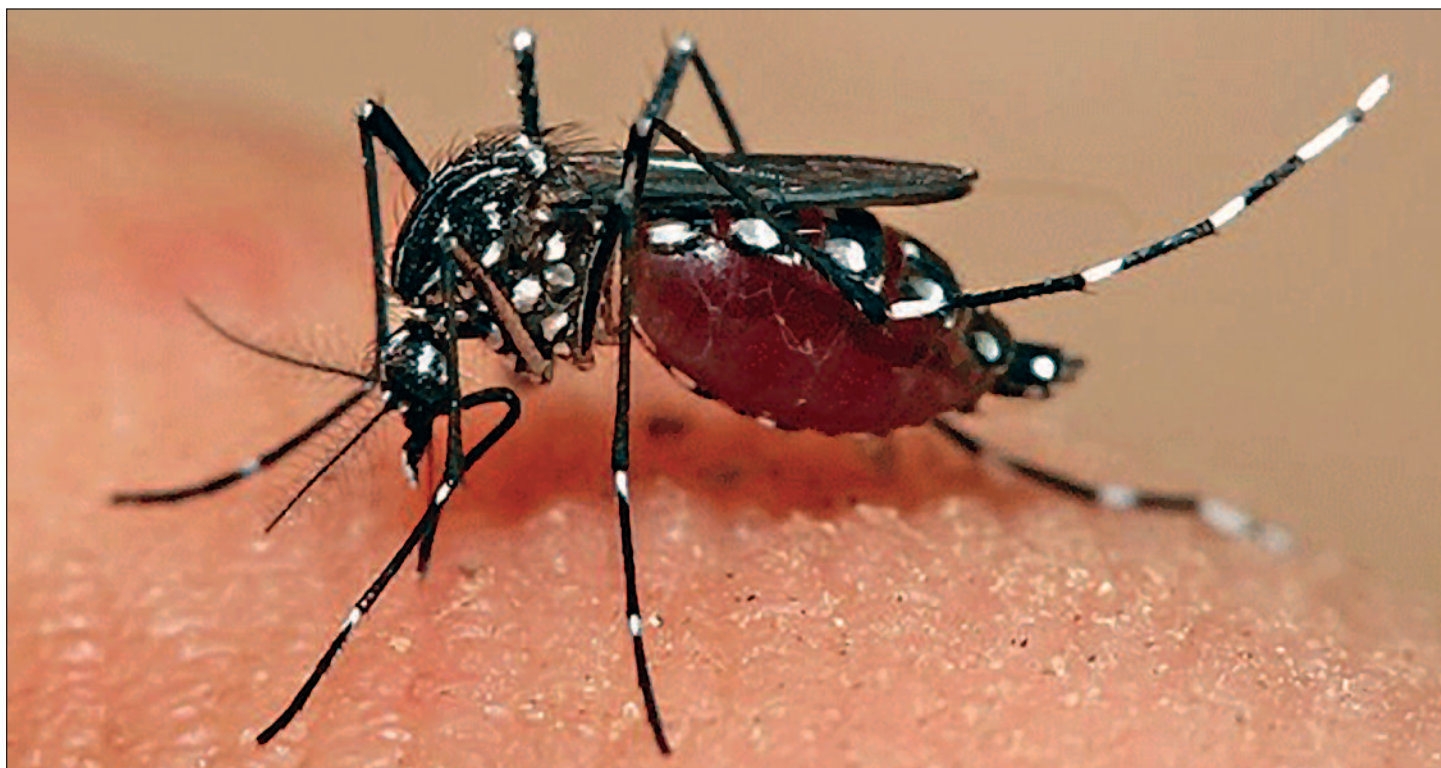


streamline



Perspective in a Time of Fear: Carmen Zorrilla, MD, on Zika, pregnant women, and lessons learned from HIV

By Claire Hutkins Seda, Writer, Migrant Clinicians Network, Managing Editor, *Streamline*

[Editor's note: This article is part of a series on the lives of members of Migrant Clinicians Network's External Advisory Board. Learn more about the board at <http://www.migrantclinician.org/about/external-advisory-board.html>.]

In Puerto Rico, the Zika virus has spread quickly since the index case was identified in December 2015, and Puerto Rico became the first US jurisdiction to confirm local transmission of the virus. But is it possible that the future may not be as dark as the newspapers proclaim?

"I see it as another challenge that may ultimately benefit women's health and my community — if we do the right thing," envisioned Carmen Zorrilla, MD, Puerto Rican clinician, researcher, and activist. Her

astounding optimism comes from three decades as the island's leading advocate for pregnant women suffering from HIV, and the sensational results she's had in reducing mother-infant transmission. Now, Dr. Zorrilla is at the center of Puerto Rico's Zika outbreak, as she builds her response to the global health crisis at her prenatal clinic.

Dr. Zorrilla began working with pregnant women with HIV in the mid-80s, when the disease was a death sentence and little could be done to halt transmission between mother and child. In 1986, Dr. Zorrilla pushed for a policy of universal prenatal screening for the entire island, which revealed between 1.6 and 1.8 percent of pregnant women in Puerto Rican labor rooms were HIV-positive.

It was a challenging time. "I was pregnant

at the time that I was giving other pregnant women [their HIV test] results," Dr. Zorrilla recalled. "We didn't know anything about HIV at the time, in terms of transmission, or what would happen to their babies." Dr. Zorrilla hadn't anticipated what universal testing would do for these women after birth.

"After delivery, the women were supposed to receive care from family medicine or internal medicine, [but] nobody wanted to see them because of their HIV. I felt responsible," she said, noting that her push for universal screening resulted not just in more diagnoses, but more stigma as well. In response, Dr. Zorrilla began to provide care

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Consultas Naturistas: An Overview of Practice at an Integrative Free Clinic

By Michelle Steinberg, M.S. (Clinical Nutritionist and Herbalist)

[Editor's note: What exactly is integrative medicine? The Academic Consortium for Integrative Medicine and Health says that integrative medicine "reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic and lifestyle approaches, health care professionals and disciplines to achieve optimal health and healing." Michelle Steinberg, MS, is the founder and main practitioner of the Consultas Naturistas program at Street Level Health Project in Oakland, California. She has a Master's degree in Human Nutrition and has completed a three-year training program in Clinical Herbalism; her Bachelor's degree is in Cultural Anthropology. Here, Ms. Steinberg shows how health centers can incorporate aspects of integrative medicine into their primary care model]



As public awareness about complementary treatment options grows, practitioners in a variety of modalities, from herbalism to acupuncture to chiropractic, have sprung up around the country, with a particular prevalence in the San Francisco Bay Area where I currently reside. The importance of integrating these therapies with allopathic medicine is steadily becoming more recognized, with nutrition at the forefront as providers and patients alike accept the impact of food upon wellness. Yet

many of these holistic practices, which ironically often come from a diversity of cultures, are less available in underserved migrant communities due to common barriers to care including cost, location, and language. This is a critical moment to shift our health care paradigm, as integrative medicine (IM) is potentially one of the most successful

ways to meet the Triple Aim of improving the health of our populations, improving patient experience, and reducing costs. IM is a multifaceted approach in which primary care providers collaborate with a diversity of practitioners to coordinate care to address the whole-body needs of a patient. By offering culturally responsive individualized care, it can improve patient satisfaction, while potentially inexpensive preventative treatments can reduce cost and improve health outcomes. Patients also benefit from the interaction with and between multiple practitioners, with all of us working together across modalities to arrive at the most effective treatment plan.

CONSULTAS NATURISTAS: INTEGRATIVE MEDICINE IN PRACTICE

Consultas Naturistas (translated roughly as "Natural Medicine Consultations"), the nutrition and herbal medicine program at Street Level Health Project (www.streetlevelhealth.org) in Oakland, CA provides free, Spanish/English bilingual, integrative health care to low-income individuals. These services are available twice weekly during regular clinic hours, both as one-on-one visits with the practitioner and as a wellness group that takes place in the waiting room as patients gather to see the doctor. Street Level Health Project (SLHP) primarily serves day laborers and other uninsured/underinsured, low- or no-income Latino/a immigrants. Other communities commonly accessing services include Mongolian, Nepalese, Eritrean, and many more. Since beginning in 2009, the *Consultas Naturistas* program has treated approximately 550 clients, with 30 percent seen on multiple follow-up visits. Visits last 45 minutes per person and involve a patient-centered discussion of health history and lifestyle, focused on nutrition, exercise, and sleep habits. Clients receive free tinctures and teas that I custom-blend for the patient, as well as vitamins and supplements. I also collaborate with our *Promotora de Salud* (Community Health Worker) who brings nutrition information directly to day laborers in the streets,

COMMON CONDITIONS

Below is a list of symptoms and conditions frequently seen at Consultas Naturistas, where an integrative approach can be of benefit.

- Type II diabetes
- low energy
- gastrointestinal issues
- women's hormonal imbalance
- insomnia
- urinary tract infections
- anxiety/depression
- arthritis
- hypertension
- rashes
- hypercholesterolemia
- allergies
- chronic headaches/migraines
- colds/flu

Approximately half of the clients seen are concurrently on multiple medications. Practitioners consider potential drug side effects and drug-to-drug and drug-to-herb interactions using reference books and internet resources.

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REMEDIES

At SLHP, developing a treatment plan with input from the whole health care team has been particularly satisfying with conditions such as GERD or other digestive disorders, where natural remedies such as Marshmallow root (*Althea Officinalis*), Meadowsweet (*Filipendula ulmaria*), Fennel (*Foeniculum vulgare*), Chamomile (*Matricaria recutita*), probiotics, and bitters have often assisted patients in place of proton pump inhibitors or H2 blockers. Similarly (and often in the same cases), nervines such as California Poppy (*Eschscholzia californica*), Blue Vervain (*Verbena hastata*), Skullcap (*Scutellaria lateriflora*), Passionflower (*Passiflora incarnate*) and others, as well as L-theanine and melatonin, have reduced the need for medications such as Trazodone.

and our cook who makes nutritious free community meals. SLHP's medical director is on-site three days per week to provide treatment. A second physician and a nurse practitioner are also on staff. Our psychologist offers mental health counseling, and health navigators direct clients to outside service providers for ongoing primary or specialized care. Other core programs include free lunches and food bags, and a workers' collective. SLHP is a unique environment where many of the social determinants of health are addressed simultaneously under one roof through interprofessional collaboration – a critical component of integrative medicine. Though SLHP is not a Federally Qualified Health Center, I believe this model could be adopted by FQHCs to develop similar interprofessional collaborations within or outside of their health centers.

NUTRITION IN A NUTSHELL

Nutrition is an important aspect of integrative health. The majority of *Consultas* visits, even those for conditions that might not appear directly related to diet, involve some discussion of nutrition. When meeting with *Consultas* clients, my focus is on:

- Whole, minimally processed foods;
- Increased intake of non-starchy vegetables;
- Macronutrient balance in all meals and snacks, with an emphasis on lean protein and healthy fats;
- Increased water intake.

Most clients are immigrants or migrant workers for whom the standard American diet was not always standard. The conversation usually begins with the individual listing how her/his diet changed upon arriving in the US. More often than not, the client elaborates a pattern where the components above were distinctly present in her/his diet prior to moving to the US and declined upon arrival, a common result of migration resulting from changes in food access and financial means, and acculturation. This realization leads to the awareness that one's ancestors held keys to nutrition that can be healing in the present. As I am not from the same cultural background as the majority of my clients, this strategy allows me to encourage the knowledge that my clients already possess. The message then becomes that necessary nutritional changes can feel familiar rather than alienating, which undoubtedly leads to a higher rate of success.

FLEXIBILITY

Flexibility is crucial at *Consultas*, as many clients have very specific circumstances that require practical remedies. The main point is to be ready to empathetically meet people wherever they are and have mechanisms in place to accommodate their needs, another way to focus on the whole person.

- For homeless clients, herbs must be portable, easily stored, and require a minimal amount of preparation; think tinc-

tures, powders, and capsules over teas (though one homeless client loved tea and would religiously get a cup of hot water from the closest McDonald's before bed.)

- When clients are battling alcohol addiction or the resulting physical damage, alcohol-based tinctures are generally not an option, and teas and powders become the focus.

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Photo courtesy of Smile Care Everywhere

Expanding Practice, Serving the Underserved

By Claire Hutkins Seda, Writer, Migrant Clinicians Network, Managing Editor, *Streamline*

Finding affordable dental care can be challenging for underserved populations in many parts of the country. In Oregon, dental hygienists are confronting the issue head-on. Around the state, dental hygienists are applying for an expanded practice permit, which enables them to perform specific tasks for underserved populations without the supervision of a dentist. Expanded Practice Dental Hygienists (EPDHs) can provide basic dental hygiene exams, periodontal maintenance, adult prophylaxis, fluoride varnish application, and oral health instruction and education.

But there's a catch. EDPHs are only permitted to work with specified underserved populations, including patients or residents of assisted senior living facilities, state mental health residential programs, community health clinics, and local correctional facilities. They can also serve low-income children and homebound adults. The concept seeks to get dental services to people who otherwise cannot make their way to a traditional dental clinic because of barriers like inability to travel, as in the case with elderly and homebound patients, or lack of paid time off of work, as with many agricultural workers.

Wilber Ramirez-Rodriguez RDH, BSDH, EPDH, serves migratory and seasonal agricultural workers, pregnant women, and children, with Smile Care Everywhere, a program of Pacific University in collaboration with local Federally Qualified Health Center (FQHC) Virginia Garcia and others, to provide EDPH services at rural locations outside of Portland, Oregon. "We go to the places where they work, so they don't have to miss their work hours," Ramirez-Rodriguez explained. He and dental hygienist students unload chairs and equipment from their mobile dental van at these rural stops. They also have portable units for their more regular locations. Smile Care Everywhere provides care twice a week, all year long. "We do clinics at the vineyards, at the nurseries, and other [locations] for migrant farmworkers," Ramirez-Rodriguez said. "If someone needs a referral, we have a partnership with Virginia Garcia," a FQHC with clinics in agricultural Washington and Yamhill counties, just west of Portland. Patients needing care that EPDHs can't provide are referred there.

Initially, Ramirez-Rodriguez says that many EPDHs felt restrained in their ability to effectively provide basic dental care, including placing a temporary filling. In response, state law has recently changed to allow EPDHs to establish a collaborative agreement with a dentist if they wish to prescribe anesthetics or anti-inflammatory drugs, or do a temporary filling. Ramirez-Rodriguez, for example, has a collaborative agreement with Virginia Garcia dentists. The changes were meant to empower EPDHs to further address the high levels of dental services needed in low-income communities that lack access to dental care.

Hurdles to providing care

At Pacific University's School of Dental Hygiene Studies, all dental hygienists graduate the program with specified coursework centering on care for diverse populations and public health, plus 500 hours of supervised dental hygienist work that cover the requirements to be eligible to apply for the EPP through an accredited program. Alternatively, already-practicing dental hygienists may

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Photo courtesy of Smile Care Everywhere

apply for the EPP after working or volunteering under the supervision of an EPDH or dentist for 2500 hours, in addition to completing 40 hours of coursework on dental hygiene and/or public health. After obtaining the EPP, many newly licensed EPDHs will go on to set up their own practices; however, the hurdles can be challenging to overcome. As EPDHs work independently, they may miss the opportunity of mentorship from dentists and others in the dental community. The increase in privileges referenced earlier can be impossible to secure for EPDHs who don't have established relationships with dentists, or who can't find a dentist who will support them, Ramirez-Rodriguez says. Isolation is one of several barriers that EPDHs face in the field — the largest being financial.

Reimbursement is a severe hurdle that some newly permitted EPDHs never manage to overcome. Dental hygienists are not recognized as regular providers by many dental insurances, which can result in very low overall wages, says Kristen Thomas, RDH, EPDH, BSDH, a faculty member at the Pacific University's School of Dental Hygiene Studies. "Many of these students have student loans, and not being reimbursed, or being reimbursed at a lower rate, is very challenging," Thomas states. EPDHs often move on to local practices serving the underserved like Virginia Garcia or the Memorial Health Clinics in the region in

hopes of making a living wage, or go to larger group practices or private practices for better salaries.

Additionally, EPDHs may be weighed down with start-up costs to purchase equipment. EPDHs choose how they provide services, which can vary, depending on their practice goals and scope of service. Some choose a fully-loaded mobile dental van with an in-van chair. Others, like Ramirez-Rodriguez, use a van with portable equipment where the EPDH has to load and unload at each stop, and wherein the EPDH needs a secondary location for sterilization and repair. A EPDH may just have some basic tools and basic sterilization equipment at their home, providing very limited services but with less start-up expense. Regardless of the set-up, start-up costs are another factor that limits EPDHs from establishing their practices quickly after receiving their permit.

A final and equally serious financial challenge for EPDHs is paying for sufficient liability insurance. Ramirez-Rodriguez counts himself lucky that he is covered by Virginia Garcia's liability insurance because of Smile Care Everywhere's partnership with the FQHC.

Concerns with EPDH care

But the program is not without concerns. Many are skeptical that hygienists receive sufficient training to provide the same quality of care that patients would receive from a

dentist. Others have expressed concern over hygienists working in the field without a dentist's direct oversight or without the full suite of dental equipment; EPDH patients may opt not to seek further dental care in a traditional dentist's office, giving up the chance for dentists to diagnose dental concerns that a mobile EPDH with limited equipment might miss.

Thomas reframes these concerns. She says there are very few dentists that accept Care Oregon, the nonprofit health plan serving Oregonians who are eligible for Medicare or Medicaid. She explains that the reimbursement is low, and many dentists opt not to serve those patients, leaving them without care. "The need is not being met," Thomas stated. EPDHs, she says, are the ones willing to meet the need. "There's a big population in the US that is not being taken care of, in the dental field, because their income level is so [low] that they can't afford to go to the dentist," Ramirez-Rodriguez said. At his clinics, he says he sees patients who have had abscesses in their mouths for 20 years. "Can you imagine living with a wound in your mouth for that long?"

Alternative dental programs

Other models to meet the needs of lower income and underserved patients include tele-dentistry, in which dentists can guide hygien-

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to HIV-positive women after birth, “sort of like an underground clinic” within her prenatal clinic. Thirty years later, she is still seeing some of those first HIV patients. “Their kids are the same age as my daughter so there’s a personal relationship.”

Over the years, Dr. Zorrilla has further pushed the boundaries of her work with women by engaging in research as well. Early on, her small clinic, the Maternal Infant Studies Center (abbreviated in Spanish as CEMI, invoking the word for an indigenous deity) enrolled pregnant women in a clinical trial of the antiretroviral drug zidovudine (ZDV), then known as azidothymidine (AZT). The Pediatric AIDS Clinical Trials Group 076 enrolled 750 HIV-positive women from across the US to determine the effectiveness of the drug in reducing HIV transmission from mother to child. Dr. Zorrilla’s clinic was one of the first 10 clinical trial sites in the US. Halfway through the trial, however, the drug was found to be so effective that the trial was suspended for ethical reasons, to enable the women and babies on placebo to benefit from the drug as well.

One month after the study was halted, Dr. Zorrilla once again stepped into the policy arena to urge health authorities to establish a public policy of providing the drug without cost to pregnant women with HIV. Puerto Rico became the first US jurisdiction to implement such a policy. Dr. Zorrilla’s research and activism has been instrumental in flipping the outcomes for Puerto Rican babies of HIV-positive mothers. “The transmission from mother to infant has decreased dramatically in my clinic. The last baby who was born positive was in 2007,” Dr. Zorrilla proudly declared.

Dr. Zorrilla is continually interested in revamping her approach to attain better results for women and their babies. In the last four years, she has found success with Centering™, a group prenatal care program for high-risk patients that she adopted in the OB/GYN clinic in the hospital with which she works. Patients are accompanied by a partner or friend for the entirety of the session. To stay active in their own care, patients take their own blood pressure and weigh themselves. Then, they participate in a group discussion. “It’s not a support group or a class,” she clarified. “It’s a combination of games, conversation, learning from each other...We have curriculum, some topics we want to cover, but whatever issues are important to them, we will discuss.” The results in the first few years include fewer pre-term babies and higher birth weights. However, Dr. Zorrilla states “establishing and sustaining the [Centering] program has been a greater challenge than working with HIV” because



Photo courtesy of Candace Kugel

of the difficulty in shifting the culture within the clinic. “There’s a lot of resistance from the staff” despite her earnest attempts to involve them at each step of implementation, she said. As with other innovations, interruption of workflow and standard processes had staff concerned over changes. Nonetheless, she continues to push the group discussion format because of its impressive results.

Over the span of her career thus far, Dr. Zorrilla facilitated a dramatic shift in the care for, perception of, and outcomes for pregnant women and their children, when it came to HIV. This transformation is exactly what shapes her perspectives on Zika — and her experiences in clinical care are driving her approach to handle Zika in pregnant women at her clinic in the midst of this latest outbreak.

“When we started talking about Zika and I started reviewing the information, I said, well, I need to do with patients with Zika what I already did with patients with HIV,” Dr. Zorrilla said. She has set up a group care visit for women with diagnoses of Zika. She’s

also spearheaded a partnership with a local university’s Clinical Psychology Program to involve doctoral students of psychology at the clinic, and to help the patients manage “the stress, the anxiety, and the misinformation” that revolves around the virus, she said. Once again, she’s shifting the culture of the clinic. “Nowhere [else] are there psychology students rotating in a prenatal clinic,” she noted.

As of early June, Puerto Rico has reported about 339 pregnant women infected with Zika, out of roughly 2,387 cases overall. “But everything is just starting in Puerto Rico. We’re going to see babies affected, maybe at the end of the year,” she noted. Although parts of South America may have a break in new cases as they ease into the winter, the Caribbean “will continue to see infections, unless we do something.”

With HIV, “now I see no transmission, people are healthy. Out of nothing, we have very good treatment,” reflected Dr. Zorrilla. “So, I think this is my plea and my experience. If we have the desire, the political will, we will find a solution,” to the Zika virus. ■

Zika virus in the exam room: What do clinicians need to know?

[Editor's note: This article is based on a recent blog post announcing Migrant Clinicians Network's new Zika Virus information page. Learn more on our new Zika page: <http://www.migrantclinician.org/issues/zika>. Keep tabs on our active blog at <http://www.migrantclinician.org/community/blog.html>.]

Migrants may have a higher risk of contracting Zika and other mosquito-borne illnesses as a result of their mobility, poverty, and occupational opportunities. Many migrants traveling to the US are from areas of outbreak, and may arrive in the US after exposure. And, in areas of active outbreak like Puerto Rico, migrants who work outdoors like migratory agricultural workers are at a greater risk of exposure simply by the increased risk of mosquito bites. Many of these workers, due to poverty and availability of housing, return after work to homes that lack screens on doors and windows. Substandard housing once again ups their risk of mosquito bites, which augments further their risk of contracting the Zika virus.

In addition to these exposure concerns, migrants also face serious barriers that limit migrants' health literacy and basic health care access. Migrants are an underserved population who may not be able to access health care or even basic health education on the Zika virus before, during, and after migration. As migrants move to and through the US in search of work or a better life, they encounter compounding barriers to care including cultural and linguistic barriers, fear over immigration status, inability to take time off work, lack of transportation, and lack of information on locally available health services — all of which reduce the likelihood of a migrant learning about the Zika virus and the associated risks, and of seeking out health services, should he or she contract the virus.

Consequently, as is noted in MCN's new Zika Virus information page, when it comes to the Zika virus, migrants may warrant greater attention from clinicians in the exam room:

- Clinicians should determine whether the patient has recently traveled to an area experiencing a Zika outbreak OR if the patient intends on moving to such an area in the future.
- Any patients presenting the Zika virus symptoms within two weeks of traveling to an infected area should undergo serum testing. Zika symptoms are similar to those of dengue and chikungunya, and the diseases are often found in the same area (as they are spread by the same type of mosquitoes). The CDC notes that it is important to rule out dengue, as proper clinical management can improve outcome.
- The Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) for two diagnostic tools: the Zika MAC-ELISA and Trioplex real-time reverse transcription-polymerase chain reaction (rRT-PCR) Assay. The CDC requests that clinicians contact their state or local health department to facilitate testing. The CDC's full instructions for sending diagnostic specimens, and more information on diagnostic testing, is at <http://www.cdc.gov/zika/hc-providers/diagnostic.html>.
- Patients who intend to travel to areas of Zika outbreak should be aware of the risks. All migrant women of childbearing age should be asked about their future travel plans. All migrant women who are pregnant or considering pregnancy should be encouraged to delay travel to areas with a Zika outbreak if pos-



Photo courtesy of Candace Kugel

sible. Resources, including fact sheets for pregnant women and a preconception counseling guide, are available from the CDC in English and Spanish.

Migrant women who may have been exposed to the Zika virus and who will be leaving your clinic require special attention. For patients who are pregnant and are suspected to have been exposed to Zika:

- Follow the most recent CDC recommendations on evaluation and testing.
- Provide information to the patient on the risks of exposure and the need for ongoing evaluation.
- Enroll the patient in Health Network, to ensure the patient is evaluated, continues treatment and/or can receive the results of serum testing at her next location. Health Network is Migrant Clinicians Network's bridge case management program, assuring continuity of care and treatment completion by providing comprehensive case management, medical records transfer, and follow-up services for mobile patients. Learn about enrollment in Health Network at <http://www.migrantclinician.org/services/network.html>.

Resources

MCN's Zika Virus information page contains links to many resources to assist clinicians in serving mobile patients: <http://www.migrantclinician.org/issues/zika>
MCN's Health Network is key to assuring that mobile patients stay in care: <http://www.migrantclinician.org/services/network.html>

The CDC's Zika Virus for Healthcare Professionals offers clinical guidance and resources like archived webinars: <http://www.cdc.gov/zika/hc-providers/index.html>

The CDC's Zika Virus Tools for Healthcare Providers includes fact sheets and guides in English and Spanish: <http://www.cdc.gov/zika/hc-providers/tools.html>

The CDC's Diagnostic Testing site gives complete instructions on how to test and where to send samples: <http://www.cdc.gov/zika/hc-providers/diagnostic.html>



Photo courtesy of Bethany Burgee

Steps to Health: Community Health Workers and Diabetic Patients in Oregon's Columbia Gorge

Claire Hutkins Seda, Writer, Migrant Clinicians Network, Managing Editor, *Streamline*

The mid-Columbia agricultural region, in Oregon's Columbia River Gorge, produces some of the West Coast's tastiest cherries, pears, and apples. It's also home to thousands of seasonal agricultural workers who tend those orchards. One Community Health (OCH), previously known as *La Clínica del Cariño*, has taken a community-forward approach to caring for the health needs of these workers, by investing in and fortifying its community health worker (CHW) programs, and assuring a close and vibrant working relationship between CHWs and providers. According to Brooke Nicholls, RN, FNP, a manager of several of OCH's CHW programs, the years of investment have paid off.

"Our community health workers recruit participants [for our classes] and engage them in a way that we as providers cannot," Nicholls noted. All of the CHW programs fall under OCH's enabling services department, with the goal to address the social determinants of health of the community. Within that department, OCH offers *Salud* ("Health"),

an in-clinic diabetes care management program in which patients work with CHWs, and *Pasos Hacia Salud* ("Steps Toward Health"), a community-based diabetes education program that is open to the public. Both have been operating for years, serving patients in Hood River and surrounding communities.

On a late May morning, Evaristo Romero, a long-time CHW in the *Salud* program, was on his way to an appointment with one of those patients. It was the first week of the cherry season, marking the start of the busy time of year for Romero, who assists 150 patients between June and September. The patient, a diabetic, had seen Romero for four or five years, but Romero already knew her for years prior, when they were both agricultural workers. Romero recalled, "We were picking cherries occasionally together. I remember being in the same orchard, my family and her family." Such personal connections help keep patients motivated to stay connected with the clinic, and to stay on track with their treatment plans. The

patient's appointment with Romero was before her exam with her provider. Together, Romero and the patient would review her medications and take blood pressure readings. "I take important notes for the provider that maybe the patient will tell me — like 'I've stopped taking my medication for the last month' — that will explain to the provider why the patient has elevated blood sugar levels," he said. This could be critical information that in the short window of time with the provider, the patient may not be able or feel comfortable to express.

The pre-provider-visit appointment is just one type of encounter that Romero has with his patients. Often, the patient will have a 15-minute provider appointment, followed by an hour-long appointment with Romero or another *Salud* CHW. Again, the added time is essential to strengthening the patient relationship. "We don't meet with our patients and immediately talk about their medication. We [ask], how is the family

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Diverse CHW Programs to Serve the Community

One Community Health utilizes community health workers in a number of additional programs, including in their well-established perinatal program, in which CHWs provide personal support, education, and care management of pregnant women during the prenatal and postpartum periods, says Brooke Nicholls, RN, FNP. Their CHW programs more recently have expanded into nutrition, with a newer program targeting food insecurity. In partnership with the Gorge Grown Food Network and the Oregon State University Extension Office, OCH offers vegetable prescription vouchers accompanied by one-on-one and group education about healthy eating on a limited budget. An OCH CHW also teaches a Supplemental Nutrition Assistance Program (SNAP) curriculum along with hands-on cooking classes.

doing? How are the cherries doing this year?" Romero explains. "It helps them feel at ease, comfortable."

The patient's care team communicates in person and through the electronic medical record (EMR). Romero's nurse supervisor, a certified diabetes educator who oversees several CHWs, reviews Romero's notes in a patient's EMR, discusses the patient with the provider if necessary, and makes recommendations to the patient's provider. Often, Romero said, he will get a call from a patient's provider who has decided to adjust a patient's medication based on the CHW appointment's findings. Romero contacts the patient to help the patient understand the medication changes and the reasoning behind the change. "We are engaging them in the management" of their own health, empowering them to stay involved, Romero said, which greatly enhances a patient's ability to stay on track.

The *Salud* program is just one of many programs targeting diabetic or pre-diabetic, hypertensive, and/or obese agricultural workers at OCH. In partnership with the Oregon Health & Science University's Casey Eye Institute, OCH offers the Casey Eye van, in which they provide dilated eye exams to screen for diabetic retinopathy, right at the clinic. Providers who are seeing patients will note on the EMR that they haven't had a diabetes eye exam and that they aren't insured, flagging them for an appointment for the Casey Eye Van, Nicholls explained. The van arrives on a Saturday, with the needed specialized equipment, ophthalmologist and other specialists, and additional volunteer staff. OCH provides the clinic for additional space and equipment, and its



Photo courtesy of Bethany Burgee

own staff. Roughly 40 people are treated during one day with the van, "and we have a waiting list," noted Nicholls.

A third diabetes-specific CHW program goes beyond the walls of the clinic. *Pasos Hacia Salud*, a 12-week class for diabetics or people at risk for developing diabetes, focuses on exercise, healthy eating, and stress for its 20 to 30 participants. The classes are a collaboration between OCH and The Next Door, Inc., along with support from many other community members. It is open to the public, not just patients at OCH. But to maintain its astounding graduation rate of over 85 percent, CHW Alicia Sandoval, who runs the *Pasos* classes, gives a lot of care to the recruitment process, assuring that community members who choose to be participants in the classes are ready and motivated.

At each class, "we work to keep up the motivation, but at the same time, we make sure the participants are comfortable... We make sure we give participants the opportunity to participate by providing a class format that's really simple," said Sandoval, who noted that they utilize a popular education model to deliver their educational goals in ways appropriate for participants who may not read or write. They are happy to meet the participants where they are, she says: "It's very important to provide support for every participant, because every participant comes with different needs." The popular education model, careful recruitment of participants, and individual attention are augmented with prizes, communal meals, and fun classes like Zumba, which results in high graduation rates. Sandoval's most recent class, which wrapped up in May, featured 28 graduates from an initially recruited group of 31.

Pasos is offered regularly through the year in Spanish, and presented every two years in English. The courses began with grant funding through the National Institutes of

Health. After three grant cycles, OCH decided to become the primary funder of the courses, and community partners stepped in to help offset the costs. The early grant funding allowed the clinic to pilot the program for several cycles, allowing executive staff to test out its usefulness for the community and its effect on health. This is the first year that *Pasos* is not grant funded; Nicholls estimates that with costs like staff time, guest instructors and specialists, and supply costs like food, the cost will be roughly \$12,000 per class. Now, Nicholls is working to measure outcomes to determine the impact to the community per dollar spent. So far, the data are encouraging. "Nearly all participants (>90%) have reported healthier habits post-class: more physical activity, more fruit and vegetable consumption and less stress," Nicholls reported. Participants' body-mass measurements showed a majority losing weight or at least maintaining their weight after the class. "Some participants [lost] as much as 10 percent of their body weight and [maintained] that at a six-month follow-up," Nicholls said.

Outside of the data, Nicholls sees a healthier community. Participants often maintain relationships with their fellow graduates, to keep up healthy lifestyles through activities like walking groups, or just to stay in touch with friends made through *Pasos Hacia Salud*. "Pasos has been an incredible asset to our clinic and the community, empowering so many folks to take charge of their own health," Nicholls stated. "Our community health workers recruit participants and engage them in a way that we as providers cannot... They've lost weight and lowered their blood sugars, but, more importantly, they've adopted healthy habits that will improve their overall quality of life, and [they've] made friends and a support group in the process. *Pasos* is about bringing health and community together!" ■

In Practice: Integrative Medicine with Dr. Lawrence Li

By Claire Hutkins Seda, Writer, Migrant Clinicians Network, Managing Editor, *Streamline*

"I got into [integrative medicine] treatment not because of curiosity," but because of a personal injury, explained Lawrence Li, MD, MPH. It started when Western treatments failed to heal his ankle, which was still swollen six months after a cross-country ski accident, Dr. Li explained. "When I have pain, I'm very hungry to learn what I can do to make it better. I have a very flexible attitude, and I'm curious, too." A cousin recommended acupuncture, and his ankle injury diminished. Soon after, Dr. Li began acupuncture training. It was the start of a turn in Dr. Li's professional path, in which he tries to weave alternative treatments and perspectives into his patient-centered medical approach as a physician for underserved patients in Lompoc, California.

Dr. Li's initial exploration in acupuncture led him to new and varied therapies, including acupressure with ear seeds, meridian tapping techniques, certain preferred stretches (which he says are a hybrid of physical therapy and yoga), and, most recently, Feldenkrais. Many but not all patients have been receptive to these types of therapies over the years, and Dr. Li reports that his approach has merit for some patients.

"I'm a pragmatist," Dr. Li explains. "If there's something simple that we can do medicine-wise that we know will work, then we'll do that," but when it doesn't work, he is interested in exploring other avenues. He gives the example of a patient with chronic pain. Medicines may ease the pain but not solve the underlying issue. Common approaches like physical therapy don't work for all patients. "There is no pain specialist that can solve all chronic pain [issues]," he notes. He tells suffering patients, "There's not a simple answer for what you have, but we should keep looking for different kinds of things'... That seems like the most practical approach."

None of the alternative approaches are

required, said Dr. Li. "In a sense, [the patients] choose. I just give them more than one option." Dr. Li finds that multiple sessions with the patient can be useful, although not always necessary — but teaching or administering new approaches does take time in the exam room, a serious point of friction, when practitioners are already overloaded and the schedule is tight. This is particularly challenging with migrant patients, who may arrive at a clinic with one health concern, and a whole backlog of other concerns that have gone unaddressed as they move from one location to another, or because of their inability to access care. On the flipside, migrants may come from a cultural background where integrative medicine's frequent inclusion of non-Western approaches is accepted and preferred — and those patients may be more comfortable with, and even be seeking alternatives like traditional medicine. Even when Dr. Li doesn't promote the healing methods a patient prefers, it's important to encourage that conversation, he says. An integrative approach allows for a greater understanding of a patient's health beliefs, which may lead to better patient buy-in for the eventual treatment. For example, "Mexican migrant farmworkers may have faith in traditional healing with *curanderos*, [or] herbal remedies. I'm not well-versed in traditional Mexican medicine but understand some of the specifics enough to identify which patients have strong beliefs," he noted, which is an important starting point. A central part of his approach, he says, is recognizing that every patient, regardless of background, comes with his or her own set of beliefs. "My personal emphasis is less on the exotic cross-cultural differences and more on understanding my patients and establishing rapport," Dr. Li emphasized. "When I model attentive listening, and respect for their viewpoints and values, then my patients will trust me more, even when

we disagree on how to proceed with diagnostic and treatment plans."

He has encountered different levels of support from staff, fellow physicians, and executive staff and boards of directors; some have encouraged his work, while in some settings, he has had to limit his alternative therapies. Despite some challenges, Dr. Li believes he is a better doctor because of his willingness to try something outside of the mainstream.

He notes that while some of the therapies he uses don't necessarily require years of study on the physician's part, they do require some hands-on skill building to gain basic proficiency in the chosen modality. But getting started can be challenging. Dr. Li recommends the Integrative Medicine for the Underserved's annual conference as a way for clinicians to connect with others interested in exploring new approaches for patients, and to learn basic skills and how others use them. State practice rules and regulations may limit providers' uses of alternative therapies in the exam room without designated education or apprenticeships. IM4U may be a useful avenue for determining where caution is needed and how to best navigate the world of integrative medicine among underserved populations.

Now Dr. Li is enthusiastically working with a different therapy he has recently encountered, the Feldenkrais Method (www.feldenkrais.com), which focuses on developing a patient's kinesthetic and proprioceptive self-awareness of his or her basic movements to reduce pain. He again came to it when other approaches — including other alternative approaches like acupuncture, yoga, and massage — had failed in healing a more recent injury, a debilitating flare-up of sciatica. His pursuit of yet another treatment falls nicely into Dr. Li's outlook on medicine, to never stop learning, to remain curious, and to try new things when all else fails. ■

■ **Consultas Naturistas: An Overview of Practice at an Integrative Free Clinic** continued from page 5

ists remotely, or an alternative dental care professional like the newly created dental therapist. "It's a midlevel provider, like a PA or FNP, who can work independently and do work that the dentist typically does like extractions, simple fillings, simple root canals, but for special populations," Ramirez-Rodriguez said. In Oregon, a dental therapist pilot program is in the works at health centers serving Native American tribes, to expand dental care to Native Americans. Ramirez-Rodriguez seems particularly intrigued with the dental therapist expansion: "When we are at a clinic, 70 to 80

percent of our patients have decay. As a hygienist, we are able to treat decay in an early stage, before it develops... but [in many ways] I'm tied." With a dental therapist at the helm, he says, more extensive work can be done for populations that may otherwise never be able to get the work done.

Similar programs are gaining speed elsewhere as well. A long-running EPDH program in Alaska swaps students occasionally with programs in Oregon. Michigan, California, and Texas have midlevel practitioner programs at various stages of development. Meanwhile,

the EPDHs from Pacific University keep plugging along. Last year, Smile Care Everywhere saw 395 patients, providing \$185,886 worth of dental services. Most of the patients were Spanish speaking, and came from households making less than \$20,000 per year. As Thomas noted, when it comes to EPDHs, "the desire is there, the passion is there, the ability is there." For underserved populations like migrant agricultural workers, the need is also clearly there. Oregon's EDPH program takes important first steps toward meeting the long-standing dental needs of underserved populations. ■



- For people sleeping at live-in treatment facilities or shelters where there may be strict rules governing what they can bring inside, even teas and supplements may require special adaptations.
- For clients who have limited food options due to financial or access considerations, the practitioner must be sensitive to these circumstances and be aware of what relevant resources do exist in the neighborhood. Visits to local food banks and nearby markets to assess the healthiest options are useful. Though not an ideal solution, I frequently provide multivitamins to those with reduced food access to supply basic micronutrients. In many cases, where more in-depth dietary or lifestyle changes are not possible, I practice a strategy of “harm reduction” nutrition.
- For migrant workers whose ability to refill herbal remedies will be limited, I tend to focus more exclusively on food and lifestyle changes that can be replicated in other locations, as well as herbs that are commonly found in their kitchens.

INDIVIDUALIZED PROTOCOLS

Engaging individuals in a holistic context means that there is no universal formula for

a given ailment. A constitutional and multi-variable picture of each person is part of formulating an effective treatment plan that addresses the whole patient rather than just the sum of her/his most prominent symptoms. Sadly, this approach is relatively rare in the conventional medical paradigm. Creating space for the individual is a cornerstone of *Consultas Naturistas* that is somewhat unique. The opportunity to be engaged in a respectful, non-rushed, interactive manner around one’s overall well-being may be of as much value to many clients as the herbs and supplements themselves.

BUILDING A MOVEMENT FOR ACCESSIBLE INTEGRATIVE CARE

I have the privilege of serving on the board of an organization called Integrative Medicine for the Underserved. Our focus is supporting a growing number of practitioners from a variety of modalities who strive to bring integrative care to communities with limited access, often in the setting of FQHCs. We offer an annual summer conference where presenters from a diversity of modalities share practical tools to enhance patients’ well-being. This year’s conference will take place from August 18th to 20th in Irvine, California and our

there is “Collaborate to Create Healthy Communities,” with the goal of increasing collaboration among those who foster wellness at all levels. In addition to other exciting presenters, the Institute for Functional Medicine will be partnering with us to offer a pre-conference workshop and conference track. Conference details and registration are available on our website, along with a free toolkit with numerous resources, from patient handouts to curriculum for medical residents. We are also working on a broader level to expand the dialogue on integrative health care and to create policy change. We encourage clinicians of all backgrounds to join us in this movement to shift the paradigm of medical care to focus on wellness, at both individual and community levels! ■

For More Information

Integrative Medicine for the Underserved offers a handbook, toolkits, and many other resources, in addition to its annual conference: www.im4us.org

The National Center for Integrative Primary Healthcare is a collaboration between the University of Arizona Center for Integrative Medicine (AzCIM), the Academic Consortium for Integrative Medicine & Health (The Consortium), and the Health Resources and Services Administration (HRSA): <https://nciph.org>

The NIH’s National Center for Complementary and Integrative Health is the federal government’s agency for scientific research on the diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine: <https://nccih.nih.gov/about>

New Study Correlates Phthalate Exposure and Women's Health Issues



A study released in the *Journal of Clinical Endocrinology and Metabolism* determined that exposure to the endocrine-disrupting chemicals DDE and phthalates may “substantially” contribute to the highly common reproductive disorders in women, endometriosis and uterine fibroids, and result in significant economic and health care costs.

The researchers of the journal article, “Female Reproductive Disorders, Diseases, and Costs of Exposure to Endocrine Disrupting Chemicals in the European

Union,” chose to focus on the two chemicals with the strongest existing epidemiological data in relation to female reproductive issues, based on peer-reviewed studies on exposure and disease in European women. DDE, or diphenyldichloroethene, is a metabolite of the long-banned but persistent organophosphate DDT, and was examined for its role in promoting the development of uterine fibroids, benign tumors on the uterus. Phthalates are plasticizers, a group of chemicals designed to make plastics flexible, and are also used in a wide

variety of products including makeup and insecticides. They are implicated in the study for their role in endometriosis, where in uterine tissue develops outside of the uterus. The researchers then estimated that costs relating to the two chemicals just for their role in fibroids and endometriosis — including direct costs like health care services and indirect costs like lost earning potential — total to 1.41 billion Euros each year, or roughly \$1.58 billion.

Fibroids and endometriosis are common conditions affecting almost three-quarters of women. The painful conditions require treatment and/or surgery, and are leading causes of infertility. In a press release, one of the researchers called the findings the tip of the iceberg: “A growing body of evidence suggests [endocrine-disrupting chemical] exposure is linked to a broader range of female reproductive problems, including polycystic ovary syndrome, infertility and pregnancy complications,” said Leonardo Trasande, MD, MPP, Associate Professor of Pediatrics, Environmental Medicine & Population Health at NYU Langone Medical Center. “These disorders also place a significant cost burden on women, their families and society as a whole.” ■

Read the journal article at <http://press.endocrine.org/doi/10.1210/jc.2015-2873>.

See the press release at <http://goo.gl/a3ra39>.



Keep up with Migrant Clinicians Network: Subscribe to our blog!

Migrant Clinicians Network's active blog, *Clinician-to-Clinician: A Forum for Health Justice*, covers timely and important issues in migrant health from the clinician's perspective. Keep up on the latest by subscribing to the blog at: <http://www.migrantclinician.org/community/blog.html>. Keep in touch with us on Facebook (www.facebook.com/migrantclinician) or on Twitter (www.twitter.com/tweetMCN).

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Long-term neurobiologic effects on migrant tobacco farmworkers

[Editor's Note: This article reviews a recent article from the Journal of Occupational and Environmental Medicine.]

Citation: Laurienti PJ, Burdette JH, Talton J, et al. Brain Anatomy in Latino Farmworkers Exposed to Pesticides and Nicotine. *J Occup Environ Med.* 2016;58(5):436-43. DOI: 10.1097/JOM.0000000000000712.

A new study compares the brain activity and the nicotine and pesticide exposure levels of 48 Latino farmworkers working with tobacco crops to 26 non-farmworker Latinos in North Carolina to determine whether cholinesterase-inhibiting (ChEI) pesticide and nicotine exposures result in neurobiologic effects. The study found that nicotine exposure was associated with neuroanatomical differences between Latino farmworkers and non-farmworkers.

The subjects underwent both brain magnetic resonance imaging (MRI) scans and voxel-based morphometry (VBM) to determine gray matter signal differences, as well as urine tests to determine levels of cotinine (a nicotine metabolite), and blood tests to ascertain cholinesterase activity. While modulated VBM testing did not show significant findings, unmodulated VBM testing demonstrated that farmworkers had increased gray matter signal in the putamen and cerebellum, while non-farmworkers had increased gray matter signals in the cortex and the right temporal lobe. When taking cholinesterase activity into account, the researchers did not uncover a statistically significant difference in brain anatomy. Urine cotinine levels, however, revealed higher gray matter signals in some regions of the brain in farmworkers, regardless of smoking history, which suggests that farmworkers' nicotine exposure in the tobacco fields resulted in reduced iron accumulation in the basal ganglia and cerebellum. Additionally, changes in gray matter in the medial and lateral frontal lobe areas show increased iron or atrophy in farmworkers.

The article also reviewed the current limited understanding of long-term effects of exposure to nicotine and ChEI pesticides, particularly the low to moderate levels of exposure experienced by migrant tobacco farmworkers. Although little is known about farmworkers who are exposed to nicotine in



the fields, the authors review the extensive literature on the brain effects of nicotine on smokers, where a "protective effect" from smoking that reduces one's risk of Parkinson's disease is offset by "substantial evidence that chronic smoking is associated with loss of brain tissue volume in multiple regions," and in particular in the lateral and medial frontal lobes. The research regarding ChEI pesticides shows "conflicting findings," but demonstrates that ChEI pesticides enhance the cholinergic neurotransmission of nicotinic and muscarinic pathways and is clearly linked to an increase in the risk of neurodegenerative diseases including Parkinson's Disease — the disease for which smokers are less at risk. Based on the results of the urine cotinine analysis in the current study, the researchers concluded that "it is possible that nicotine exposure in the

farmworkers may be related to reductions in brain iron deposition in the putamen and cerebellum," which is in line with the previously demonstrated decreased risk of Parkinson's Disease for smokers, as patients suffering from the disease demonstrate an increased brain iron accumulation.

On the lack of significant results regarding ChEI pesticide exposure, the researchers write that "although the present study did not identify a relationship between brain anatomy and blood cholinesterase, it is premature to rule out ChEI pesticide exposure as a contributing factor," because previous exposures may have had lasting effects, cholinesterase values are highly variable over time, and other factors may affect the interaction between blood cholinesterase activity and brain anatomy, including liver function and blood cell density. ■

Work-related Asthma: Swapping a microfiber cloth for the disinfectant at California schools

[Editor's note: Please join us for our webinar on work-related asthma with Robert Harrison, MD, MPH, Clinical Professor of Medicine at University of California, San Francisco. He also directs the worker tracking investigation program for the California Department of Public Health. The webinar is September 14th at 1pm ET. Register on our Upcoming Webinars page: <http://www.migrantclinician.org/services/education/webinars.html>.]

Disinfectants are pesticides. This statement is at the heart of California's Cleaning for Asthma-Safe Schools (CLASS) project, one of several initiatives in the Golden State aimed at reducing work-related asthma resulting from disinfectant and sanitizer use. While chemical safety in the schools has largely centered around weed killers and landscaping chemicals, and cleaning and janitorial supplies, newer cleaning trends and sanitizing habits have resulted in the use of many disinfectants and sanitizers throughout the day in the classroom. Such exposure not only exacerbates existing asthma issues for those present but may trigger new cases for children, teachers, and staff.

"Overuse and misuse of disinfectants is particularly a problem, as these chemicals are pesticides, designed to kill germs," notes a CLASS fact sheet. "While they are important to protect health in some instances, they contain harmful chemicals, and therefore, should only be used when necessary by staff trained to use them safely." Notably, asthma has increased across the US.

Although focused on schools, the project is relevant to a wide range of occupations in which workers may be exposed to disinfectants that can cause asthma. The National Institute for Occupational Safety and Health (NIOSH) estimates that between 15 and 30 percent of people suffering from asthma either developed it as a result of their exposures in the workplace or have work-exacerbated asthma. Migrants and immigrants in particular may have a greater risk of exposure: language and cultural barriers may inhibit proper training; and fear of immigration status or of job loss may discourage workers from reporting overexposures or other work-related health issues. Immigrant workers are employed in many occupations



in which they are exposed to chemicals, dust, exhaust, and other asthma triggers. Be it pesticides in the fields, coal dust in the mines, fumes in the nail salon, diesel exhaust in the shipping warehouse, or second-hand smoke in the restaurant, immigrant workers' exposures, in a myriad of work environments, may have lifelong health implications.

To address this risk, CLASS has launched the Cleaning for Asthma-Safe Schools Microfiber Pilot Project, in which participating districts will receive asthma-safe microfiber cloths, resources, a how-to guide, and technical assistance, to get teachers to switch to microfiber. Because the cloths are made of fibers roughly 1/100th the size of a human hair, they can pick up germs and dirt, without the use of chemicals. School

staff are taught how to clean with the microfiber cloth — as a dry rag, with water, with hand soap and water, or with a third-party-certified green all-purpose cleaner, depending on the job — and in the process save themselves and the schoolchildren from exposure to chemicals.

Simultaneously, the newly updated California Healthy Schools Act requires any staff member using disinfectants — teachers, their aides, front-desk staff — to get trained in proper use of disinfectants. The training, provided by the California Department of Pesticide Regulation, is for any staff using pesticides, the Department website reports, which includes weed killers, disinfectant wipes, and sanitizers. The requirement came into effect on July 1st of this year; re-certification is required annually. ■

- Learn more at our upcoming webinar, "Work-related asthma," on September 14. Register at <http://www.migrantclinician.org/services/education/webinars.html>.
- View asthma-related resources on MCN's Resources & Clinical Toolbox page: <http://www.migrantclinician.org/tools-and-resources.html>.
- Learn more about CLASS at <http://goo.gl/yBvhFj>.
- Read about the California Department of Pesticide Regulation required Healthy School Act trainings at <http://goo.gl/V1j0wG>.
- The microfiber project is at <http://goo.gl/Spn0k9>.
- Read NIOSH's asthma page at <http://www.cdc.gov/niosh/programs/resp/risks.html/>

New Childhood Agricultural Injuries Fact Sheet: Know the Facts

A child dies in an agriculture-related incident every three days in the United States, and 33 children are injured in agriculture-related incidents daily. Clinicians need to know the facts, so they can relate critical safety information to agricultural families, to ensure that children who spend time on farms and in ranches stay safe.

With this in mind, Migrant Clinicians Network recommends the newly released 2016 Childhood Agricultural Injuries Fact Sheet from the National Children’s Center for Rural and Agricultural Health and Safety (NCCRAHS).

While it is heartening to note that there has been an overall decline in the rate of childhood agricultural injuries, it is important to highlight that injury rates among youth ages 10 to 19 have increased in recent years. This includes hired youth and visiting children on farms. The leading sources of fatalities among all youth were machinery, drowning, and motor vehicles including ATVs. Leading causes of injuries were vehicles and animals.

Sixty percent of agriculture-related injuries among youth took place when the children were not working on the farm. Non-working youth may be children living on family farms, or the children of migrant and immigrant farmworkers who often bring their children to work because they lack childcare options. These non-working children face numerous risks, including injuries related to farm machinery and livestock, heat-related illness, dehydration, and exposure to pesticides. NCCRAHS and MCN’s Protecting Children While Parents Work project focuses on this often overlooked population by developing strategies for keeping non-working children off farms and enrolled in quality childcare programs.



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“Farmworker parents face many barriers when it comes to accessing childcare, including long work hours, cost, and finding culturally appropriate childcare providers,” states Juliana Simmons, MSPH, CHES, Environmental and Occupational Health Manager at Migrant Clinicians Network. “It is vital that farmworker parents, childcare providers, and agribusiness leaders come together to ensure access to quality off-farm

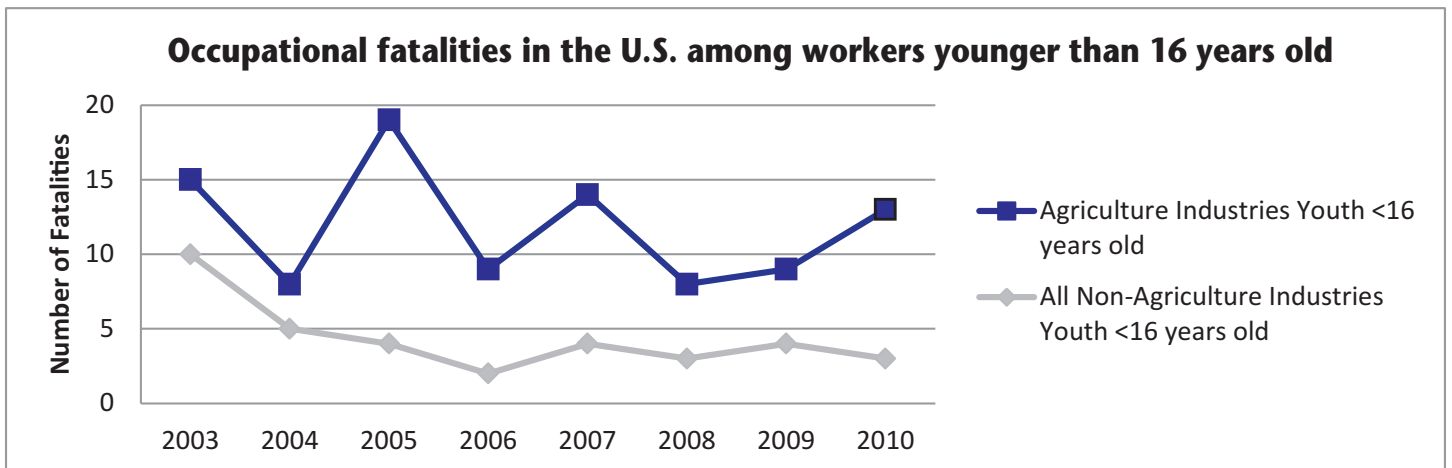
childcare services for migrant and immigrant farmworker families.”

Resources:

The complete 2016 Childhood Agricultural Injuries Fact Sheet from the National Children’s Center for Rural and Agricultural Health and Safety (NCCRAHS) is viewable at <https://goo.gl/d0DWpN>.

Learn more about Protecting Children While Parents Work at MCN’s Environmental and Occupational Health Initiatives page: <http://goo.gl/Dd7E9D>.

Economic Data	
Nonfatal Injuries	Youth agricultural injuries cost society an estimated \$1 billion per year (in 2005 dollars).
Fatalities	Youth agricultural deaths cost society an estimated \$420 million per year (in 2005 dollars)





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calendar

August 24 – 26, 2016 **NMAOHS 2016**

Nordic Meeting on Agricultural Occupational
Health and Safety
Hotel Legoland – Billund, Denmark
<http://nmaohs2016.dk/>

September 15 – 18, 2016 **4th Annual United States Conference on African Immigrant and Refugee Health**

New York La Guardia Airport Marriot –
East Elmhurst, NY
<http://www.africanimmigranthealth.org>

September 23 – 24, 2016 **Transgender Health Conference – Advancing Excellence in Transgender Health Care**

Fenway Health – Boston, MA
<http://www.fenwayhealth.org>

September 25 – 28, 2016 **9th AACR Conference on the Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved**

The Westin Fort Lauderdale Beach Resort –
Fort Lauderdale, FL
<https://www.aacr.org>

September 28, 2016 – October 1, 2016 **19th Annual NPWH Premier**

Women's Healthcare Conference
Sheraton New Orleans Hotel – New Orleans, LA
[https://www.npwh.org/events/conferences/
details/32](https://www.npwh.org/events/conferences/details/32)

October 13 – 14, 2016 **International Indigenous Health Symposium**

Hilton Hawaiian Village – Honolulu, Hawaii
<http://www.hehuliau.com>

October 13 – 15, 2016 **2016 East Coast Migrant Stream Forum**

Deauville Beach Resort Miami – Miami, FL
http://www.ncchca.org/events/event_list.asp

October 15–18, 2016 **2016 Fall Primary Care Conference**

Denver, CO
<http://www.nwrpca.org/>