Some nurses are taking their work out of the hospital and into the community.

Unconventional Medicine

BY HEATHER BOERNER
Three days a week, Lori Bowers, RN, puts on her scrubs, enters the sterile halls of Alpena Regional Medical Center in Alpena, Michigan, and assists in the births and deliveries of northeastern Michigan’s babies.

But between April and October, you’re just as likely to find Bowers, 47 and a nurse since 1993, standing on the dusty tarmac of Alpena Combat Readiness Training Center, watching as medical personnel scale two-story-high piles of rubble in search of victims of natural disasters and military strikes.

Bowers is a captain in the Air National Guard. Every week, spring through fall, she helps train 45 to 75 medical reservists in how to save military personnel and civilians during disasters or wars as part of a Guard program called EMEDS, or Expeditionary Medical Support.

Most of Bowers’ time is spent outside, supervising and teaching the reservists to set up the $3.2 million mobile hospital (what she calls a “very expensive tent”), complete with an emergency room, surgery suite with centralized sterilizer, dental clinic, ICU, x-ray, laboratory and full pharmacy. “It’s like MASH, but more high-tech,” she said.

The real test comes on the third day, when the reservists must confront a simulated emergency. That’s where the pile of rubble comes in. Fake “patients” made up and taught to explain specific injuries are hidden in the rubble. Suddenly, doctors who work in private practice must learn to diagnose and treat without the luxury of a CT scanner or MRI and learn laboratory values for blood and medications that are different in a mobile hospital than in a traditional one. They must learn when to treat there and when to airlift patients to remote trauma centers.

Instead of running the halls of a hospital between patients, Bowers is criss-crossing the tarmac, stopping students from lifting a litter with two men instead of four, teaching a medical technician the right and wrong way to treat an injury, and watching as a thoracic surgeon teaches everyone, including her, to insert a chest tube—just in case they are in an emergency situation and no one else can do it.

“I’m used to working with a laboring patient and supporting her to bring a new baby into the world,” Bowers said. “What we do at EMEDS is not the same at all. I enjoy both of them, but they’re two totally different things. When you work in a hospital, especially a union hospital, if you’re a med-surg nurse, you are a med-surg nurse. If you work in the ER you work in the ER. Everything is so clear and concise. In the military, you slip into different positions. Even though you may be a med-surg nurse, for the day, you may become an ICU nurse. You become comfortable, knowing that if you’re deployed somewhere you can walk into a facility and know you’ve been trained on how to make it work.”

When patients can’t get to the hospital, when it’s their homes that are making them sick, or when natural disasters or wars rob them of access to standard medical care, someone has to be there to help. That’s where these four nurses come in.

While most registered nurses continue to work in hospitals, some find their work in far-flung locales and in unique positions that require particular skills and personalities. From jails to forensic teams, lots of different organizations need registered nurses, and here are a few who have heeded the call. They’ve left the hospital and are bringing health to the people.
Diana Emersonwas getting ready to head home after a long day of interviewing childhood sexual abuse victims when the call came in from police: They were bringing in a local woman who had spent the day tied up while two burglars ransacked her home, ate her food and demanded that she write each of them checks for $500. She was sexually assaulted during the ordeal and her husband was tied and beaten in the other room.

When the woman arrived at the San Mateo Medical Center emergency room in San Mateo, California, she was covered in bruises and wearing only a robe. The home invasion had started at 9:30 a.m., when she was just getting ready for the day.

Emerson, a nurse practitioner and the clinical coordinator of a forensic medical unit for the Keller Center for Family Violence Intervention, did a quick but thorough physical exam to make sure she didn’t have immediate medical needs and then put her in a wheelchair to bring her to her office.

Over the next hour Emerson and a police detective talked to the shaken woman, gathering any information they could get to help identify and apprehend the suspects.

The woman asked to be alone with Emerson for the next portion of her visit—a grueling, three-hour-long forensic exam of her body, in which Emerson took pictures in triplicate of every bruise, every mark left by the material used to bind her arms, and every bit of duct tape residue on her wrists. She ran a black light over the woman’s body looking for organic material and performed a pelvic exam to collect DNA samples from the man who assaulted her and treat any injuries she sustained. She also collected a few strands of the woman’s long, dark hair in case any of her hairs clung to the men as they fled in her truck.

“Her body is a crime scene,” said Emerson, 55, who worked as a certified nurse aide, LPN and RN before becoming a nurse practitioner and getting a master’s degree in forensic nursing. “Our exams are always two-fold: One is for the medical management and treatment of injuries. The other is for forensic evidence. It requires all your assessment nursing skills.”

In the end, Emerson gave the woman a pair of sweats and helped her call her husband, who was taken to the local Kaiser Permanente hospital for treatment of his injuries. She talked to her about possible sexually transmitted diseases and pregnancy, and she offered her referrals to counseling services to help her deal with the fallout of...
The cases that are really hard are the families where childhood sexual abuse has occurred,” she said. “It’s finally disclosed, the father has been arrested, the mother is devastated. All their income comes from the father and now the family is destitute and near homeless. How can you tell a child that when you tell the truth it’s going to be OK, when in reality life may become chaotic and unpredictable?”

On the other hand, Emerson said, the home invasion survivor she treated “was really strong and articulate. I know she’s traumatized now, but I know she’ll end up being OK.”

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or Angie Eccles, RN, one of the biggest challenges of her work as a visiting nurse isn’t finding the time to get to a patient or the work itself. It’s Fido and Fluffy.

Like the time when Eccles was perched in the kitchen of an older man with a leg wound, changing his dressing, and looked towards the doorway to see a huge, black pit bull staring her down. “Will he be OK with me putting this dressing on your leg, or will he think I’m attacking you?” Eccles remembers asking the dog’s owner.

He assured her that the dog would be fine, and he was. Eccles? Not so much.

“I did the dressing to the best of my ability but that dog just sat there the entire time. He didn’t bark or snarl. He just watched me,” she said. “It raised the hair on the back of my neck.”

As a visiting nurse, Eccles has spent 34 years driving from home to home, doing house calls on patients too remote or frail to make the trip to the clinic or the doctor’s office. By now, Eccles knows her corner of South Portland, Maine—where she’s spent half her career—like the back of her hand.

The therapy itself is straightforward, Eccles says. It’s the environment in which she works that’s complicated. After all, she treats the same medical conditions as any nurse in a hospital: changing dressings, checking IVs, treating and preventing pressure sores, and educating patients about how to care for their health when the nurse is no longer there. But because homebound patients aren’t under the watchful eye of a nurse 24/7, and because the home environment can sometimes encourage old, bad habits, the care requires more education and the support of family members.

“Seeing people in their homes and on their own turf you get a better perspective of who they really are and what their learning abilities are around their disease,” said Eccles. “Patients are also more comfortable in a home situation—there are no bells or buzzers and few interruptions.”

But seeing people in their homes is a double-edged sword. Take the pet issue, for one thing. Once a cat has jumped in Eccles’ lap during a visit, she carries that pet hair and dander to the next home, possibly causing a reaction in her next patient. Sometimes she has to begin setting up a sterile work environment all over again.

Several of Eccles’ patients over the years have developed pressure sores from laying in the same position for too long, a problem that in a hospital would be carefully monitored and treated—or pre-
vented altogether by regular movement and monitoring by a floor nurse. But once a patient gets home, such supervision is more difficult, and compliance with treatment can be difficult to ensure.

“Once they come home from the hospital, they figure who are we to come into their homes and tell them what to do,” she said. “What we do is a lot of teaching to make it as palatable for them as possible.”

While Eccles says the company she works for pressures her to see as many patients as possible, she—like many other visiting nurses—works independently and if a patient needs an hour of her time, she can give it. Visiting nurses first became popular in the late 1800s in both the United States and the United Kingdom—including Scotland, where Eccles was born—and achieved dramatic gains in public health in city slums of both countries. They have remained an integral part of health care in the U.K., Cuba and other countries with national health systems focused on preventive care.

In the United States, visiting nurses tend to be less common but can play an important role, especially in rural areas. While Eccles works in town, many visiting nurses in Maine travel long miles in snow, ice and other conditions to visit homebound patients who may be an hour or two away from their nearest medical center.

“We want to teach them to care for themselves better,” Eccles said, “so they don’t have to go to the hospital or emergency department.”

The Fixer

Tereresa Miller, RN

The rusted-out trailer in the driveway was the only hint that the modest, single-story home in Modesto might have health problems inside. Other than that, it had the same look as all the other houses on the block, said Teresa Miller, a Stanislaus County, California, public health nurse. The trailer was filled with the carcasses of old appliances. A stove and a stove hood sat on the side of the house.

Once inside, it only got worse. The house looked like a home renovation gone wrong. Drywall was missing and electrical wires were exposed between wall studs. Further into the house, closer to the bedroom of the 19-year-old young man Miller had come about, there were fist- and elbow-sized holes punched into the doors.

But it was the 19-year-old’s bedroom that was ground zero for what Miller had come for. Miller had received a report from the local laboratory indicating that the young man’s lead levels were 50 percent higher than healthy. That’s a big problem. Lead poisoning can affect every system in the body, causing everything from fatigue and vomiting in children to memory loss, mood disorders, pain and miscarriage in adults. It’s also known to cause developmental delays in children. This particular youth was bipolar and had attention-deficit disorder. The lead poisoning wasn’t helping.

That’s where Miller, who stayed home to raise her own children for 20 years before becoming an RN, comes in. She’s charged with following up every case of lead poisoning in Stanislaus County until the patient’s health is back to normal.

What she found in the room was a surprise even to her. The floor was littered with more appliance pieces and exposed wiring. It turned out that her client’s hobby was working on electronics, often by soldering them with lead. When the environmental health officer who went with Miller to the house tested the bedroom for lead, it scored off the charts. And since its occupant was walking around the rest of the house after soldering, the lead was in the carpet, too. He was eating with lead-covered hands and wearing lead-covered clothes all day.

So Miller came up with a plan to reduce the young man’s lead levels: He must have a place set up outside to solder and he must do it there only; he must wear coveralls while soldering that he takes off before coming back in the house; and he should wash his hands before he eats or returns to the house. And, because his mother is recovering from heart surgery and her other son is autistic, Miller referred her to another agency that provides mental health day programs that can help the woman deal with her two children’s special needs.

“Now the challenge is going to be to follow up on monthly lead testing until his results are normal,” Miller said.
Not all of Miller’s cases are so dramatic, but they all start the same way. Every lab result in Stanislaus County that reports more than 10 micrograms of lead per deciliter of blood gets sent to her office, where she contacts families, helping them to pinpoint the cause of the poisoning. Often, the home itself is the problem. Lead paint in older homes or lead in pipes can make one sick. Sometimes, the contaminant comes from kitchen pots or even candies.

“I’m a nurse, so I’m a fixer,” Miller said. “If I can help people fix something, I’m a happy girl.”

Miller likes the freedom the job gives her: She spends her days visiting families, working with other county officials, attending health fairs and designing public-awareness campaigns on the dangers of lead poisoning. Once a family is identified, she works with the family and the doctor until the lead levels return to an acceptable range.

“What I like best and the challenge of this job are the same thing,” Miller said. “I like working with the families. I like the one-on-one individual interaction. Parents generally are very motivated to help their children—usually more motivated for their kids than they are for themselves. But it’s sometimes hard to convince a family that it’s really an issue. There are no symptoms for lead poisoning. You can’t see it until later, when the child is developing or having learning or behavior or attitude problems at school.”

Then there are the cases that make it all worth it, like that of a two-year-old girl who was diagnosed with lead poisoning from the pipes in her house. Miller said the mother took the problem seriously and moved the family. She also followed Miller’s other suggestions to beef up her daughter’s calcium consumption (because the bones recognize lead as calcium and calcium absorption declines) and add cilantro to the girl’s diet. According to some studies, cilantro is a natural chelator of heavy metals and can accelerate the excretion of the toxic metal. The girl’s lead levels came down immediately.

“It’s gratifying when people make changes and learn something,” said Miller. “I want to be part of that solution.”

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