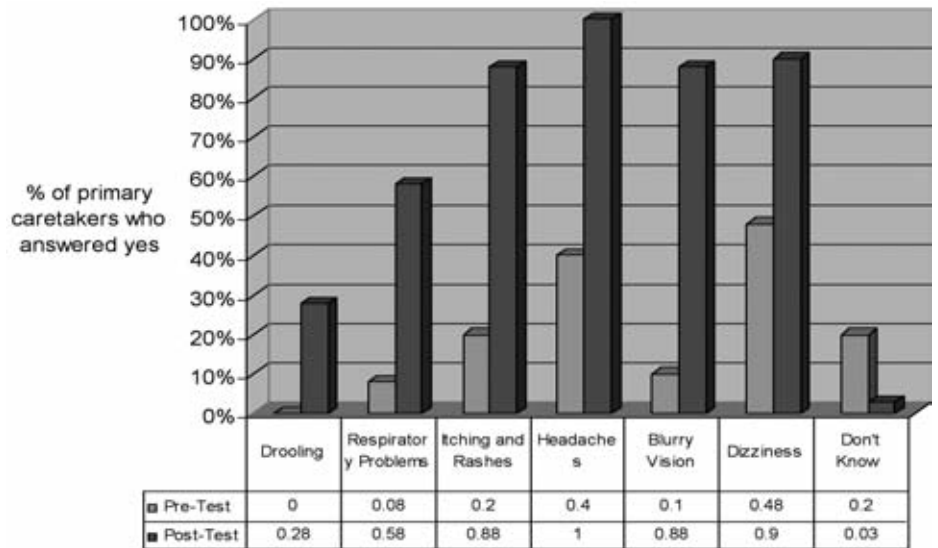
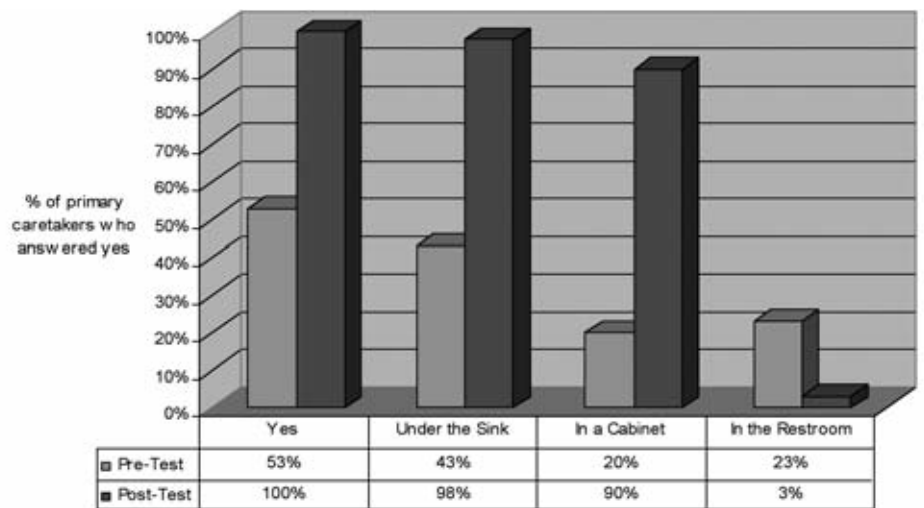


Figure 5. Store Pesticides Out of the Reach of Children



edge regarding other ways to protect their children from pesticide exposure. This is particularly evident for such practices as bathing or hand washing before touching children, storing and washing work clothes separately and changing clothes before touching/holding children.

Primary caretakers better understood the symptoms of pesticide poisonings following the pilot intervention. Caretakers were asked to list symptoms of pesticide poisoning. Headaches, dizziness, itching or rashes, and blurry vision were well understood as symptoms of pesticide poisoning (Figure 4).

The results demonstrate a change in behavior related to pesticide storage practices. There was a slight change in self-reported behavior regarding safe storage practices (Figure 5). Sixty-three percent reported safe storage practices prior to the

intervention and 88% reported such practices after receiving the education. Safe storage of pesticides in the home was better understood prior to the intervention than knowledge surrounding other ways to protect children from pesticide exposure.

DISCUSSION

The assessment tool was designed by community organizations to assist the *promotoras*

in evaluating the impact of their work and not for use as a rigorous research instrument. The project staff encountered programmatic challenges when we observed the *promotoras* focusing more on the assessment tool as part of the educational intervention itself as opposed to a tool to exam-

ine effectiveness of the intervention.

Through monitoring and feedback, project staff strengthened the intervention techniques used by the *promotoras*.

More research studies are needed to demonstrate the impacts of such programs. *Promotoras* often serve as an excellent resource for data collection. Caution, however, is warranted, as it is often difficult to do both unbiased research and education. While the assessment results of the other 150 household visits show very positive outcomes, the administration of the instrument was not carefully implemented. The 40 pre-assessments and 40 post-assessments that we describe here were conducted by a very well-trained *promotora* with a lot of prior community and research experience. While many research efforts successfully utilize *promotoras* to conduct the research, extensive training and monitoring in both data collection and educational techniques is

highly recommended.

Whether programmatic or investigatory in approach, it is critical to involve those conducting the education or the research in the design of the methods. In this pilot intervention, the *promotoras* largely selected the criteria to assess their efforts. The assessment was limited by the *promotoras'* insistence to keep the tool as simple and as brief as possible. Their desire for simplicity and brevity is justified, as the educational intervention was their priority. More in-depth training, however, could have been done to help the *promotoras* understand how to implement the assessment tool and use it as a way to demonstrate their impact with the families. The training could be strengthened so that if a training-of-trainers approach is used by other organizations, new trainees would better understand the reasons for evaluation and ways to conduct assessments. Project staff could have also suggested additional

variables to assess to better determine attitudes or other knowledge criteria such as steps to take when symptoms of pesticide poisoning occur, but felt it was important to give the organizations and their *promotoras* final say in the areas to assess.

CONCLUSION

The importance of protecting children and other family members of farmworkers from para-occupational pesticide exposure is often neglected in worker protection training measures. By targeting caretakers in a home-based educational intervention, the importance of preventative measures that can be done in the home is reinforced. The pilot intervention offers practitioners a way to make pesticide safety training relevant to farmworkers and their families: emphasize children as a motivating reason to take steps to protect not only the worker but his or her family members. ■

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Experts Urge Integration of Adult Vaccines into Routine Care to Save Lives, Reduce Needless Illness

New data released by the Centers for Disease Control and Prevention (CDC) paint a disappointing picture of adult immunization against serious infectious diseases in the United States. In addition, a new consumer survey shows the vast majority of adult Americans lack awareness of vaccines and the severity of infectious diseases.

CDC's National Immunization Survey shows only 2.1 percent of adults 18 to 64 years of age are immunized against tetanus-diphtheria-whooping cough. Immunization to prevent shingles among people 60 and over was only 1.9 percent. Vaccine coverage for the prevention of HPV (human papillomavirus) among women 18 to 26 is about 10 percent. In addition, influenza and pneumococcal vaccination rates for the elderly are well below the 90 percent national target rates.

Immunization is recommended for U.S. adults to protect them against chickenpox,

diphtheria, hepatitis A, hepatitis B, human papillomavirus/cervical cancer (HPV), influenza, measles, meningococcal disease, mumps, pertussis (whooping cough), pneumococcal disease, rubella, shingles and tetanus.

The results of a new national survey conducted by the National Foundation for Infectious Diseases (NFID) that show most adults cannot name more than one or two diseases that are vaccine preventable in adults were also released. Each vaccine for adults was identified by only 3 to 18 percent of those polled; the only exception was the influenza vaccine, which was named by just under half of respondents.

Also disconcerting is that half of those surveyed say they are not concerned about whether they or another adult family member gets a vaccine-preventable disease. When asked about specific diseases, consumers expressed most concern about getting influenza, which likely reflects the more frequent messages they receive about

influenza versus the other diseases.

One adult vaccine with low immunization rates (< 2 percent) prevents herpes zoster or shingles, a severely painful and debilitating infectious disease. The vaccine not only helps reduce the risk of getting shingles, but it reduces the incidence of postherpetic neuralgia (PHN), a long-lasting shingles pain syndrome that constitutes the most common serious and debilitating complication of shingles. PHN pain can last for years after the initial shingles outbreak and is often resistant to treatment.

Although immunization rates are higher for influenza than for other vaccines recommended for adults, influenza remains a significant threat to the public health. A recent report connected influenza infection with an increased risk of heart attack and stroke.

For more information on vaccines and vaccine-preventable diseases, please visit <http://www.nfid.org>.

MCN Seeks 2008 Unsung Hero

The Migrant Clinicians Networks invites nominees for its unsung hero award. MCN is the nation's oldest and largest networks dedicated to the mobile underserved and it wants to honor a clinician in the field of Migrant Health. Last year, we honored Carolyn White, FNP, from Baldwin Co. Alabama. As a nurse practitioner for family and pediatrics and an attorney she was the founder of La Clinica de Baldwin in 1997. Working with other community volunteers who were concerned about a lack of even the basic of health services for Hispanic farm workers, she stepped out "in faith" to make a difference in the then rural community.

Since 1991, MCN has recognized those special healthcare workers who are so very dedicated to those laborers working in the fields, construction sites or home who become sick or injured. These same workers are often forgotten when it comes to their health.

Nominees are distinguished by their demonstrated dedication to migrant health. Qualifications may include innovation to service delivery or prevention strategies. Other attributes may include their leadership skills or contributions to the health of those who need it, but often do not get it.

The Migrants Clinician Network is in a unique position to look nationwide, to honor someone from your community. The unsung hero will receive an all expenses paid trip to the Annual Farm Worker Health Conference in San Juan, Puerto Rico, May 6-8 2008. MCN will present the award in front of a professional audience of peers. Please submit their names for consideration with a simple paragraph describing the nominee and why they embody the characteristics of the "2006 Unsung Hero Award." Email, call, or write to Jillian Hopewell, Migrant Clinicians Network, PO Box 164285, Austin, TX 78716 (530) 345 4806 by March 15th, 2008.

For more information on the "The Unsung Hero Award," changes in the migrant population or any of MCN's innovative programs caring for the mobile underserved in your area visit our website at www.migrantclinician.org or contact:

Jillian Hopewell at (530) 345-4806, jhopewell@migrantclinician.org
or Edward Zuroweste, MD, at (814)238-6566 kugelzur@migrantclinician.org.

Make a Commitment to Healthcare Justice in 2008!

Do you feel overwhelmed with the problems facing your patients? Do you keep your head down and try not to think about the big picture? Would you like to be able to make a substantial difference in healthcare?

Let's Make Our Voices Heard!

Join a gathering of clinicians from across the country to explore cutting edge solutions, rediscover professional excitement, and be a vital voice in healthcare justice.

The National Summit of Clinicians for Healthcare Justice is a one-of-a-kind event sponsored by many of the major safety-net clinician organizations across the United States. The 2½ day event is expected to attract clinicians and advocates from all over the country who will come together to celebrate, acknowledge and highlight the work frontline clinicians do to serve disenfranchised populations in need of basic healthcare in our country. The conference provides an opportunity for clinicians and others to explore cutting edge solutions and to be a part of the vital efforts to make quality health care for the underserved a reality.

The summit will culminate in a vigil on Capitol Hill to show support for Healthcare Justice and to demonstrate the need for healthcare change in the United States.

The conference will feature revolutionary discussions all focused around the issue of healthcare justice. Specific themes include:

- History of Healthcare: Justice and Injustice
- Transdisciplinary Healthcare Solutions
- Breakthroughs and Breakdowns Healthcare Practice
- Grand Rounds: Case Histories of Justice and Injustice from the Field
- Radical New Ideas for Health System Reform

- Compassion Fatigue and Self Care
- Breaking Through Stigma in Healthcare
- Human Rights in Healthcare

To find out more about submitting an abstract or registering for this event go to www.allclinicians.org or call 530-345-4806. ■



The Path to Change:

Raising Rates of Immunization for Hispanic Migrants

MCN has begun a new initiative, the primary goal of which is to increase the rates of immunization for Hispanic migrants of all ages and life cycle phases. Steps to achieving this goal will begin with a systematic analysis of immunization policies and practices at the national, state, and local level. The national review will result in a comprehensive compendium of the composition, availability and funding for immunization services across the country as they affect migrant workers.

This will provide a framework for the development of migrant-specific recommendations with national application. State-level analysis will draw from the experience of states that have identified migrants as a priority population and have systematically included them in their immunization goals. As New York State has identified migrant farmworkers as a population meriting special attention from their Immunization Program, it will be used as a special case study. At the local level a review

of the availability and provision of immunization services to migrants by local health departments and local primary care centers will be conducted, with emphasis on community collaboration. From this review a model for outreach and immunization delivery to migrant Hispanics, with attention to male adolescent and adult workers, will be developed and tested. We will be sharing more information about the impact of this project as it develops. ■

MCN to Expand Bridge Case Management System for Mobile Cancer Patients

Migrant Clinicians Network, Inc. (MCN) has received an Evolution Grant from the Lance Armstrong Foundation (LAF) in the area of Practical Issues of Survivorship for the expansion of a Bridge Case Management System, CAN-track, dedicated to mobile cancer patients and survivors.

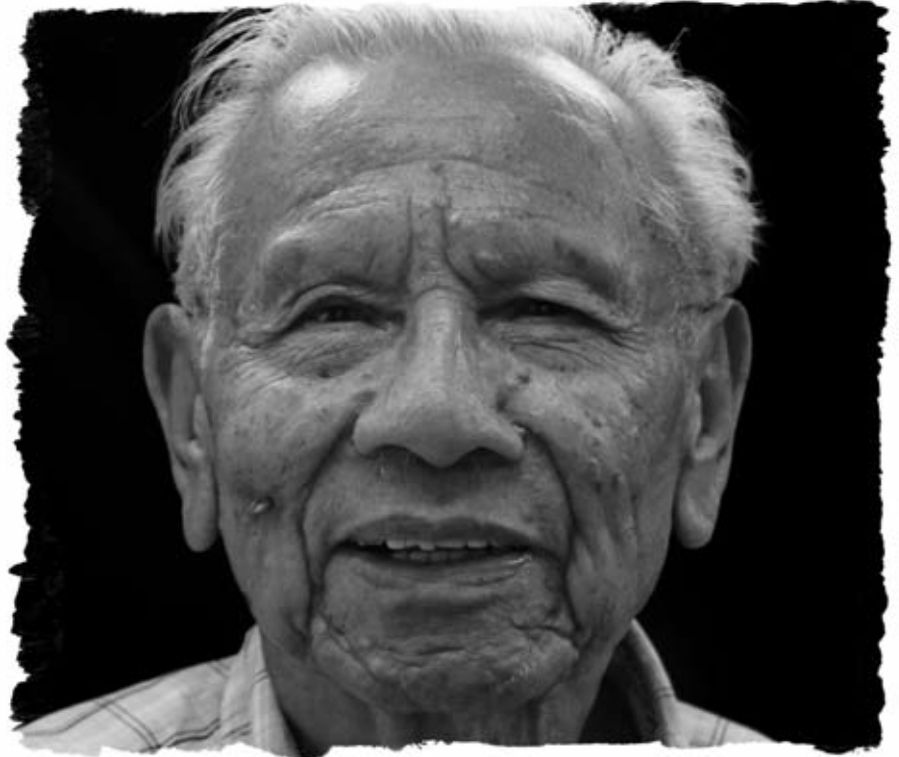
In 2006, with the support of a LAF Implementation grant, MCN identified that one of the greatest challenges facing health care providers is finding a way to bridge primary care services and secondary care for their cancer patients. CAN-track allows clinicians caring for migrant workers to improve their continuity of cancer care. At the same time CAN-track provides patients and their families with personalized referral to care sources, information and the on-going support they need as they move from one location to another. The pilot program was very well received and demonstrated the need for a full-scale, national bridge case management system available to all Hispanic migrants facing cancer diagnosis and treatment while moving for purposes of employment.

With support from the Evolution Grant, MCN is excited to take lessons learned from the CAN-track pilot and work with patient and provider partners to enhance and expand this unique resource for migrant cancer patients. In 2008, the system will be

launched nationally to additional sources of care such as local health departments and specialty care centers.

To learn more about CAN-track or other

services offered by MCN's Health Network visit our award winning website at www.migrantclinician.org or call toll free at 1-800-825-8205.



Exploring the ToolBox

You've been charged with writing your organization's emergency management plan... or... you need a job description for your outreach workers... or... you need a patient bill or rights.... Health centers across the nation are turning to one of MCN's best-kept secrets for tasks like these—the web-based Clinical Systems Tool Box. If you are tired of reinventing the wheel with every policy you write or just need a sample to get you started, check out www.migrantclinician.org/clearinghouse.

The Clinical Systems Tool Box came about as a result of MCN's field work with health centers, both new and established, who find themselves challenged by the increasing need for documentation of systems. The resource is a gold mine of sample forms, policies, and templates contributed by various migrant and community health centers that are available electronically and can be adapted to your needs. Categories include:

- Clinic brochures
- Clinical guidelines

- Health center policies and procedures
- Human resources
- Medical records
- Quality management
- Practice management

The tools are not offered as a gold stan-

dard, but rather as a repository of samples. In keeping with the adage promoted by the Health Disparities Collaboratives — “Steal shamelessly ...” use them wisely and share your own work with others by posting your tools.

NEWSFLASH

Low health literacy is pervasive in the United States, particularly among older adults and people with limited education or English proficiency. Patients with low health literacy are at greater risk of misunderstanding treatment recommendations, taking prescription medications improperly, and experiencing lower health status and poorer health outcomes.

But according to a new Commonwealth Fund report, there are a number of practical steps that health care providers can take to combat the problem. In *Health Literacy Practices in Primary Care Settings: Examples from the Field* (<http://www.commonwealthfund.org/publications>), Sharon E. Barrett, M.S., Jennifer Sheen Puryear, M.P.H., and Kathie Westpheling, M.P.H., identified practices used by health care providers across the U.S. to improve care for patients with low health literacy.



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National Association of Community Health Centers
www.nachc.com
301-347-0400

42nd National Immunization Conference

March 17-20, 2008
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nlpnic@cdc.gov
404-639-8225

National Farmworker Health Conference

May 6-8, 2008
San Juan, PR
<http://www.nachc.com>
301-347-040

National Summit of Clinicians for Healthcare Justice

October 23-25, 2008
Washington, DC
www.allclinicians.org
530-345-4806



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