Bioinformatics, by the people, for the people
Profile of Philip J. Kroth, MD, MS

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.]

Biomedical informatics should be a simple tool to improve health care: just design, develop, and implement IT-based innovations into the Electronic Health Record (EHR) and other processes, and the delivery, management, and planning of health care will improve. Right?

"It's not always the case," admitted Philip J. Kroth, MD, MS, Director for Biomedical Informatics, Research, Training, and Scholarship at the University of New Mexico Health Sciences Library and Informatics Center, and Associate Professor at the University of New Mexico School of Medicine. He pointed to a well-known incident at the University of Pittsburgh's neonatal intensive care unit, where a new software system caused patient mortality to double because the workflow was disrupted. "A number of changes that came about because of the EHR actually caused process breakdown — and their mortality rate went up," said Kroth. The case is a stark reminder that the technology on its own may not be capable of the big changes that technology promises to deliver. But Dr. Kroth, through trial and error, has learned ways to avoid such serious implementation blunders — and it's more about the people than the technology.

Dr. Kroth brings a unique perspective to the world of biomedical informatics; he has a degree in computer engineering and worked for four years in the field before returning to school to study medicine. Consequently, he has always had a sharp eye and keen interest in the ways information technology can improve the delivery of

Dr. Philip Kroth (right) with MCN's Health Network Manager, Ricardo Garay, at a Health Network training in 2015.

health services. For migrant agricultural worker patients, the potential may be great. Changes to an EHR may assist front desk staff and clinicians in properly identifying workers, which in turn aids clinicians in making proper diagnoses of environmental and occupational injuries. Clinicians may be prompted to provide information and resources to the worker on the health risks associated with their employment. But before the benefits of a new informatics system can be reaped, it must be developed with technology, policies and procedures, and workplace culture and workflow in mind.

Technology, Policies and Procedures, and Culture

Dr. Kroth is board certified in internal medicine as well as in clinical informatics. To receive the latter certification, which was first

offered just three years ago, a practitioner may be board certified in any of the medical specialties or sub-specialties, which results in a very diverse "polydisciplinary" program, he noted, necessary "because informatics affects the whole spectrum" of medical professions, just as technology affects all processes, not just one branch of medicine.

Although technology was the magnet that drew him to informatics, Dr. Kroth quickly found the human relation and workflow pieces in implementing a new informatics system were just as essential. "Imagine a pie chart: one third is technology. It's what most people focus on," he said, even if the other two pieces are equally relevant. "The second part is policies and procedures," like assigning a practitioner a username and password to the system, and then assuring

Building relationships:
Referrals for specialty care in Kansas

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

I n Kansas, migratory agricultural workers are not centralized in one region, and consequently, migrant health services are spread out across the state. "It didn't make sense to have a brick-and-mortar clinic dedicated to farmworkers," explained Kendra Baldridge, LMSW, Section Chief of Special Population Health for the Kansas Department of Health and Environment (KDHE). Instead, starting in 1994, KDHE has offered a voucher program, establishing relationships with Federally Qualified Health Centers (FQHCs), rural health clinics, and private clinics throughout the state to assure the migrant population of Kansas can access the care they need.

KDHE's voucher program holds agreements with over 700 providers throughout the state, with roughly 120 of those providers offering specialty care. In the voucher model, patients sign up at access points, which are generally FQHCs or health departments. A patient may see a primary care provider who accepts vouchers. If that provider refers a patient to specialty care, the provider may know which specialty care provider accepts vouchers, or the patient may reach out to one of KDHE's case managers to determine which specialists in his or her area will accept the patient under the voucher program — "similar to finding someone 'in-network' with [private] health insurance," noted Baldridge. But, as many federally funded programs offering specialty care encounter, KDHE must work diligently to maintain strong relationships with specialty care providers.

"In this world of technology, a lot of times it just comes back to... having a conversation and explaining why our program is a benefit to clients and why it's helpful for them to partner with us to serve farmworkers," Baldridge said. "When we sign up a new provider, we have hopefully a face-to-face conversation, but at least a phone conversation, to plead our case." Specialists may turn down participation in the program because of lower reimbursement rates and the stigma against the primarily Spanish-speaking migratory and agricultural worker patients, who are viewed as a "difficult population to serve," but KDHE has been successful in convincing specialists to take referrals, by helping them "see the benefit of serving the community," Baldridge explained.

Much of the relationship between the specialists and the voucher program is developed by the regional case manager. Most of the urban population — and consequently the largest concentration of specialists —

are in the "Eastern third" of Kansas, said Baldridge, where agricultural workers are more often employed at nurseries, orchards, greenhouses and tree farms, which supply the landscaping companies in the cities. In the north and west of the state, the dairy and feedlot industries employ most of the agricultural workers, whereas in southern Kansas, cotton processing facilities provide much of the work. KDHE has four full-time regional case managers as well as five part-time health promoters spread throughout the state who are bilingual in Spanish and English, and one health promoter in the western part of the state who is bilingual in Low German to serve the Mennonite community.

KDHE's regional case managers keep a pulse on the specialists who have agreed to take referrals. Case managers need to stay flexible to keep their region's specialist relationships functioning, said Baldridge, who worked as a KDHE case manager herself for eight years before taking the Section Chief position in 2015. And each case manager's caseload is unique. "Our central Kansas case manager...seems to get quite a few referrals for specialists, and she has the routine down of talking with providers and [figuring out] who to ask for in the office," to make sure she connects with someone who will accept the program and can make the final decision on whether to become a provider. Baldridge noted that this process is more challenging with larger providers like hospitals, where decision making may be more complex.

Case managers also need to exhibit a level of flexibility to get specialists on board, said Baldridge. "Each clinic or provider might

potentially work a little differently," she admitted. "The case managers have the most contact directly with providers in that area [so it's their job to] understand how each one works," complying with the specialist's policies or procedures, which may be a requirement for the specialist to accept a voucher program patient. A common example of this is a specialist requesting that the case manager call the specialist to set up an appointment on behalf of a client, rather than allowing the client or the referring practitioner's office to contact the specialist directly. "It seems that in our experience... we're the ones that have the ability to be just a little bit more flexible… If it's something as simple as, they want a call from a case manager rather than directly from a client... that's one of the easier ones that we're able to accommodate," Baldridge said.

The voucher program may send clients to some specialists only once every few years. In such a situation, case managers may find themselves re-explaining the basics of the program to a provider that has been a partner with the program for several years. To avoid that, Baldridge says, case managers are tasked with keeping up the relationship over time.

For KDHE, that open line of communication is paramount to a functioning specialty care referral system. "I really think it's all about that relationship with the entities and the individuals that you partner with," Baldridge concluded. "It may be a different kind of relationship with email and social marketing," which may open different avenues of connection beyond the face-to-face meeting, "but still, it's about making a connection." ∎

Collecting sexual orientation and gender identity data in Electronic Health Records: Recommendations and next steps

National LGBT Health Education Center, Fenway Institute

[Editor's Note: The following is excerpted from two articles reprinted with permission from the Fenway Institute. Collecting Sexual Orientation and Gender Identity Data in Electronic Health Records *is available at http://goo.gl/WJOvRc, and was made possible by grant number U30CS22742 from the Health Resources and Services Administration, Bureau of Primary Health Care.* Promoting Health Care Access to Lesbian, Gay, Bisexual, and Transgender (LGBT) Farmworkers, *a publication of the National LGBT Education Center, a program of the Fenway Institute, and Farmworker Justice, lists best practices for health centers in serving LGBT agricultural workers beyond data collection, like training all health center staff in general LGBT concepts, terminology, and health needs; including sexual orientation, gender identity, and gender expression in the health center's non-discrimination policy; and using inclusive language for all patients. It is available at http://goo.gl/2HNC7z, and was supported by grant numbers U30CS22741 & U30CS22742 from the Health Resources and Services Administration's Bureau of Primary Health Care. The contents of both articles are solely the responsibility of the authors and do not necessarily represent the official views of HRSA.]*

Why Collect Data on Sexual Orientation and Gender Identity

There are no data regarding the number of lesbian, gay, bisexual, and transgender (LGBT) individuals in the agricultural worker community. However, outreach workers, clinicians, and researchers who provide health care and public health interventions to agricultural workers know from experience that LGBT people exist within the community, and that many face enormous challenges in accessing care, finding support, and feeling safe.[1,2] LGBT "invisibility" within the agricultural worker community stems from strong cultural and religious taboos regarding sex in general, and sexual and gender minority identities specifically. It is common for LGBT persons to hide their identity in order to protect themselves from shaming, assault, and isolation from their families and communities.[3] The stress caused by hiding one's identity and dealing with stigma has been associated with higher rates of depression, suicide attempts, drug and alcohol abuse, and unsafe sexual behavior in LGBT people.[4,5]

Most clinicians do not discuss sexual orientation or gender identity (SO/GI) with patients routinely, and most health centers have not developed systems to collect structured SO/GI data. This invisibility masks disparities and impedes the provision of important health care services for all LGBT individuals, such as appropriate preventive screenings, assessments of risk for sexually transmitted infections and HIV, and effective intervention for behavioral health concerns that may be related to experiences of anti-LGBT stigma.[5] Like all patients, LGBT people have behavioral as well as medical concerns, and want to discuss issues related to coming out, school, work, relationships, children, aging, and other issues that occur in different stages of life. An opportunity to share information about their sexual orientation and gender identity in a welcoming environment will facilitate important conversations with clinicians who are in a position to be extremely helpful.

Collecting SO/GI data in electronic health records (EHRs) is essential to providing high-quality, patient-centered care to LGBT individuals. SO/GI data collection has been recommended by both the Institute of Medicine and the Joint Commission as a way to learn about which populations are being served, and to measure quality of care provided to LGBT people.[5-7] In addition, HRSA has proposed that SO/GI data be reported in the Uniform Data System for Calendar Year 2016. Gathering this data is therefore an important part of identifying

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Figure 1:
Sexual Orientation and Gender Identity Questions

Sexual orientation:
Do you think of yourself as:
- ☐ Straight or heterosexual
- ☐ Lesbian, gay or homosexual
- ☐ Bisexual
- ☐ Something else
- ☐ Don't know

Gender identity:
What is your current gender identity? (Check all that apply)
- ☐ Male
- ☐ Female
- ☐ Female to Male (FTM)/Transgender Male/Trans Man
- ☐ Male to Female (MTF)/Transgender Female/Trans Woman
- ☐ Genderqueer, neither exclusively male nor female
- ☐ Additional Gender Category/(or Other), please specify:_____
- ☐ Decline to answer

What sex were you assigned at birth on your original birth certificate? (Check one)
- ☐ Male
- ☐ Female
- ☐ Decline to Answer

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and addressing LGBT health disparities in health centers and other health care organizations.

Recommended Questions

Sexual orientation and gender identity questions have been shown to be acceptable to health center patients from diverse backgrounds. In 2013, The Fenway Institute and the Center for American Progress conducted a study that asked 301 people in the waiting rooms of health centers in Chicago, Baltimore, Boston, and three rural South Carolina counties how they felt about answering questions about sexual orientation and gender identity. Most respondents were heterosexual and non-transgender; more than half were people of color; and seven percent were over age 65. Across all of these variables and regardless of geography, respondents overwhelmingly supported the collection of SO/GI data in health care encounters. Most respondents agreed that, "the question was easy for me to answer" and that, "I would answer this question on a registration form at this health center." In

addition, most LGBT respondents said that the questions accurately reflected their SO/GI.[8]

Based on this and other studies of SO/GI data collection, such as research conducted by the Center for Excellence for Transgender Health at the University of California at San Francisco, we advise using the questions listed in Figure 1.[9,10]
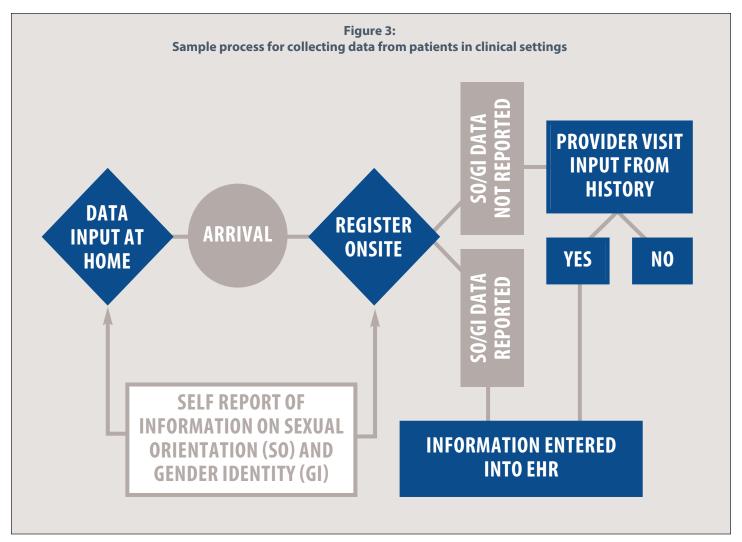
Note that the gender identity question has two parts: one on current gender identity and one on sex assigned at birth. Together, these questions replace "Sex: Male or Female?" questions on patient information forms and in EHRs. Asking two questions gives a clearer, more clinically relevant representation of the transgender patient than asking just one question. For example, asking if someone is transgender will miss some transgender people who do not identify as such (e.g., a person who was born male, but whose gender identity is female, may check "female" rather than "transgender" on a form. The gender identity question also includes options for people who have a non-binary gender identity (i.e., people who do

not identify as male or female).

In addition to asking about SO/GI, we strongly suggest asking patients to include their preferred name and their pronouns on registration forms (see Figure 2). This is important because many transgender patients have insurance records and identification documents that do not accurately reflect their current name and gender identity. In addition, some people

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Figure 2:
Preferred Name and Pronouns Questions

Preferred name: _____

Specify: _____

Pronouns:
☐ He/Him
☐ She/Her
☐ They/Them
☐ Other: _____

Figure 3:
Sample process for collecting data from patients in clinical settings

who have a non-binary gender identity want to be called "they" rather than "he" or "she," or use other gender neutral pronouns such as "ze" that are unfamiliar to many. Asking about preferred name and pronouns, and training all staff to use them consistently, can greatly facilitate patient-centered communication.

Collecting the Data

There are several ways SO/GI data can be collected. For example, questions can be included on registration forms as part of the demographics section alongside information about race, sex, and date of birth; or they may be asked by providers during the patient visit. Patients may self-disclose to providers as a response to open-ended questions, such as, "Tell me about yourself." Or, providers may ask as part of the social or sexual history, with a question such as, "Do you have any concerns or questions about your sexual orientation or sexual desires? Your gender identity?"

SO/GI information can be entered into the EHR by appropriate staff or directly by the patient through an online portal or mobile device. Whichever way the data is collected, SO/GI questions should be asked periodically, as sexual orientation and gender identity can change over time. Figure 3 illustrates a sample process of gathering SO/GI data in clinical settings.

Training Staff

Health centers that collect SO/GI data need to ensure that all staff are first trained on effective communication with LGBT people. This training should include information on LGBT people and their health needs, as well as information on how to safeguard patient privacy and confidentiality. Training is available from the National LGBT Health Education Center at www.lgbthealtheducation.org.

Next Steps

There are various ways that SO/GI information can be incorporated into the EHR; there is no single system for accomplishing this. Health centers will need to work with their EHR vendors on how to structure questions as well as how to structure decision support (reminder systems) and coding. This also means it is important to educate insurers about standards of care for LGBT people so that reimbursement policies recognize the unique health needs of LGBT people.

The federal government is actively considering opportunities to support health care providers in asking SO/GI questions in clinical settings. As of spring 2015, the Office of the National Coordinator for Health Information Technology (ONC) has proposed health IT certification requirements calling for creating an optional module to collect SO/GI data. The Centers for Medicare and Medicaid Services' proposed Meaningful Use Stage 3 rule does not include collection of SO/GI data, although many are recommending its inclusion.[6,7,11] To keep up to date on where these proposals stand, please refer to the Do Ask, Do Tell website at doaskdotell.org.

Conclusion

Given the documented disparities found in LGBT populations, it is critical for health centers to begin the standardized collection of SO/GI data in EHRs. Gathering this data will increase quality of care given to LGBT patients by allowing health centers to measure and track outcomes in these populations. Asking these questions also improves patient-centered care. Providers who are informed of their patients' sexual orientation and gender identity – and are trained to care for LGBT patients– are better able to provide care that is relevant, specific, and compassionate. For further resources and information, see the Resources section below, and visit the National LGBT Health Education Center's website at www.lgbthealtheducation.org. ■

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Resources

A Toolkit for Collecting Data on Sexual Orientation and Gender Identity in Clinical Settings: doaskdotell.org.

Center of Excellence for Transgender Health: transhealth.ucsf.edu

World Professional Association for Transgender Health: www.wpath.org

Healthy People 2020 LGBT Health: www.healthypeople.gov/2020/topics-objectives/topic/lesbian-gay-bisexual-and-transgender-health

There are many publications from the National LGBT Health Education Center's website, http://www.lgbthealtheducation.org/lgbt-education/publications/, including:

- Do Ask, Do Tell: Talking to your provider about being LGBT
- Taking Routine Histories of Sexual Health: A System-Wide Approach for Health Centers
- Optimizing LGBT Health Under the Affordable Care Act: Strategies for Health Centers
- Ten Things: Creating Inclusive Health Care Environments for LGBT People

There are many webinars from the National LGBT Health Education Center's website, http://www.lgbthealtheducation.org/lgbt-education/webinars/, including:

- Collecting Data on Sexual Orientation and Gender Identity in the Electronic Health Record: Why and How
- How Patient-Centered Medical Homes Can Improve Health Care for Lesbian, Gay, Bisexual, and Transgender Patients and Families
- Meeting the Health Care Needs of Lesbian, Gay, Bisexual, and Transgender People: The End to LGBT Invisibility

that the practitioner doesn't share it, so the security of the system won't be compromised, he offered: "If you write your password on the table, you can have the most bullet-proof security system in the world and it just went right out the window!" The technology often comes before the policy and procedure part, as implementation often exposes exactly where those policies are needed, Dr. Kroth noted, so spending time to anticipate those pieces is important to protect patient information.

"The third part of the pie that is very often overlooked is the culture, what people are willing to do," Dr. Kroth explained. "When you bring in a new system, you have to involve the end users… Not only are they in the trenches and have the best knowledge on those processes that are unknown" and unwritten, like how a primary care team functions in real time, "but they are more invested in the system that you are getting."

Unfortunately, "that's a very difficult sell for management," he noted, because of the time and effort required to build relationships between end users and programmers, and the patience and persistence needed to accomplish input and buy-in from those who will eventually use the technology. He hopes that the new informatics board certification — which gives attention to all three parts of the pie — can deliver the full suite of tools and knowledge that health centers and hospitals need to best implement a new technology — because in the end, it's not really the technology that gums up the works. "Technology is the minority of what you deal with," Dr. Kroth explained. "Most of the time, this is a people problem."

End users are the experts

Dr. Kroth learned this lesson early in his career during his fellowship, when he was troubleshooting a new system that automatically registered a patient's bedside vital signs. The system, implemented on just one floor of a hospital, had serious kinks — all the computers needed to be rebooted regularly or else they'd shut off — Dr. Kroth had trouble determining how to scale up the system to the rest of the hospital. And, he wasn't getting buy-in from the nurses on that floor, who were frustrated that the computers would regularly go out without the reboot. One night, however, a nurse mentioned to Dr. Kroth that the nurses could really use a report to keep track of diabetic patients and their schedule of finger stick blood sugar results. The tech team easily created a quick fix report for that problem and implemented the report — and the nurses responded very positively. "It totally blew me away — it was their idea, and I had done it. Even though it seemed insignificant to me, it really mattered to them. And then I asked, 'How are the computers doing?' and they said... "Oh, we just unplug them and plug them back in and they work fine.'" Suddenly, he no longer got resistance from the nurses in helping to implement the larger system.

"There were other issues that people were ignoring that were important too, and when I solved one of them, almost by accident, it built trust," he explained. When he troubleshooted the problem, he told his tech collaborators, "I'm going to go to the nurses and have them design it, determine how they want it to look," designing it alongside them, so they have ownership over the piece when implementation finally comes.

"Of course you have to know about the technology… but you really have to...recognize the people systems that are in place," Dr. Kroth said he learned. "It's about developing the relationships for the long term and recognizing that the people in the trenches are the experts."

Encountering MCN

Dr. Kroth's expertise in technology is just one area that he lends to Migrant Clinicians Network through his participation in MCN's External Advisory Board (EAB), a peer technical and scientific committee established to promote cross-disciplinary collaboration, and to give expert advice on community-based participatory research and the development and expansion of MCN programs. He came to the EAB through his longtime professional relationship with MCN's Ileana Ponce-Gonzalez, MD, MPCH, CNC, Senior Advisor for Scientific and Strategic Planning, whom Dr. Kroth has known for many years. MCN is greatly involved in the future of informatics, both within Health Network, our bridge case management system that assists mobile patients, and in the wider world of regional and national health information exchanges, which could potentially be a boon for migrant patients who traditionally have had limited ability to transfer their medical information as they move. Similarly to the internal problems of a hospital implementing a new system, Dr. Kroth sees the stumbling blocks that are slowing down national health information exchange issues as primarily cultural and political issues, and less technological.

But Dr. Kroth has hope that further study and training can transform technology implementation from an exercise in institutional foot-dragging to a collaborative initiative to better our delivery of health care. "We're in a Golden Age," Dr. Kroth emphasized. "And we're just getting started." ■

MCN Medical Director, Ed Zuroweste training health center employees from the Healthcare Network of Southwest Florida.

Credentialing and privileging: Common pitfalls

By Candace Kugel, FNP, CNM, Specialist in Clinical Systems and Women's Health, Migrant Clinicians Network;
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Credentialing and privileging can be challenging for many health centers, though it is a significant risk management issue. What's the difference between the two processes in the oft-uttered word pair? Credentialing is verifying the qualifications of a health care professional who provides care, while privileging is defining the scope of clinical practice for that professional within a given organization. When a new nurse practitioner is hired, for example, health center staff credentials the NP through verification of that individual's professional background by contacting the NP's alma mater(s), the state licensing board and the national certification organization. The NP then requests privileges — a list of skills and services she or he can perform for patients — and the health center is then tasked with assuring the NP is qualified and trained for those services before granting privileges. In most cases, initial verification comes through documentation of training or from references from colleagues and faculty who have worked closely with the practitioner. Or privileges may be granted as "under review," indicating that the practitioner may perform the tasks under observation or guidance until the medical director or other clinical supervisor feels sufficient skill has been demonstrated to grant the privileges to perform those tasks.

Credentialing and privileging processes assure that the right practitioner is doing the right job, so that patients receive skilled and knowledgeable care. It also protects the health center from liability claims that may result from improper care provided by practitioners performing tasks that they haven't been properly trained and approved to do. Re-privileging at least every two years also assures that a health center's practitioners remain up-to-date on their skills and advancements in their field.

Credentialing and privileging isn't just a good practice — it's a requirement for health centers. Credentialing and privileging is a major component to the staffing requirement, the third of the 19 program requirements established by the Health Resources and Services Administration (HRSA), which oversees the Health Center Program. HRSA has issued two Policy Information Notices (PINs) which specifically outline the credentialing and privileging requirements for health centers. (See resources below.) And yet, health centers experience challenges in this area. Here are some of the common credentialing and privileging pitfalls for health centers:

1. Credentialing and privileging policies and the real-life process aren't aligned.

Both credentialing and privileging are ongoing processes, and should be reviewed and updated at least every two years. While many health centers have policies and procedures in place to assure that this regular upkeep is documented, health centers may lag in completion. Maintaining the many pieces in a credentialing file can be challenging. When a practitioner's license expires between the two year intervals, for example, health center staff must verify the new license. Additionally, sometimes health centers are doing the credentialing appropriately — but they aren't doing the privileging. At least every two years, health centers must review that list of privileges that the practitioner was granted when first hired, and either re-approve the list, or add to (or subtract from) it as needed.

2. The policies and procedures aren't approved at the board level.

Even if the correct policies are in place and are implemented properly, some health centers miss the critical step of including the board of directors. The board has final approval authority on credentialing and privileging, and if a health center's board approves a practitioner's credentials and privileges, the approval needs to be documented, preferably in both the board minutes and the practitioner's credentialing and privileging file. In addition, the credentialing and privileging policy must be approved by the board.

3. Primary source is confused with secondary source.

HRSA requires primary source verification for certain elements of a practitioner's credentialing. Some health centers are using secondary source verification in places where HRSA requires the use of primary source verification. Primary source verification means health center staff goes to the original source of the credential, like contacting the university that issued a practitioner's diploma and documenting confirmation from the university. Secondary source verification is less direct, like receiving the practitioner's diploma and photocopying it.

4. Licensed practitioners who practice with supervision are overlooked for credentialing.

There are two categories of clinical staff: Licensed Independent Practitioners (LIPs) and "other licensed or certified health care practitioners." LIPs practice independently, like doctors, nurse practitioners, nurse-midwives, and dentists. Non-LIPs are licensed clinical staff that do not work independently, like registered nurses, licensed practical nurses, medical assistants, and dental hygienists. Although the credentialing and privileging requirements for these two groups are different, both categories of workers need regular credentialing, which some health centers overlook.

Health centers are encouraged to assess their policies and processes to assure full compliance with HRSA's specific requirements regarding credentialing and privileging. Many resources are available to assist health centers in strengthening credentialing and privileging policies and procedures:

1. HRSA has issued two Policy Information Notices (PINs) specifically outlining its credentialing and privileging requirements.

   PIN 2002-22 http://bphc.hrsa.gov/programrequirements/pdf/pin200222.pdf

   PIN 2001-16 http://bphc.hrsa.gov/programrequirements/pdf/pin200116.pdf

2. The ECRI Institute provides a credentialing toolkit available to its members at www.ecri.org.

3. Credentialing and privileging is outlined in the third of HRSA's 19 Health Center Program requirements. Read a short description here: http://bphc.hrsa.gov/programrequirements/index.html#top

   Read a more detailed description in HRSA's Health Center Program Site Visit Guide for fiscal year 2015: http://bphc.hrsa.gov/archive/administration/visitguidepdf.pdf

4. MCN's online toolbox includes sample policies, procedures, and documents useful to health centers in performing credentialing and privileging: http://www.migrantclinician.org/toolsource/85/credentialing-and-privileging/index.html   s   w

Photo by Alan Pogue

Cohort Management and Health Network

By Deliana Garcia, MA, Director of International Projects, Research, and Development, Migrant Clinicians Network

Migrant Clinicians Network recently collaborated in a university-sponsored TB screening to determine the effectiveness of using Health Network to manage a cohort of migrant research subjects. Health Network, a program of Migrant Clinicians Network, is a system for virtual bridge case management and patient navigation.

Few studies include migrant research subjects due to researchers' concerns with follow-up with migrants. For a recent TB infection screening at the University of Arizona, Migrant Clinicians Network contracted with the University of Arizona to provide follow-up services, including database management, tracking, and phone calls, to a cohort of individuals tested for TB Infection utilizing the Health Network system. Health Network fulfilled the study's goal of providing patient navigation to treatment services and case management to any participant for whom treatment was initiated. After a brief training of the study team, it was agreed that those recruited for TB testing would be directed to a Health Network Associate via telephone to be enrolled in the case management program on the day of testing. Additionally, individuals in the study who initiated treatment because of a discordance between skin testing and Quantiferon results

(negative/positive) or concordance of positive results were passed to Health Network associates for follow-up services to assure treatment was maintained.

On the day of the screening, 18 patients were interviewed by a student member of the research team. They were then directed to Health Network via telephone and a Health Network case file was initiated for each one. Every subject was assigned to a Health Network Associate as a part of the Associate's follow-up case load. The Associates contacted or attempted to contact each of the subjects to provide him/her with testing outcome information.

During the course of the study, the researchers identified several issues of concern:
• Poor cell phone signal impeded Health Network Associates' ability to complete enrollment;
• Addition of an extra step into the testing day procedure added significantly to the time that the subjects were required to remain at the site;
• Asking inexperienced students to enroll participants in Health Network slowed the process;
• Limited time to explain to the subjects the benefits and limitations of enrollment in Health Network potentially reduced par-

ticipation and created unrealistic expectations.

Of the 18 test subjects:
• Five subjects did not return to receive skin test results – all but one of these subjects has been contacted by Health Network.
• Reports were not received by Health Network at the time of enrollment for two of the subjects.
• Phone numbers were not obtained for two subjects rendering it impossible to follow up with them.
• Communication has been maintained with nine of the subjects.
• Four of the subjects expressed an interest in additional participation.
• One subject requested assistance with a non-TB related health care concern.

Due to the limited size of the cohort, other efforts to demonstrate the effectiveness of using Health Network to manage a cohort of migrant research subjects are required. However, the continuing success in communicating with the participants gives strong support to the belief that migration does not limit participation in research that can aid significantly in the understanding of the health concerns of migrants and the development of effective interventions. ■

Ag Worker Access 2020: Increasing access to quality health care for Migratory and Seasonal Agricultural Workers

By Bobbi Ryder, CEO, National Center for Farmworker Health, Co-Chair, Ag Worker Access 2020 Campaign Task Force
and Claire Hutkins Seda, Writer, Migrant Clinicians Network, Managing Editor, *Streamline*

Federally funded health centers ("health centers") serve an estimated 18 percent of the country's migratory and seasonal agricultural workers. Specific health center program funding to serve this special population and decades of health center history in doing so have provided hundreds of thousands of agricultural workers with health care. Behind the starkly low figure stand thousands more agricultural workers and their families who may lack access to services that are offered specifically to serve their needs. Some may be receiving care at health centers but are not being properly identified, which is problematic: A clinician's approach to care must take into account the circumstances of a patient who plans to migrate soon, or the occupational hazards of agricultural work. And a funder's view of the numbers may beg the question: Why do health centers need the current level of funding to serve agricultural workers, if so few are reportedly seen?

Over the last two years, the National Center for Farmworker Health (NCFH) and the National Association of Community Health Centers (NACHC) have brought health center leaders and migrant health advocates together to rectify this issue. Participants zeroed in on several ways to better serve and identify agricultural workers during roundtable discussions. In May 2015, at NACHC's Annual Farmworker Health Conference, a call to action was issued. The resulting Ag Worker Access 2020 campaign has been embraced by both NCFH and NACHC and a coordinating task force has been appointed by the NACHC Ag Worker Committee. The campaign's 11-member task force is appointed by the NACHC Ag Worker Committee and co-chaired by Bobbi Ryder, CEO of the National Center for Farmworker Health and Avein Tafoya, President and CEO of Adelante Health Care in Phoenix, AZ. The campaign identifies important approaches to improving access, and offers the tools and technical assistance needed to implement them. Ag Worker Access 2020's goal is to increase access to quality care for agricultural workers in health centers over the next five years, and serve at least two million by 2020.

The progress has already been noted in 2014, and members of the Ag Worker Access 2020 task force anticipate further growth of services in 2015 — the results, they believe, of the nationwide effort. The campaign has the following three broad strategies to effect change:

Credit where credit is due: Identifying agricultural worker patients

The first strategy focuses on helping both the administrative and clinical teams in identifying a patient as an agricultural worker. Under this strategy, nicknamed "credit where credit is due," health centers take measures to accurately identify the agricultural workers currently being served but not properly identified as such in the electronic practice management system or EMR. The meaningfulness of data collection is lost when a patient is not properly identified in the EMR and accurately reported to the Uniform Data System (UDS), the system under which health centers report their progress to the Health Resources and Services Administration (HRSA). Accurate information on migratory and seasonal agricultural workers cannot be extracted from important data collection systems when the reporting is compromised.

Identification of special population status must be understood as independent of the determination of sliding fee scale eligibility or verification of insurance coverage. When population status is treated as an insurance category, and a patient shows up with third party insurance, registration staff may miss identifying the patient as migrant or seasonal because they have already identified the insurance category. Yet, all federally funded health centers are required to identify the special population status of all patients: migratory or seasonal, homeless, veteran, or public housing. If that step is skipped, vital patient information may not reach the exam room. If, consequently, a provider does not know that a patient is engaged in agricultural employment, the provider may not properly recognize, manage, or diagnose agriculture-related injuries or exposures, or provide the patient with education on how to manage risks the patient may face in agricultural settings.

Awareness of migratory status is also important for clinicians to know. A provider who does not know a patient is planning to migrate in four months may launch into a major dental repair which cannot be completed, or fail to provide a multi-month prescription birth control which may lead to unplanned pregnancy. As some agricultural workers need to migrate to seek work through the seasons, uncovering agricultural status is the first step in determining migratory status.

One point often overlooked among health centers is that former migratory workers, no longer able to work because of age or disability, should be counted as agricultural workers, along with their families. The statute does not define age or disability; whether the worker is 50 or 60 years old, or fully or partially disabled, if age or disability prohibits a former migratory agricultural worker from working, then that person should be identified as an agricultural worker.

The term "families," which is used in the statute, may be misinterpreted as limited to legal dependents when in fact it includes extended family members. "Family members" may also include those in domestic partnerships and common law relationships.

How the question is asked is as important as the question itself, as NCFH points out in a fact sheet on identification of agricultural workers: "When describing their occupation, the majority of the agricultural [workers] seldom identify themselves with the terms migrant, seasonal, aged, or disabled. They tend to describe themselves either by the product they are working on, by the task they are performing, or by the location of their employment." Or, a migratory worker may have finished migrating for the year, and may have taken other temporary employment in his or her home base — and consequently may not self-identify as an agricultural worker in the intake prompts. Intake questions need to ask about recent work history as well as current. Those with the intent of employment in agriculture, but not currently so employed, also fall in the category, even if they have not worked in agriculture within the last two years, notes the NCFH fact sheet.

Finally, staff need to understand — and internal health center policies must reflect — the complete definition of what agricultural work is. (See sidebar for complete definition.)

Ag Worker Access 2020 is helping health centers tackle these issues. Through a partnership with the Central Valley Health Network (CVHN) in California and the Washington Association of Community and Migrant Health Centers, NCFH has provided training to health centers in central California and Washington, and has offered a program that will facilitate standardized training and retraining of front desk staff so

that as turnover occurs, health centers can assure accuracy and consistency in front desk procedures. The training is also intended to be provided to new employees as part of standard orientation.

Additionally, executive staff must assure that its health center's policies are in tune with the data requirements for the UDS outlined by HRSA. NCFH assistance in reviewing health center policies and protocols to assure alignment with the statute and the UDS Guidance manual.

Application of this strategy is not limited only to health centers that receive funding specifically to serve agricultural workers; all health centers need to ensure proper identification of patients.

Access for unserved agricultural workers

The second strategy, "opening doors and increasing access," asks health centers to take a fresh look at the community to see if there are pockets of agricultural workers that have been overlooked due to changes in agricultural industry. Health centers are encouraged to engage community partners like community advocacy organizations, Migrant Head Start and Migrant Education, churches, and food banks. Migrant Health Centers (MHCs) may also find expertise in their neighboring health centers to help them build capacity to serve agricultural workers.

Health centers should be sure to include agricultural workers in patient satisfaction evaluations, to determine how an agricultural worker perceives care, and why some do not receive care at the health center. Organizations participating in the Ag Worker Access 2020 campaign will be working with *promotores* to assure that agricultural workers know their right to be seen at health centers, and encourage them to exercise that right by becoming patients.

NCFH and NACHC offer training to assure that governing boards take responsibility to assure that the health center's migratory and seasonal agricultural workers are appropriately served and welcomed. Health centers need to actively assure that their own processes and procedures reduce subtle acts of discrimination that create unintentional barriers to access.

Building and increasing capacity

The third strategy will anticipate health center growth, and reach out for funding from a variety of sources early on in the process. Ag Worker Access 2020 campaign advisors recommend thinking about how to support growth through the lens of the managed care environment, even though it is not, for

the most part, a managed care population. To sustain growth, one recommendation is to create a per-ag-worker-per-month revenue stream that is attached to growth. That funding should be dedicated to assure integration of outreach, case management, patient navigation, and bilingual services as critical elements of a standard practice management system.

Conclusion

Migratory agricultural work is dynamic, and the changes occur without advance notice in response to weather, economics, and demand for commodities. Tracking these changes with reported figures is challenging because they occur faster than the data can be gathered and reported. The most current and accurate knowledge of agricultural worker demographics is often anecdotal. Health centers need to actively engage their own boards, and their administrative and clinical teams within each of their local communities, to assure flexibility in services to best respond to the ever-changing needs of this special population.

The Ag Worker Access 2020 campaign invites individuals, health centers, organizations, and employers to take part in this effort to assure that the intent of Congress, in authorizing the Migrant Health Act in 1962 and the Community Health Center Act in 1967, is upheld for the next 50 years. ■

RESOURCES

What is agriculture work, anyway?

According to HRSA's 2015 UDS Manual, the term "agriculture" means farming in all of its branches as defined by the North American Industry Classification System, a program of the Office of Management and Budget that standardizes tasks for use by Federal statistical agencies in developing data related to the US business economy. In most cases, "cultivation" is the key word, which is why industries not cultivating the product — like fishing and hunting, or like processing of harvested food — aren't included in the HRSA definition of agricultural workers. Keeping these intricacies and exceptions in mind, here's a short list of what constitutes employment in agriculture, and the corresponding NAICS code:

111: Crop Production
1111: Oilseed and Grain Farming
1112: Vegetable and Melon Farming
1113: Fruit and Tree Nut Farming
112: Animal Production and Aquaculture
1121: Cattle Ranching and Farming
1122: Hog and Pig Farming
1123: Poultry and Egg Production
1151: Support Activities for Crop Production
1152: Support Activities for Animal Production

Please note that this list includes both horticulture and animal husbandry. "Support Activities" include transportation from the farm to market or to a processing facility not located on the farm.

Some activities that are NOT considered "agricultural" include the transportation of meat and meat products, merchant wholesalers, landscaping, spectator sporting (like care of racehorses), and lumbering or transportation of timber. NCFH further breaks down the definition and its inclusions and exceptions here: http://goo.gl/t1ixUp.

Identifying migratory agricultural workers at Healthcare Network of Southwest Florida

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

"Our numbers were going down," said Yerania Lopez, Clinical Manager at Healthcare Network of Southwest Florida. She was referring to the decrease in the number of migratory agricultural workers that her health center serves, despite its location in subtropical Collier County, where the Immokalee agricultural region grows almost a third of the US's tomatoes and is well known as an epicenter of agricultural worker advocacy like the Coalition of Immokalee Workers' Fair Food Program. In 2012, 29.2 percent of patients were identified as migratory agricultural workers. By 2014, the percentage was down to 22.3.

Last year, to improve care given to the agricultural workers and better equip clinicians with tools to recognize and manage work-related exposures and injuries, Healthcare Network signed on as a Center of Excellence in Environmental and Occupational Health through Migrant Clinicians Network's (MCN) Workers and Health program. Centers of Excellence commit to completing a mutually agreed-upon workplan for the year-long collaboration. Healthcare Network aimed to successfully integrate environmental and occupational health (EOH) into its medical practice through trainings, adjustments to the electronic health record (EHR) to include EOH concerns, the adaptation of MCN's pesticide guidelines, the inclusion of migrant health and EOH in orientation training, and collaboration with the Florida Department of Health. (See sidebar for more on the program.) Healthcare Network's workplan also had the stated goal of improving identification and documentation of agricultural workers by five to ten percent.

Lopez, who admits she's a "data person," was one of several Healthcare Network staff focused on implementing the identification portion of the workplan. Lopez received the workplan in September, 2015. "From there, I knew what the timeline was and what needed to get done," she said. In September and October, Heathcare Network and MCN determined specific metrics and dates for their plan. MCN coordinated with the National Center for Farmworker Health (NCFH) to facilitate trainings for intake staff during the first week of November. "Here in Immokalee, we had a large group of Patient Service Representatives (PSRs)," and other front-desk employees joined together to participate in NCFH's virtual training, while other offices throughout the county logged

Photo by Ed Zuroweste

on from their own locations. NCFH provided two training sessions on different days. "The next week, we implemented the changes," Lopez said.

The most significant of changes was a questionnaire, provided by MCN in Spanish and English, that all patients fill out. "We had it translated into Creole," as well, said Lopez, to best suit their patient population. The questionnaire asks, "Have you or a member of your family with whom you reside ever done agricultural work as your principal employment?" If a patient answers yes, "they have to go to another field," where they'll ask if they are migratory or seasonal.

"We added a customized field within the registration section of the EHR and in the practice management section," Lopez said, where the PSR/front desk staff will input whether a patient completed the questionnaire. If they had, the PSR then scans the questionnaire into the record, and then inputs in another new field in the EHR whether the patient identified as migratory or not, or declined to state.

Healthcare Network's report writer built a report to pull data to see if the questionnaires were completed. "We got that report, and we were able to identify some sites that were not collecting the data"— the first point at which they can improve, Lopez said. A secondary report was built to determine how agricultural workers responded to the question that asked about migratory status.

Although complete numbers aren't yet in,

initial results in the first three months were impressive. "One of our adult sites, we had 17 migrant and 17 seasonal" newly identified agricultural workers. "Another site, Family Care Immokalee, [saw] 54 new migrants and 59 new seasonal — that's a large number." Both sites were in the same town, prompting the next question — why was the jump so large in the second site, compared to the first? "Those sites see the same people," Lopez noted, so further analysis needs to be conducted. Lopez seeks to better understand "which sites are we getting a high percentage of migrant workers, which sites are we not getting them, and why."

Lopez noted that in an area north of Naples, many patients were declining to answer whether they are migratory or not. Lopez says her next step is to determine, "Why are the patients declining? Why do they not feel comfortable sharing that information? Is that because we're not explaining what it is, or they just don't want to be bothered by it?" A review of the questionnaire may result.

Healthcare Network isn't just analyzing data — they are using it. Lopez says Healthcare Network is going to do more outreach based on the results of the questionnaire, reaching out particularly in areas where the numbers are lower than anticipated. Part of their Center of Excellence workplan with MCN is to connect with newly identified migratory workers and enroll those with chronic conditions into Health Network, MCN's bridge case management system. "I'm trying to utilize my [current] staff as much as I can," Lopez said. "We have a case manager to follow up with those patients," specifically to enroll them in Health Network. One of the case managers who was previously focused on HIV will now be more focused on Health Network enrollment of migrant patients "as soon as they're ready to go up north at the end of May," to assure they can continue to access care at their next destination.

Lopez emphasized that it's a work in progress. "We're still working on it. I'm still waiting to analyze more information and come up with some more solutions," Lopez said. "But the numbers are going up, and in just three months."

Learn more about MCN's Centers of Excellence program at http://www.migrant-clinician.org/services/initiatives/occupational-health.html. ∎

Pesticides in combination increase toxicity: New study from UCLA

By Amy K. Liebman, Director of Environmental and Occupational Health, Migrant Clinicians Network

Before a pesticide is approved for use, regulators test the health effects of a pesticide as a single agent. But, on fields across America, pesticides are often applied as mixtures, and research has lagged in determining the interactive effects of pesticides. A new report from the Sustainable Technology and Policy Program out of the University of California, Los Angeles determined that three pesticides, used in combination, became more toxic. The three fumigants — chloropicrin, 1,3-dichloropropene, and metam salts — are often used simultaneously on common crops like strawberries, tomatoes, peppers, and nuts. The report, which focuses on California agriculture, notes that there were thousands of applications of the pesticides, totalling millions of pounds of the fumigants applied in California alone.

The study determined that the pesticides in combination have a "reasonable likeli-

hood" to be more toxic to humans by decreasing the body's ability to detoxify, attacking and damaging DNA, and disabling DNA repair and expression enzymes. "Taken together, these three possible interactive effects would result in a greater likelihood of unrepaired mutations and/or uncontrolled cell growth. This would potentially increase the likelihood of cancer," the authors note in their case study summary.

California agricultural workers and agricultural communities, the authors argue, are often exposed to the fumigants in combination. Because the tested pesticides are fumigants, they are "likely to volatilize and drift away from the application site and expose people in surrounding schools, houses, businesses, and fields," the summary notes. As an illustration, the researchers presented data from chemical levels at Rio Mesa High School in Oxnard, CA, which is bordered by farmland.

The article notes that regulators like California's Department of Pesticide Regulation (DPR) do not sufficiently regulate the application of multiple pesticides to determine cumulative effects on human health, but are required to do so under California law to protect public health. The researchers recommend that regulators should: test all pesticides sold as a mixture for synergistic toxic effects before approval for use; require testing on chemicals in combination or impose "stringent regulations" on the use of chemicals in combination on the fields when there is "a scientifically reasonable hypothesis of synergistic effects"; and include synergistic effects of pesticides in establishing risk management requirements.

Access the complete report, the summary, and an interactive pesticide map at http://stpp.ucla.edu/node/586. ∎

Glyphosate Statement of Concern:

Scientists speak out against common herbicide, call for regulation

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

[Editor's Note: The following is a summary of an article in Environmental Health. *Read the complete Scientific Statement of Concern at http://goo.gl/DeUlSA.1]*

In February, a group of 14 health scientists published a Statement of Concern on glyphosate, the ubiquitous herbicide marketed under brand names like Roundup.[1] The scientific review, printed in the journal Environmental Health, tracks the herbicide's "100-fold" increase in use to become the most heavily applied herbicide in the world, the resultant growth in glyphosate-resistant weeds and other "unanticipated effects" of its increased use, and the more recent animal and epidemiology studies that challenge the level of glyphosate considered safe for humans. To illustrate these concerns, the health scientists detailed a number of "consensus points" on the agreed-upon impacts of glyphosate, followed by a lengthy list of recommendations.

Increased and varied usage

The article couches its concern in the dramatic increase in use in the past decade, along with growing resistance and the impact of exposure to glyphosate chemical mixtures. The use of glyphosate-based herbicides (GBHs) skyrocketed in the mid-1990s, upon the introduction of "Roundup Ready" crops on which glyphosate could be directly applied onto food crops. Currently, corn, soybeans, cotton, canola, alfalfa, and sugar beets have been genetically modified to be "Roundup Ready" and approved in some nations for planting.

Usage has also changed; authors note that GBHs are now being used later in the crop cycle, and, with some crops like wheat and barley, GBHs are used in nontraditionally to "accelerate crop death, drying, and harvest operations." As a result, residue levels on some crops are "substantially higher" than they were ten years ago, resulting in increased human dietary exposure.

Increased usage has resulted in the wide-spread growth and unprecedented spread of glyphosate-resistant weeds, authors argue, and can significantly affect agricultural practices: "The consequences triggered by the spread of glyphosate-resistant weeds, in contrast to the emergence in the past of other herbicide-resistant weeds, are unparalleled, and include the need for major changes in tillage and cropping patterns, and large increases in farmer costs and the diversity and volume of herbicides applied."

The authors are also concerned about glyphosate in combination with other chemicals in GBHs. Data confirm that chemicals in combination may change the risks posed; surfactants, for example, a common addition to GBHs, are known to increase the toxicity of glyphosate. As regulators test toxicity of chemicals singly, current regulations may fail to accurately predict the toxicity of glyphosate in combination with other chemicals.

Newer health studies change the landscape

Concurrent with the increased usage in agricultural has been an increase in epidemiological studies and research on the effects of glyphosate. Initial studies when glyphosate was first introduced concluded that vertebrates were likely unaffected by the herbicide because it targeted a plant enzyme not present in vertebrates. But recent research suggests a "wide range of adverse outcomes" for human health including endocrine disruption, birth defects, hepatorenal damage, and gastrointestinal health issues. The authors cover additional studies that have suggested other health risks have a causal links to GBH exposures, but need further research, like the increase in non-Hodgkin's Lymphoma and the epidemic of chronic kidney disease of nontraditional etiology in Sri Lanka and Central America.

The health of the environment is also greatly affected by the increased usage of GBHs. The authors note that increased usage contaminates rainwater, groundwater, and drinking water. Newer studies have determined that the half-life of glyphosate in water and soil is "longer than previously recognized," and dependent on soil types, thereby limiting the ability of researchers to accurately predict how long soil will be contaminated.

Detection of glyphosate in foods

The health implications, say the authors, are not limited to those within the agricultural sector. The statement lists multiple studies detecting glyphosate residues in food for human consumption, but also notes that adequate surveys of GBH contamination in food have not been conducted.

Daily intake and regulatory limits

Early risk assessments to the human population were based on initial research that indicated limited effects on vertebrates; newer research debunks these assumptions, but acceptable daily intake as determined by government agencies remains the same. Another key early assumption, that glyphosate would not be persistent in the environment, has also been proven incorrect. Meanwhile, huge increases in prevalence of glyphosate worldwide have not been followed up with monitoring to determine the level of exposure in the human population. The authors conclude that tolerable daily intakes for glyphosate are based upon outdated science, in the US as well as in Germany.

"These conclusions all indicate that a fresh and independent examination of GBH toxicity should be undertaken, and that this re-examination be accompanied by systematic efforts by relevant agencies to monitor GBH levels in people and in the food supply, none of which are occurring today," the authors state. "The US National Toxicology Program should prioritize a thorough toxicological assessment of the multiple pathways now identified as potentially vulnerable to GBHs." ∎

1 Myers JP, Antoniou MN, Blumberg B, et al. Concerns over use of glyphosate-based herbicides and risks associated with exposures: a consensus statement. Environ Health. 2016;15(1):19.

Occupational safety on the horse farm

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

Photo by Darley Farms

[Editor's Note: This article was originally published on MCN's active blog, "Clinician-to-Clinician: A Forum for Health Justice," where we share updates on MCN projects and partners, news stories, and more in the world of health justice for the mobile poor. Please visit and sign up for our blog at http://www.migrantclinician.org/community/blog.html.]

Agriculture remains the most dangerous industry in the US, yet agricultural workers are afforded fewer protections than workers in other industries. Immigrants may not have sufficient training on the hazards they encounter at work, and the risks they face vary greatly: a worker picking blueberries in a field has different challenges than a worker milking cows at a dairy farm.

To address this wide range of occupational hazards, MCN has developed targeted resources and outreach materials for different types of agriculture, including resources specially for immigrant dairy workers.[1] Other groups are similarly focused on the specific needs of subgroups of agricultural workers; in Kentucky, for example, the Latino Thoroughbred Farm Worker Health and Safety Study is looking in-depth at thoroughbred horse farms.

"In Kentucky, one of the three largest industries is the thoroughbred industry, which includes businesses that breed, raise, sell, and race thoroughbred horses," explained Jennifer Swanberg, PhD, professor at University of Maryland School of Social Work and principal investigator of the Latino Thoroughbred Farm Worker Health and

Safety Study. The thoroughbred farm workforce, say the researchers, is largely understudied and is increasingly comprised of immigrant Latino workers.

In 2009, Dr. Swanberg's Institute for Workplace Innovation, which aimed to improve the quality of workplaces in Kentucky, decided to conduct a pilot study exploring health and safety issues for workers on crop and horse farms. They enlisted Jessica Clouser, MPH, from the University of Kentucky College of Public Health and now project manager and co-principal investigator of the thoroughbred study, to interview Latino agricultural workers to determine what types of health and safety issues they may be encountering. At first, the researchers targeted workers on both thoroughbred horse farms and crop farms; even-

tually they narrowed their focus to just the horse farms.

"Our study results indicated that workers in the horse industry were exposed to aspects of the work environment that increased their risk to injury," Dr. Swanberg said. The researchers discovered that workers experienced injuries as a result of working with large animals and had heightened respiratory issues. Additionally, as farm managers turn to immigrant labor for help, "it's creating management challenges, [as a result of] the cultural and language barriers," noted Clouser. "The industry is strongly dependent on this worker group," Clouser said, but the study demonstrated that "the industry is experiencing challenges and [industry leaders] want help in overcoming them." The study also found that the quality of relationship with the supervisor mattered in the level of risk for the worker, added Clouser.

"Results from this initial pilot study informed the development of a much larger study that would systematically examine the occupational safety and health issues of Latinos on thoroughbred horse farms," Dr. Swanberg said. The resulting five-year study, just entering its final year, is funded by the CDC's National Institute of Occupational Safety and Health and works to engage the farm to impact farmworker health. The researchers used two advisory councils to guide the process, one with representatives from the industry and one with members of the Latino community and the outreach partners and service providers who serve it. The study's output is extensive. When Clouser asked farm managers what they wanted from they study, they asked for the findings of the research, a better understanding of what other farms are doing, and more tools and resources to assist their farmworkers. Consequently, three major categories of tools are being developed:

Research briefs. As the findings of the research came out, the group provided research briefs both to farm managers and to outreach and service providers who work with Latino workers, to disseminate what the research is revealing, including information on the types of injuries that occur on horse farms and the circumstances of those injuries. Many of the research briefs are already available online and several more will be released in the coming year.[2]

Promising practices reports. From the in-depth interviews conducted with thoroughbred farm managers, the researchers are developing a report sharing practices employed by farms to address both health and safety and management issues. These

Photo by Darley Farms

will be distributed to farm management. Thirty-two farms participated in the survey, and 26 of them continued on to complete an "in-depth interview that lasted between one and four hours," covering a wide range of questions about their operations, their workforce, and the injuries they've seen, Clouser noted, to fill out a full picture of their operations. "One farm enacted safety teams," said Clouser. "They have safety meetings [where] they'll have a representative from each division across the farm," and from each level of the farm, from workers in a non-supervisory position to farm managers. "They meet quarterly and they discuss issues that they've found regarding safety on the farm," she explained. The group reviews injury reports and assigns an underlying cause and underlying prevention strategy, she said, and they work to change farm policy if needed. These promising practices reports will be disseminated to farms in the region, and they will be available on their website.

Graphic safety materials. The researchers are assembling a working group consisting of farm managers, a human resources manager from a local thoroughbred farm, and workers' compensation and insurance representatives to begin developing low-literacy

and bilingual materials on health and safety for workers on horse farms. These pieces will be developed in this final year of the project and will also be available on the website in Fall 2016.

Community involvement has been key. "This project was very focused on community participatory principles," Clouser emphasized. "We worked really hard to get both industry and organizational representation of people who are concerned about the workers themselves, and the health of Latinos." Swanberg added, "When I step back to see what's unique and has been successful about this project, it's that we've been able to work with both sets of communities and both have been equally as valuable in the success of this project."

Learn more about the Thoroughbred Worker Health and Safety Study and access their materials at their website, www.worksafetyandhealth.com. ■

FOOTNOTES

1 MCN and National Farm Medicine Center Seguridad training is available at: http://www.migrantclinician.org/seguridad

2 View the Thoroughbred Worker Health and Safety Study's issue briefs at: http://www.worker-safetyandhealth.com/issue-briefs/

MCN

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calendar

June 6-8, 2016
2016 Southwest Latino HIV/Hepatitis C Conference
Pearl South Padre, TX
http://www.latinosandhiv.org/

June 7, 2016
22nd National Health Equity Research Webcast
Political Power, Policy, and Health Equity
Tate-Turner Kuralt Auditorium at UNC
www.minority.unc.edu

August 25, 2016
9th Annual Community Health Worker Conference
Grand Valley State University, Eberhard Center — Grand Rapids, MI
www.spectrumhealth.org

September 20-22, 2016
2016 AFOP National Conference
Double Tree by Hilton — Washington, DC
http://afop.org/event/
2016-national-conference/

October 13-15, 2016
29th Annual East Coast Migrant Stream Forum
Deauville Beach Resort — Miami
http://www.ncchca.org/events/
EventDetails.aspx?id=699118

October 15-18, 2016
2016 Fall Primary Care Conference
Denver, CO
www.nwrpca.org

October 31-November 2, 2016
Midwest Stream Forum for Agricultural Worker Health
Hyatt Regency Riverwalk Hotel
San Antonio, TX
www.ncfh.org