MIGRANT CLINICIANS NETWORK
MCN
streamline
Volume 23, Issue 2 • Fall 2017

TB Gets a B:
How to Conquer TB Infection with Health Center Screenings

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

In September 2016, the United States Preventative Services Task Force (USPSTF) issued a final updated recommendation on screening for tuberculosis infection. With a grade "B", the second highest on its grade scale, the USPSTF sent a powerful message: that all asymptomatic adults from increased-risk populations should be screened for tuberculosis infection.[1]

A "B" grade means the USPSTF recommends the screening, as "there is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial," according to the USPSTF grading system.[2] The final grade puts the recommendation at the same level as more commonplace and integrated screenings such as an annual lung cancer screening for current smokers aged 55 to 80 with a smoking history[3] and screening for preeclampsia in pregnant women through blood pressure measurements throughout pregnancy.[4]

There are likely to be 13 million people in the US infected with *Mycobacterium tuberculosis* but not showing active symptoms of the illness.[5] In general, about five to ten percent of infected individuals will flip to active tuberculosis (TB), with about half of those progressing to active TB within two years from contracting TB infection. Those with weakened immune systems, like HIV-infected patients, have a higher risk of developing active TB disease.[5] Once they have active TB, they can spread the airborne bacterium through coughing, sneezing, and speaking. Active TB patients require six to nine months of treatment with a complex regimen of medications. Side effects are commonplace. There are certain populations who are at increased risk for TB infection and active TB. The USPSTF states that those with increased risk include immigrants or former residents of countries with high TB prevalence, and those who live or have lived in "high-risk congregate settings" like homeless shelters or correctional facilities.

Community health centers may be the link to significantly reduce TB in the US. One way to prevent the spread of TB is to identify those with dormant TB infection (sometimes called latent TB infection, or LTBI) and provide them a course of therapy to prevent active TB disease — and community health centers can lead the way. Such a prevention program can be cost effective. And, for patients who avoid the illness and the active TB treatment, the shorter or less complex regimens for preventing active disease is less invasive to the patient's life, easier for health centers to administer, and easier for patients to complete. Commonly used regimens for LTBI can have high rates of completion: the twelve-dose once-weekly Isoniazid and Rifapentine regimen with directly observed therapy boasts a 90 percent completion rate, and the daily, self-administered four-month Rifampin regimen has a roughly 80 percent completion rate.[6,7] See CDC guidelines for choosing a LTBI regimen at: https://www.cdc.gov/tb/publications/ltbi/treatment.htm.

A health center-focused strategy to address TB infection isn't just theoretical. In Houston, Texas, HOPE Clinic, a Federally Qualified Health Center, has closely partnered with the Houston Department of Health to make a difference in TB rates in their community. When the health department finds that a screened adult refugee or new immigrant tests positive for TB infection, the health department officials refer the patient to the community health center, where the patient can not only complete the course of therapy to prevent active TB but also establish a relationship with a new medical home. In 2016, through this partnership, HOPE Clinic provided care for 402 patients with TB infection. If all community health centers had the same capacity and expertise, they could screen and treat an estimated 875,000 patients with TB infection each year out of the roughly 13 million cases of TB infection in the US — a strategy that in just a decade may reduce the reservoir of TB infection in the US.

"We try to approach it from a fairly com-

continued on page 5

Approaches for Establishing a PCMH for Mobile Patients

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

Several years ago, Diana Davis,* an agricultural worker with diabetes, made an appointment at her local health center to refill her prescription for diabetes medication. When a new patient like Davis arrives with health concerns at a health center that has implemented a patient-centered medical home (PCMH) framework, the patient is often brought into the fold with a thoughtful, long-term strategy for her care, through the activation of a care team around the patient and her specific needs. This often means the development of a personalized health plan that is followed up with appointments for support and education from a care manager, a diabetes educator, and others as determined by the primary care provider.

A health center that actively creates a PCMH can improve quality, patient experience, and staff satisfaction, while reducing health care costs.[1] But the achievement of that famed triple aim breaks down when the patient's home isn't stable. In many cases, a care team may have just helped a patient get her diabetes under control when she moves away — and the team never hears from her again. How can we assure that mobile patients can continue to stay on the path to wellness? What does a "mobile home" version of PCMH look like?

Davis had just arrived from Florida, where she had been diagnosed with diabetes after having a heart attack. With her medication in hand, she had traveled north to Pennsylvania for work, where she got a job as the cook for 30 agricultural workers at a farm housing kitchen. Ed Zuroweste, MD, Co-Chief Medical Officer for MCN, was her primary care provider at that first appointment, and immediately saw the predicament: how can we keep her on her personalized plan, if she moves away?

"I explained what diabetes was, because she said that no one had explained that to her before, and gave her education on how to make things better," Dr. Zuroweste recalled. He spent extra time in the exam room going over how diabetes works, and how behavioral shifts in diet and exercise can greatly improve a person's health. He then requested a nutritionist to go out to the camp to spend an afternoon teaching her how to cook more diabetes-friendly, healthy foods. The nutritionist ended up going out a second time as well. Dr. Zuroweste recognized that, as a cook, a careful, food-based approach might resonate with the patient — and he was right. By the end of the season, her A1c had dropped from 13 to nine, she had lost some weight, and she understood her medications. Then, she disappeared for nine months. Just like many workers tied to the seasons, she left when the agricultural workers left.

When she finally returned, she had lost more weight and her hemoglobin was down to 7.5. Dr. Zuroweste assumed she must've continued with good care at the health center at her new location, but the patient insisted it was not the case. She had gone to another health center, which had not given her any education but just refilled her prescription. "She said, 'now, I am in charge of my diabetes and I know what I need to do. You've taught me that diet, exercise, and taking my medications is what I need to do. I just need you to write the prescription,'" Dr. Zuroweste recalled.

"A lightbulb went off in my head. I was trying to fix patients with diabetes, and manage their diabetes. This patient taught me that what I should be doing is teaching the patients to do all that," he said. He recognized that sending a nutritionist who spoke the cook's culinary language may have contributed to the success. He also emphasized that the patients can be empowered because they're smart, even without a good education: "We don't give people enough credit. They're the ones who get the biggest benefit out of all that, so why not put them in charge?"

A PCMH approach to mobile patients includes several approaches, says Dr. Zuroweste. First, the health center can have a coordinated approach to assure the primary care providers in various locations are linked. "If the person always goes from Immokalee to South Carolina and then to Pennsylvania and back to Florida, they go to three health centers, and a case manager at one of the health centers can make sure the medical records transfer. But that is a rarity," Dr. Zuroweste admitted. Few health centers have the resources available to do such close, long-term tracking of a patient with a chronic concern, but for those that do have the resources, it can be an effective strategy to a mobile patient PCMH.

A second approach is centered on the patient herself. "Make the patient, the individual, the expert on her issue," Dr. Zuroweste offered. As he discovered with Davis, an empowered patient can be a motivated patient. "Make them, not the primary care provider, the expert in their diabetes, taking the self-management to an extreme level." In this case, the patient knows about diabetes, understands her medications and dosages, understands the behavioral changes necessary, and recognizes when she will need a foot and eye exam. Dr. Zuroweste also notes that portable medical records can be sent with the patient to make clear to the next health center what steps she has already taken. "Give them the tools, a checklist, all the information they need to become an expert," Dr. Zuroweste stressed. "It takes a lot of work from the front end, but it has great results on the back end."

A third approach — perhaps the most effective for the patient and least resource-intensive for the health center — is enrolling

continued on page 5

Health Network Communication Tactics: *A Case Study*

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

Health Network Associates encounter numerous obstacles to ensuring continuous care for the mobile patients enrolled in Health Network, MCN's innovative and effective bridge case management system. Health Network Associate Olivia Hayes, for example, has occasionally had trouble connecting with patients' families in Vietnam.

"I call with an interpreter," she explained, since she is not bilingual in Vietnamese. She has to wait for the family member to pick up the line, after which she connects with the interpreter to tell her in English that the line has been picked up. "But, when family members hear English, they often hang up!"

Health Network Associates employ a great variety of communication tactics to increase the likelihood of regular contact with patients or their family throughout their enrollment. The "anchor contact," combined with the recent inclusion of communication technology like Skype, text, and WhatsApp, have been implemented to reduce the communication breakdowns that result from wrong or out-of-service numbers, poor connections with far-off rural locales, or wary call recipients.

For several months every winter, 66-year-old Phuong* visits family and friends in her homeland of Vietnam. This year, however, Phuong, a US citizen, tested positive to tuberculosis in her lungs and spine, requiring a 12-month treatment regimen. After eight months of treatment, she was ready to travel, so her local health department signed her up with Health Network to assure that she could continue treatment despite her travel plans.

Four days before her planned departure, Hayes received her enrollment form. She got ahold of Phuong one day before she left. "She said she had refills for all of her medications," Hayes noted, "and I found a local health center's information the day that the patient departed." Later that week, Hayes followed up with the doctor's office in Vietnam but found the number out of service, so she called the patient's friend, who is listed on the enrollment forms as a contact in the US. The friend got Hayes the doctor's email address.

Soon after, she received an email from the doctor. "She confirmed that she was going to care for her for the time that she's there, and she sent that information to the Health Department in the US as well," she said. The doctor was in fact the daughter of the patient's good friend, and the patient was staying in the same residence as the doctor. The doctor told Hayes that the patient was going twice a week for direct observed therapy. She could also confirm that the patient was taking daily medications at 6am in the house they shared.

Communication Tactics

Several of Health Network's communication tactics lined up to assure that Hayes was able to keep contact with Phuong despite her rural location. First, Hayes made sure that Phuong provided detailed contact information for her anchor contact — a person in Phuong's life who is not traveling, who can be relied upon to pick up the phone if all other contacts fail. This might not necessarily be the emergency contact like a mother or a sister; it might be a friend or a mother's neighbor. Secondly, Hayes didn't just stick to calling contacts. As with many patients, Hayes found that other technologies are easier to access from abroad and increase the likelihood of ongoing communication.

In the last two years, Health Network Associates have integrated texting and apps to contact patients in the way they most like to be contacted. With careful attention to HIPAA regulations — there is no sharing of medical data over such programs — Health Network Associates have used Facebook, WhatsApp, texting, Skype, and other programs as requested by patients.

"Patients with family and friends in other countries are rapidly employing a variety of communication platforms to stay connected to the folks back home," noted Deliana Garcia, MCN's Director of International Projects, Research, and Development. The various platforms don't just improve communication between Health Network Associates and patients; they can serve as a reminder for patients. "[Patients] prefer in some cases to have a written record of the information they are given so that they do not have to recall it from memory or look for a pen and paper while on a phone call," Garcia added.

Completing Treatment in Vietnam

Through email, Hayes received regular updates from her anchor contact — the friend in the US. Two weeks before the patient's scheduled return, Hayes emailed the doctor again to get updated records before the patient returned. "Five days later, I got a great document. It's difficult to get complete records from Vietnam. The doctor had made a chart of the medications she was taking and how often she was taking them, and the days that the doctor did a check-up. There were no lab reports, but she did check blood pressure and pulse during regular check-ups," the records noted. The doctor also reported that the patient followed treatment, followed health instructions, ate and slept well during treatment, and gained weight during her time in Vietnam.

In late spring, the patient returned to the US. Hayes spoke to her two weeks later to make sure she had a scheduled appointment for a check-up and X-ray. She followed up with her once a month to ensure the continuation of treatment, until late June, when she completed treatment, at which time Hayes closed the case.

The case is a typical one in that Health Network Associates must often try many different contacts and various modes of communication before making contact with the needed health authorities and patients, a patient advocate who the patient has indicated can speak on his or her behalf, or an anchor contact. The depth of reporting from the doctor abroad, however, was unusual, as Health Network Associates often spend more time working with the patient's health clinic abroad to develop health records that are acceptable to US health departments. The most important aspect of this case, as with all of our cases, was the outcome: through Health Network, Phuong was able to continue her treatment, despite travel to a rural corner of Vietnam for several months, followed by a return to the US.

Learn more about Health Network, watch a short video on the benefits, download enrollment forms in four languages, and schedule a training to get started: http://www.migrantclinician.org/services/network.html. ■

* All names, dates, and locations have been altered to protect the patient's identity.

The material presented in this portion of *Streamline* (pages 1 - 5) is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under cooperative agreement number U30CS09742, Technical Assistance to Community and Migrant Health Centers and Homeless for $1,094,709.00 with 0% of the total NCA project financed with non-federal sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Migrant Clinicians Network Announces New Co-Chief Medical Officer, Laszlo Madaras, MD, MPH

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

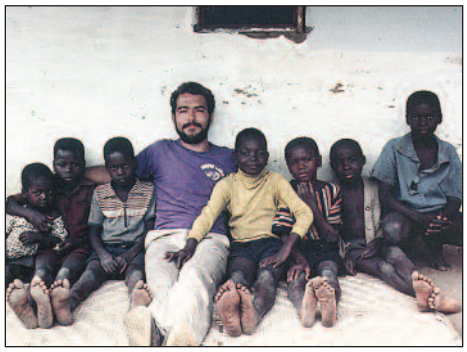
This year, Migrant Clinicians Network welcomed a new Co-Chief Medical Officer, Laszlo Madaras, MD, MPH, who has joined longtime CMO Ed Zuroweste, MD in the many efforts that MCN spearheads to advance health justice for the mobile poor. Dr. Madaras comes to MCN with decades of experience in health justice, international medicine, and mobile health, and has swiftly become an integral part of MCN's hardworking staff.

Dr. Madaras started on the track to a medical research career during his undergraduate years at Dartmouth, where he researched muscular dystrophy at the Boston Biomedical Research Institute. Luckily for his many future patients, Dr. Madaras discovered a preference for people over test tubes. A turning point came after college, when he joined the Peace Corps, which brought him to the Democratic Republic of Congo (then known as Zaire). Honing his French and picking up Swahili and Kikongo, Dr. Madaras worked on a tilapia fish farming project. He also encountered international doctors for the first time, which fueled a goal to work on the frontlines as a primary care provider serving underserved patients.

When he returned, he took a job at the Environmental Protection Agency while prepping for medical school. At the EPA, he learned the ins and outs of environmental policy, in particular working on removing carbon tetrachloride from food additives and grains. When he made his way to Tufts Medical School, he was 28. He pursued a combined MD/MPH four-year degree. "I pretty much went in with the goal of doing primary care — and I never turned back," he noted.

During his final year of residency, he was contacted by an international aid group, American Refugee Committee, asking if he would join them to work in Rwanda. It was 1994, and the country was deep in the aftermath of a horrendous genocide. "Since I'd been a Peace Corps volunteer, I knew the language, I knew the geography of the area, and I could drive a Land Rover, they said I could come for just three months," instead of the more typical six-month deployment.

He arrived in a refugee camp of 170,000 refugees. He was one of the youngest doctors there; his mentors were international disaster veterans, previously working in the war fields of Cambodia and Vietnam. He worked six to 12 hours a day, triaging people to the correct spot, with separate tents for cholera, malaria, dysentery, meningitis, and more.



Dr. Laszlo Madaras started his career with international service in East Africa.

Photo courtesy of Laszlo Madaras.

The heaviness of war was hard for Dr. Madaras as a young doctor. "On one of my first days, we had about 500 deaths in 24 hours. The old veterans said it was a good day," he said. Deaths were declining as more time passed; when he left three months later, less than a hundred people were dying each day. "People were very generous, very kind during my time there in the Peace Corps. It was very hard to see this switch where people could be so incredibly cruel to each other. I had such good memories in the Peace Corps just ten years before! I saw the best and the worst of Africa in the same region, within ten years."

As for many who return from such harrowing experiences, it was challenging for Dr. Madaras to fold back into his final year of residency. His first rotation upon return was in dermatology. "The derm patients' concerns were real, although some were 'just cosmetic,' but it was very different than dealing with machete lacerations," Dr. Madaras said. "I tried to recognize that, as a family doctor, I also need to know about skin ailments. But it was kind of a shock to go from one extreme to the other."

Upon graduation, he was accepted into the National Health Service Corps loan repayment program, a popular program offered by the Health Resources and Services Administration (HRSA) that places clinicians in underserved areas in exchange for loan repayments, thereby reducing a new clinician's debt while gaining much-needed primary care services in underserved areas like in Federally Qualified Health Centers around the country.

"I had to serve in a physician-shortage area — and that's when I met Dr. Ed Zuroweste," Dr. Madaras recalled. After a summer in the Dominican Republic on a vaccination program, Dr. Madaras could add Spanish to his list of languages in which he could communicate with patients. That brought his spoken languages up to seven, as he also had Hungarian and German under his belt.

"Seven languages is a huge plus for a health center — and he used all those languages at our health center. He worked with our mobile population from day one," Dr. Zuroweste recalled. He jumped at the chance of having Dr. Madaras at Keystone Health Center in Pennsylvania, which Dr. Madaras joined in 1996. The two physicians, with similar interests in medicine, hit it off. Dr. Zuroweste was impressed by the international experience he brought at such an early stage in his career. "I once saw him at a street fair where five patients came up to him separately, all speaking different languages. I saw people watch him do that and think, 'What the heck is going on?'"

Over the years, Dr. Madaras and Dr. Zuroweste continued to cross paths, even after Dr. Madaras left Keystone family medicine to become a hospitalist and in-patient doctor. When volunteering with the local state department of health clinic, Dr. Madaras would work with mobile agricultural workers, referring those who needed case management to Dr. Zuroweste for what became Health Network, and giving him an early peek into MCN's work.

Starting in 2002, Dr. Madaras began joining Dr. Zuroweste for some of his trips to the rural mountains of Honduras with fourth-year medical students from Johns Hopkins and elsewhere. The trips serve to give future doctors a low-tech highly needed international medicine experience. Dr. Madaras even brought his children, "for helping in the work and for them to see how much of the world really lives. It's important to have compassion and understanding for how people live in the world," he noted.

As he grew more involved in work with mobile populations, he was invited to present for the World Conference of Family Doctors where he talked about mobile populations and control of infectious diseases like tuberculosis and HIV. While he continued to enjoy the diversity of work as a community health doctor — "I was delivering babies! In a small town, I got to do everything

continued on the next page

under the umbrella of family medicine," he said — his work with the mobile poor in his community continued. For the last eight years, Dr. Madaras cut back to strictly inpatient hospitalist, for better work-life balance. But in 2012, Dr. Madaras added outpatient medicine back to his schedule, as a TB physician with the Pennsylvania State Health Department, another place where he joined Dr. Zuroweste in work for the underserved. Last year, Dr. Zuroweste approached Dr. Madaras to see if he'd want to work with MCN as Dr. Zuroweste eases into retirement.

"He's the perfect fit for MCN," Dr. Zuroweste admits, who is thrilled that Dr. Madaras has joined on and has begun a long transition during which both doctors share the role of Chief Medical Officer. Dr. Madaras currently works about 10 days a month at the hospital, another day with the TB clinics, and spends the rest of the time in a number of pursuits, including ramping up his work for MCN.

Dr. Madaras is very positive about the longer transition. "I've had enough experience with leadership change in institutions to know that everything slows down if the new guy has to figure everything out without overlap. But MCN needs to keep moving forward. Ed is still here with the guiding hand and I'm absorbing the way things work," he said.

"It's an ideal way to transition with a less-than-ideal outside environment in health care. We will continue to be challenged in the coming years, and I'm hoping to help move MCN forward as we figure out which way we need to go." ■

How to Conquer TB Infection with Health Center Screenings continued from page 1

prehensive perspective," noted Kara Green, FNP, Director of Clinical Services and Continuous Quality Improvements at HOPE Clinic. "Sometimes patients [think] we're just here for vaccines or active TB disease, but we say that we're your family's doctors and we take care of all your medical needs, and one part of that is this latent TB. I think it helps that we see other patients at the same time for diabetes, hypertension, back pain."

With the mission to provide care to medically underserved populations, community health centers like HOPE Clinic are in a unique position to take a sizeable step toward TB elimination in the US. In 2016, roughly 68 percent of active TB cases in the US were among foreign born people and 90 percent of TB cases in foreign-born patients were attributable to reactivation of prior, latent tuberculosis infection.[8] Given that health centers' patient populations are ethnically diverse, with roughly 62 percent of patients identifying as a "racial and/or ethnic minority" and almost 23 percent feeling they are best served in a language other than English.[9,10] their patient populations are likely to have a higher prevalence of TB infection.

"Some clinics don't have capacity or comfort with this issue, but we've have good success so far," Green said. As treatment innovations progress, health centers may find management of TB infection doable within their settings. For example, Green is excited about future innovations, like shorter treatment durations and directly observed therapy over live video chat, both of which promise to reduce costs and increase treatment completion rates — which can go a long way in eliminating TB in the US. She also recognizes that the health center approach is effective not just because of the provision of medications but the reach into the community to break down stigma and increase understanding of TB and TB infection.

"The education [of] one family goes a long way in their individual cultural communities, so that TB evaluation and treatment for LTBI or active disease becomes more normative," Green said. With such a multifaceted approach, health centers can make strides toward TB elimination: "Any efforts we are able to accomplish here hopefully help impact the worldwide picture of TB."

The CDC's page on TB infection treatment is available at: *https://www.cdc.gov/tb/publications/ltbi/treatment.htm* ■

References

1 US Preventative Services Task Force. *Latent Tuberculosis Infection: Screening*. Available at: https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/latent-tuberculosis-infection-screening

2 US Preventative Services Task Force. *Grade Definitions*. Available at: https://www.uspreventiveservicestaskforce.org/Page/Name/grade-definitions

3 US Preventative Services Task Force. *Lung Cancer: Screening*. Available at: https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lung-cancer-screening

4 US Preventative Services Task Force. *Preeclampsia: Screening*. Available at: https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/preeclampsia-screening1?ds=1&s=preeclampsia

5 Centers for Disease Control and Prevention. *Tuberculosis (TB): Latent Tuberculosis Infection: A Guide for Primary Health Care Providers*. Available at: https://www.cdc.gov/tb/publications/ltbi/intro.htm

6 Sterling TR, Villarino ME, Borisov AS, et al; TB Trials Consortium PREVENT TB Study Team. Three months of rifapentine and isoniazid for latent tuberculosis infection. *N Engl J Med.* 2011;365(23): 2155-2166. Accessed June 7, 2017. Available at: http://www.nejm.org/doi/full/10.1056/NEJMoa1104875

7 Menzies D, Long R, Trajman A, et al. Adverse events with 4 months of rifampin therapy or 9 months of isoniazid therapy for latent tuberculosis infection: a randomized trial. Ann Intern Med. 2008;149(10):689-97. Available at: https://www.ncbi.nlm.nih.gov/pubmed/19017587

8 Schmit KM, Wansaula Z, Pratt R, Price SF, Langer AJ. Tuberculosis — United States, 2016. MMWR Morb Mortal Wkly Rep 2017;66:289–294. DOI: http://dx.doi.org/10.15585/mmwr.mm6611a2.

9 Shin P, Alvarez C, Sharac J, Rosenbaum S, et al. A Profile of Community Health Center Patients: Implications for Policy. Henry J. Kaiser Family Foundation. 2013. Available at: http://www.kff.org/report-section/a-profile-of-community-health-center-patients-demographic-characteristics/

10 2016 Health Center Data: Health Resources and Services Administration, Health Center Program. Expanded Summary for 2016UDS Tables 3A-9E and EHR Information. Available at: https://bphc.hrsa.gov/uds/datacenter.aspx

Approaches for Establishing a PCMH for Mobile Patients continued from page 2

the patient in Health Network, MCN's bridge case management system for patients who intend on moving, but whose health needs are ongoing. Health centers utilize its services in many ways: a patient who got a pap smear but will be moving to a new state may be enrolled for a short time to assure she receives the results despite her new location; a student with HIV may be tracked when he leaves for summer break to visit home, and then returns to school; or, it may be used for patients with chronic concerns who remain mobile over many years, like agricultural workers who continually move with the seasons. Patients are enrolled for free by clinicians at the patient's health center, after which a Health Network Associate follows up with the patient to confirm their enrollment, offer Health Network services, and assure the patient gets the follow-up he needs. The Associate transfers medical records, sets up appointments, and assists with additional services like transportation as needed and as available.

"You can do all three," reminded Dr. Zuroweste. "If you can create a PCMH for a mobile population then you've really got a solid PCMH at your institution, because if you can address those complex issues of mobility, then it's easy to do for people who are stable." ■

* The patient's name has been changed to protect her identity.

1 Science in Brief: The Patient-Centered Medical Home: Current State of Evidence. Centers for Disease Control and Prevention. https://www.cdc.gov/dhdsp/pubs/docs/science_in_brief_pcmh_evidence.pdf. Accessed June 5 2017.

The Risk...
Talking to Patients about Pesticides

During a prenatal check-up, an agricultural worker patient asks a question about the mosquito control in her neighborhood: "They are fogging by airplane in our community occasionally at night. I close the windows, but is it safe the next morning for my young children, and for me? Should we stay at my sister's house when they spray?" Clinicians are often taxed with answering pesticide safety questions with limited information and training — but a careful and clear informational approach, supplemented with reliable resources the patient can access, can help patients understand their pesticide exposure risk and make informed behavior changes if they determine their risk is high.

Approaching the Conversation with Risk in Mind: A Checklist

For a comprehensive approach in the exam room, we turn to the National Pesticide Information (NPIC). A cooperative agreement between the Environmental Protection Agency and Oregon State University, NPIC answers over 11,000 calls and emails from the general public each year about pesticides. Their goal is to help people understand their risk through objective, science-based information about pesticides and related topics. Their conversations usually contain the following elements, all of which are applicable for patient-provider conversations as well.

1. Risk — not Safety

It's critical to frame the conversation in terms of a patient's risk, not their safety, says Amy Hallman, MS, Project Coordinator of NPIC. "The safety question is the same for every person," Hallman explained during a recent NPIC webinar. "Is it safe?" can end up being a yes or no answer. "Risk, however, has lots of factors that may make something more or less risky," Hallman said, depending on their personal circumstances, so a focus on risk can lead to a well-rounded discussion that is tailored specifically to the circumstances of the questioner. If a clinician gives the patient the impression that a given pesticide is safe, however, "it can lead to careless behaviors, or lack of vigilance, which can increase their risk," Hallman noted, and the "safe" pesticide may no longer be safe.

Risk is a combination of the toxicity of a product and the amount of exposure. Exposure can vary greatly. When mosquito fogging occurs, the toxicity of the pesticide remains constant, but the exposure is different. A pregnant woman with a young toddler whose toys are outside will have a different risk than a single male living in an apartment in the same area, because her potential for exposure is greater. Patients may not be able to control the toxicity of a product — especially agricultural workers, who may be exposed to numerous products at their workplace — but they may have greater control over their exposure.

2. Listen, ask questions, and paraphrase

Just as in all of our conversations with patients, a complete and detailed conversation about their physical situation and their past experiences can help us better under-

continued on the next page

stand their needs and exposures. What type of features in their environment may increase their risk — is there a barrier between the yard and the field next door? Is there a windbreak that reduces drift? Habits of the individual and family may also affect their risk. Does the patient utilize personal protective equipment (PPE) every time, or does the patient skip it if it's too hot outside? Does the patient wash hands and change his clothes after returning home and before hugging his children? Are shoes allowed in the house?

Hallman notes that perceived risk may not match actual risk. Clinicians may need to delve deeper into a patient's experiences and values to unearth how patients perceive their risk of exposure. Hallman outlines factors that influence a person's risk perception. The chemical may be viewed as:

- Out of a person's control or imposed versus in a person's control or voluntary;
- Beneficial versus damaging;
- Natural versus manmade;
- Only affects adults/has no effect versus affects children;
- Unfamiliar and untrusted versus familiar and trusted.

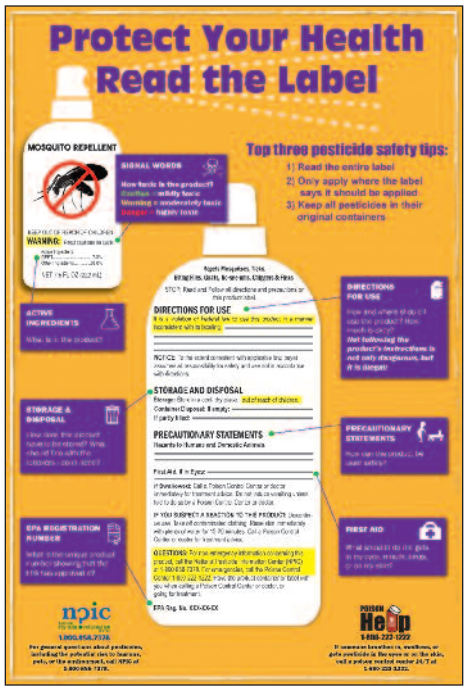
Many clinicians have seen this with agricultural worker patients. If an agricultural worker has applied chemicals many times before, he may not perceive his risk as high because the application is routine and familiar, and he has not experienced any acute reactions. Alternatively, a worker who is new to agricultural work may find chemical application concerning, when the routine and the product are untrusted and unfamiliar.

To assure that the patient feels their concerns and needs are heard, clinicians can reiterate the patient's concerns back to the patient.

3. Toxicity Information: Understanding Signal Words

Another key aspect of the conversation can be around the product itself. Helping a patient understand a product's label can help them understand the risk. Critically, product formulation varies from product to product and requires the user to pay close attention to precautionary statements and instructions for use. The active ingredient by itself may be highly toxic; the formulation of the product with the active ingredient may or may not be.

Hallman places emphasis on the signal word. The product will be labeled with a signal word designated by the Environmental



Protection Agency that is specific to the formula: CAUTION, which indicates mild toxicity; WARNING, moderate toxicity; and DANGER, for high toxicity. A signal word is determined by evaluating all active ingredients for toxicity through each route of exposure — acute oral or dermal lethal dose, inhalation lethal concentration, primary eye irritation, and primary skin irritation. The product will carry the signal word of the highest category of concern, regardless of route of exposure. For example, if a product is corrosive to the eyes indicating high toxicity for eye exposure, but the product is low in toxicity for all other routes of exposure, it will still carry the DANGER label to indicate that at least one route of exposure can result in serious injury. If a product is considered low in toxicity for all routes of exposure, then the product will carry the CAUTION signal word.

In many cases, however, a patient may not have the product with them or have access to the product. In this case, a clinician can still have a valuable conversation about how to reduce risk, even when the product toxicity is unknown.

4. Exposure Information: Action Items

After the clinician has a greater understanding of the patient's perceived risk, his or her environment, the toxicity of the product, and how it will be applied, the clinician can now recommend action items in the patient's control that will limit the patient's risk of exposure. For our pregnant agricultural worker and her children, this may include bringing in toys and removing hanging laundry for the night, closing windows, covering the vegetable garden for the night, and more vigilance around shoe wearing in the house. It may be a good time to check in on other possible exposures at work that the patient may have not been concerned about because of a perceived low risk.

Clinicians may refer the patient to trusted, science-based information sources outside of the exam room. NPIC's website features fact sheets, FAQs, podcasts, and videos that are developed based on emerging concerns and on the frequently asked inquiries they receive via phone and email. Access NPIC's resources at: http://www.npic.orst.edu/. NPIC's "Is It Safe?" Fact Sheet is at: http://npic.orst.edu/factsheets/isitsafe.html. Their Reading Pesticide Labels Infographic is at: http://npic.orst.edu/outreach/labelinfographic.pdf. Watch the webinar for more information on communicating with the public about pesticides: https://youtube/ RRinp6IMH8g.

Should the patient's concern about an exposure be workplace-related, clinicians must report the incident in most states. Please refer to MCN's Pesticide Reporting Map to see reporting requirements and recommendations for your state: https://goo.gl/ttknSD.

Migrant Clinicians Network
P.O. Box 164285 • Austin, TX 78716

Non Profit Org.
U.S. Postage
PAID
PERMIT NO. 2625
Austin, TX

Acknowledgment: *Streamline* is published by Migrant Clinicians Network (MCN). This publication may be reproduced, with credit to MCN. Subscription information and submission of articles should be directed to:

Migrant Clinicians Network
P.O. Box 164285
Austin, Texas, 78716
Phone: (512) 327-2017
Fax (512) 327-0719
E-mail: jhopewell@migrantclinician.org

Hugo Lopez-Gatell, MD, MSc, PhD
Chair, MCN Board of Directors

Karen Mountain, MBA, MSN, RN
Chief Executive Officer

Jillian Hopewell, MPA, MA
Director of Education and Professional Development, Editor-in-Chief

Claire Hutkins Seda
Writer, Managing Editor

Editorial Board – Linda Forst, MD, MPH; Kathy Kirkland, MPH, DrPH; Kim L. Larson, PhD, RN, MPH; Linda McCauley, RN, PhD, FAAN, FAAOHN; Marie Napolitano, RN, FNP, PhD.

calendar

November 14
Bureau of Health Workforce Grand Rounds Webinar Series: Strengthening the Rural Health Workforce.
https://goo.gl/92zyWA

November 14-16
Detroit, MI
Climate, Health, and Equity Meeting and 2017 Health and Environmental Funders Network Annual Meeting.
https://goo.gl/aN3cuH

December 4
Davis, CA
Migrant Farmworker Health, Inequality, and "What Can Be Done?" Seminar.
https://goo.gl/wFbBy2

December 7
Baltimore, MD
Maryland's 14th Annual Statewide Health Equity Conference.
https://goo.gl/xeRkmg

December 5-6
Moab, Utah
23rd Annual Four Corners TB/HIV Conference.
http://iz3.me/sQu64z7rLSL1

December 5-7
Baltimore, MD
National COSH Conference on Worker Safety and Health.
https://goo.gl/AUC1QW

December 10-13
Orlando, FL
IHI National Forum on Quality Improvement in Health Care.
https://goo.gl/yZvroR

February 22-24, 2018
Seattle, WA
2018 Western Forum for Migrant and Community Health.
www.nwrpca.org