

DESPITE EFFORTS, 'TREMENDOUS NEED' REMAINS

Schools, hospitals work to cure nurse shortage



FILE / ROBERT A. MARTIN FOR GCC

Germanna nursing program graduates Kathleen Miranda (left) and Machele McAllister pose for a selfie before the 2016 commencement ceremony. Germanna graduates 130 to 140 nurses each year, but a shortage remains.

BY ADELE UPHAUS-CONNER
THE FREE LANCE-STAR

Between January and early May of this year—four months—Mary Washington Healthcare hired 106 new nurses.

“We hired approximately 49 new graduate resident RNs [registered nurses] in March of 2019 and are on target for a class the same size starting in July of 2019,” said Darla Burton, director of physician and associate recruitment for MWHC.

Despite all these new hires, there were 172 open RN positions at MWHC as of mid-May.

Germanna Community College graduates between 130 and 140 new nurses each year.

“You would think 140ish a year would fill up any demand, but we did a study and found there is still tremendous need,” said Patti Lisk, dean of nursing and health technologies at Germanna.

According to a 2015 Chmura Economics and Analytics study conducted for Germanna, the local health care and social assistance sector will need more than 11,000 new workers over the next 10 years.

It’s not just a local problem. The United States is in the midst of a significant nursing shortage that promises to get more pronounced in the next



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Spotsylvania Medical Center nurse Amanda Davitt checks supplies.

10 to 15 years. According to the Bureau of Labor Statistics, more than 438,000 new RN jobs are expected to be added to the workforce by 2026.

Several factors contribute to the nursing shortage.

Nationwide, just under 40 percent of all adults are obese, and obesity-related conditions such as heart disease, stroke, type 2 diabetes and certain

types of cancer are the leading causes of preventable death. Skilled nurses are needed to care for patients with these conditions, as well as the health care needs of aging baby boomers.

“We as a society demand highly acute care,” Lisk said.

Another cause of the shortage is that women now have more career choices.

SEE NURSE, A10

NURSE

▶ FROM A1

"It used to be that teaching and nursing were basically the two careers available to women," Lisk said.

While the numbers of male nurses have increased, men still make up only 12 percent to 15 percent of the nursing workforce, Lisk said.

And that workforce is starting to age.

"The average age of a nurse is 45 to 50," said Eileen Dohmann, senior vice president and chief nursing officer at MWHC. "When we get old and retire, we should have people in the wings to take over."

According to a July 2017 article in the Journal of Nursing Regulation, 1 million RNs will retire by 2030. In 2019, the article estimates, the nursing workforce will lose more than 2 million years of experience—the number of retiring RNs multiplied by the years of experience for each RN.

"The departure of such a large cohort of experienced RNs means that patient care settings and other organizations that depend on RNs will face a significant loss of nursing knowledge and expertise that will be felt for years to come," the article states.

Dohmann said some nurses employed by MWHC have been there for 40 years.

"When someone like that, who's very seasoned, walks out the door, who do you replace them with?" she asked.

Janet Atarhi-Dugan, director of the University of Mary Washington's Bachelor of Science in Nursing completion program, said that when she started her nursing career in a Chicago intensive care unit in 2001, she worked with two or three nurses who combined had about 60 years of experience.

Though it depends on the hospital and unit, this is no longer the norm in most facilities, especially in medical-surgical units, she said.

Medical-surgical nurses care for adult patients hospitalized for a broad range of reasons. Working in the medical-surgical unit was traditionally an entry-level position considered a stepping stone to specialty units.

"What I see is nurses stop practicing at the bedside and go back to school for advanced nursing," Atarhi-Dugan said. "Before, we had people at the bedside with way more experience."

According to the Bureau of Labor Statistics, the job outlook for advanced practice registered nurses—nurse anesthetists, nurse practitioners and nurse midwives—is expected to grow by 31 percent between 2016 and 2026.

That's double the rate of job growth for registered nurses, which is 15 percent, and more than four times the average job growth for all occupations.

Though the need for specialty nurses is increasing, the need for experienced nurses at the bedside isn't going away.

"When you don't have an educated nursing presence, it impacts how we advocate for our patients," Atarhi-Dugan said.

In 2014, the National Institutes of Health found that for every 10 percent increase in hospital nurses with bachelor's degrees, there was a corresponding 7 percent drop in patient mortality.

The same study also found that when nurses are overworked, patient mortality increases. Researchers estimated that each additional patient in a hospital nurse's workload increased the likelihood of a patient dying within 30 days of admission by 7 percent.

"So the question is, how to bring new nurses in and when they are in, how to keep them?" Atarhi-Dugan said. "How do you create a nurse who is empowered? It's an investment to retain nurses. It needs to be intentional."

TRAINING NURSES

Educating new nurses is one way to solve the nursing



Lisa Estep pushes a cart through Spotsylvania Medical Center's emergency department.



Rep. Rob Wittman visits a nursing lab at Eastern Virginia Career College in Spotsylvania County in 2018.

shortage, but this is difficult when there aren't enough nursing schools, nursing faculty or sites where students can get clinical experience.

"The pipeline gets plugged up," Lisk said.

Nurses in clinical settings command a high salary—\$71,730 per year for RNs and \$113,930 per year for advanced practice registered nurses, according to the Bureau of Labor Statistics. Academia doesn't offer that same salary.

"Moving to academics can mean a \$30,000 per year pay cut," Atarhi-Dugan said. "Some don't want to take that pay cut or they might have family to support and not have a choice."

Dohmann said nursing schools across the country have to turn applicants away because there is not enough faculty.

Nursing students also have to do a certain amount of clinical hours—usually about 520—and clinical sites are limited.

"There are only so many hospitals and they're busy," Atarhi-Dugan said. "Some schools travel 45 minutes to an hour to clinical sites."

This is more difficult in some parts of the country, especially rural areas where some hospitals are closing.

Dohmann said the Fredericksburg area is "different and unique" in that there are several facilities—Mary Washington Hospital, Stafford Hospital and Spotsylvania Regional Medical Center—that can support nursing students.

"Last year, over 700 students did rotations at Mary Washington Hospital," Dohmann said.

Mary Washington Healthcare works closely with local nursing programs at Germanna and UMW to ensure there is an educated workforce to fill its needs, and the nursing programs are working to remove barriers that might prevent students from entering and achieving their degrees.

Students can become Licensed Practical Nurses, or LPNs, in about 18 months and RNs in two years. Lisk said Germanna has redesigned its nursing curriculum with Mary Washington Healthcare to make moving from LPN to RN "seamless."

"The push is for nurses to be prepared for a [Bachelor of Science in Nursing], which is then only 30 more credits at a university," Lisk said.

Germanna is in the final

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stretch of raising funds for a new Allied Health Center at its Locust Grove campus. An additional \$2.9 million is needed, said Mike Zitz, communications and marketing director for Germanna.

It will have the same footprint as the existing health building but will be "more efficient so hopefully there will be more space that we can use more wisely," Lisk said.

Germanna also recently expanded its nursing program to Stafford County.

"There are 20 students there now who are very excited to be there," Lisk said.

Lisk said Germanna's nursing program is "very highly regarded," with an average of 98.9 percent of graduates passing the nursing licensing exams.

UMW started offering nursing programs in 2014. The one-year Bachelor of Science in Nursing completion program for RNs was initially funded by a grant from the Mary Washington Hospital Foundation. It is designed to complement Germanna's program.

UMW also offers concurrent enrollment to students in Germanna's RN program who want to get a start on their BSN coursework. Students can take summer classes at UMW at part-time tuition rates and are then guaranteed admission to the BSN completion program upon graduating from Germanna.

"It is to meet the needs of students who from a financial or practical standpoint can't be in school full-time," At-

arhi-Dugan said.

"There is a workplace environment challenge."

At graduation, Dohmann said, new nurses "know enough to pass the test," but translating that to caring for actual patients is hard.

"People are not at their best in the hospital," Atarhi-Dugan said. "They're vulnerable."

In 2013, MWH established a residency program for new nurses that is helping to ease the transition from school to the workplace.

New hires meet on a regular basis with a facilitator, who is a clinical nurse specialist, and also check-in monthly with the other new hires in their cohort to talk about how things are going.

When the new hire program started, one group of 15 recently graduated nurses was brought in once a year. Now, new groups start four times per year.

Since 2013, nurses who go through the new hire program are staying with MWH at a rate of 92 percent, Burton said.

"We are constantly looking at how we are recruiting and how to seek the experienced nurses we need," she said. "We have to pay attention to the level of experience per shift, per floor, per day. It requires a lot of work from the hospital's side."

MWH also offers a scholarship to qualified RNs to pay for their BSN coursework while they work.

In addition, Dohmann said the hospital is making use of "creative staffing" to meet the shortage.

In 2018, MWH partnered with an organization that sponsors nurses from other countries and brings them to the U.S. to work.

"The nursing shortage is not international," Dohmann said. "These are nurses with 15-20 years of experience who can't find work in their home countries."

Forty-seven international nurses—both men and women, from countries including Jamaica, the Philippines, India, Canada, Egypt, Syria and Sri Lanka—are now employed at MWH and are going through the process of becoming U.S. citizens.

"Our hope is that they're here to stay," Dohmann said.

The hospital is also invested in helping empower its nurses, she said. The Advancing Clinical Excellence program gives nurses the opportunity to take on a project, such as leading the implementation of a new medical procedure or piece of equipment.

Nurses can advance through four ACE levels.

"The whole intent is empowerment," Dohmann said. "You want nurses making decisions about their practice."

Atarhi-Dugan said she thinks nurses recognize the role they play in improving patient outcomes, but she doesn't think the wider public does.

"We're not just taking orders from doctors," she said. "We change lives. We save lives."

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FILE / ROBERT A. MARTIN FOR GCC

With a shortage locally and nationwide, nursing school graduates are in high demand.

Caroline hemp farm aims to cash in on legal change

BY ADELE UPHAUS-CONNER
THE FREE LANCE-STAR

A few years ago, Bill Pickett was in the mountains near Bama Yao in southwestern China, picking wild hemp seeds with a 90-year-old resident.

Residents of Bama Yao—which is near where Pickett and his wife, Bixia, own a second home—have a life expectancy of over 100 years. As of 2013, there were 81 centenarians living there.

Part of the reason for this longevity, Pickett said, is that hemp seeds are a regular part



Pickett checks a hemp seedling. There are many uses for industrial hemp, but getting high isn't one of them.

of the villagers' diet.

"They steam them and make them into a porridge," he said. "They say hemp originated in that region."

Pickett suspects that the seeds he picked on that trip came from plants that were 4,000 to 5,000 years old.

"They haven't been stepped on a lot," he said. "There's a purity."

He hopes that purity comes through in the cannabis sativa plants now growing at Cool Water Farm, the Caroline County property that has

SEE HEMP, A8

HEMP

► FROM A1

been in his family for 100 years.

He developed the proprietary strains he grows—which he calls Virginia Gold and Cool Water Cherry—through open pollination of several hemp varieties, including the ancient Chinese strain, and harvested his first salable crop last August.

Virginia Hemp Commodities, the business the Picketts established, sells hemp seed and hemp plants. Pickett hopes to eventually extract CBD oil for sale.

According to the VHC website, Cool Water Farm is first licensed hemp farm in Caroline and the only source in the state for hemp seed.

“If something inspires me, I dig in and try to learn as much as I can,” Pickett said.

There is growing local and national interest in the farming of industrial hemp. The 2018 federal farm bill established a regulatory framework for the commercial production of hemp and at the end of March, Virginia Gov. Ralph Northam signed legislation permitting the growing and processing of industrial hemp for commercial purposes in the state.

Until then, hemp could be grown only as part of a research program in partnership with a college or university.

Both hemp and marijuana derive from the genus of plants called cannabis, but the two plants differ in how they are cultivated and harvested. Marijuana plants are cultivated to have high levels of the chemical compound tetrahydrocannabinol, or THC, which produces the “high” feeling.

Hemp is cultivated to have low levels of THC and will not produce a buzz. It is an ancient crop that was important for colonial Virginians, who were required by the British to cultivate it for making canvas sails—the word “canvas” derives from “cannabis.”

Pickett said he’s been watching the progression of the hemp industry in the United States since about 2010, and in 2016, he started working with John Fike at Virginia Tech to develop his own seed. He now has separate state licenses to grow and process hemp, as well as a license for distributing the hemp seed.

Pickett said the focus of his



PHOTOS BY MIKE MORONES / THE FREE LANCE-STAR

Bixia Pickett stands in a greenhouse full of hemp seedlings on the farm that has been in her husband’s family for generations. There are a number of licensed hemp fields in the region.



Hemp has myriad uses as a renewable agricultural product, but the focus is on seed production at Cool Water Farm.

business is in the health and medical benefits of hemp seed and in cannabidiol, or CBD.

“CBD is the medical part,” Pickett said.

According to Brightfield Group, industry analysts for the cannabis and CBD market, CBD will be a \$22 billion industry by 2020.

Studies published in the National Institute of Health database have found that cannabinoids such as CBD can help with pain relief, reducing anxiety and depression, alleviating cancer symptoms, treating seizures and lowering blood pressure, though most studies also say

further research is needed.

Cool Water Farm makes a salve with 1 percent CBD oil. Pickett said he rubs it on his aches and pains and finds it soothing.

“But it could be placebo effect,” he added.

Industrial hemp can have CBD levels up to 20 percent and Pickett said Cool Water Farm’s product is “up to the higher end.”

According to federal regulations, industrial hemp plants and their derivatives—fiber and seed—cannot have THC levels higher than 0.3 percent. Pickett said the highest THC level his hemp plants measured last year

was 0.2 percent at maturity.

If a crop is found to have levels of THC that are too high, it will have to be destroyed.

High THC levels can be caused by the growing environment or an overly long flowering season. They can also be caused by accidental cross-pollination with a nearby hemp crop. That’s why the Picketts also grow hemp in several other undisclosed locations around the county that are more remote than Cool Water Farm.

Cross-pollination causes problems both for hemp farmers, by making THC levels too high, and marijuana farmers, by making levels too low.

“Friends in Oregon [where growing marijuana is legal] have a lot of trouble just growing [hemp], because of all the contamination,” Pickett said. “I hope Virginia takes a little slower approach [to possibly legalizing marijuana].”

According to the Virginia Department of Agriculture, there are 15 licensed hemp production fields in Caroline, four in Stafford County, four in King George County and three in Spotsylvania County. As of last week, the state has issued 629 grower registrations and 92 processor registrations across the state.

Pickett, who also works as

vice president of Hoover Treated Wood Products, said he thinks everybody sees dollar signs when they think about hemp farming.

“But they shouldn’t be focused on that,” he said. “You should go into it with the idea that you’re a farmer and you like to grow things, to plant a seed and see the product of the work.”

At Cool Water Farm, Bixia Pickett starts baby hemp plants from seed in her greenhouse. When they are old enough, she separates the males from the females.

Both male and female hemp plants go into the ground at Cool Water Farm so pollination can occur and seed will develop. At the isolated locations, the Picketts plant females only, to get flowers and buds without cross-pollination for extracting CBD.

Hemp can’t take frost, so it is planted outside once that danger has passed—though Pickett said he is working on developing a variety that can overwinter.

The soil at Cool Water Farm is a sandy loam, which hemp likes because its roots can spread out, he said. The plants get water from a drip irrigation system—they don’t like to stay wet.

“They like to take a shower and dry out,” Pickett said.

Everything is organic. Pickett said his father and grandfather, who farmed the same land before him, never used pesticides and it’s never been part of his routine, either.

Instead, he grows clover in between rows of hemp. This has the dual effect of keeping weeds down and providing nitrogen-rich fertilizer to the hemp.

Last year, some of the hemp plants grew to 14 feet tall, and six feet in diameter.

Fiber from hemp stalks can be used to make rope, textiles, clothing, shoes, food, paper, bioplastics, insulation, and biofuel.

Though it has so many potential uses, Pickett said any success he’s had didn’t come from hemp as a product, but from working hard.

“It’s profitable, but it’s hard work,” he said. “We spent \$20,000 last year on just a couple of acres. I’m doing this with the mindset that I can develop something that really has some use.”

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Stafford schools agree to change asbestos policy after complaint

BY ADELE UPHAUS-CONNER

THE FREE LANCE-STAR

Stafford County Public Schools is making changes to the way it communicates information about asbestos-containing materials in its schools following a review of its practices by the Environmental Protection Agency.

The review was conducted by the EPA after a complaint from a community member with ties to Ferry Farm Elementary School.

SEE ASBESTOS, A5

ASBESTOS

► FROM A1

The EPA did not release the community member's name and she asked to remain anonymous out of concern about possible repercussions.

She was concerned about the school division's possible noncompliance with the 1986 federal Asbestos Hazard Emergency Response Act and how it affects Ferry Farm. Under the act, local education agencies are required to identify possible asbestos-containing materials in school buildings, develop a management plan for those materials and make the plan available for public review.

School divisions are also required to "provide yearly notification to parents, teachers, and employee organizations on the availability of the school's asbestos management plan and any asbestos-related actions taken or planned in the school," according to an EPA fact-sheet on AHERA.

The community member said she has never received communication about possible asbestos-containing materials in the school, which was initially constructed in 1957 with renovations and ad-

ditions completed in 1963, 1989 and 1992.

According to schools spokeswoman Sherrie Johnson, AHERA management plans are available to be viewed at each school that has one.

The schools, as identified in the division's 1989 AHERA management plan, are Moncure, Falmouth, Ferry Farm, Garrisonville, Grafton Village, Hartwood, Stafford and Widewater elementary schools; Wright, Drew, Stafford and Gayle middle schools; and Stafford and North Stafford high schools.

"Information on the division's AHERA Management Program is on the division's web site and can be easily found by engaging the search engine using 'AHERA' as the search word," Johnson continued.

The community member felt that online availability of the information doesn't meet the requirement of annual notification, and also has concerns about how asbestos-containing materials will be handled in the upcoming \$1.8 million renovation to parts of Ferry Farm.

Asbestos-containing materials will not release asbestos fibers—which, if inhaled, can cause lung cancer and other health

problems—unless they are disturbed or damaged in some way by aging or physical impact. These materials are most dangerous when they become friable, or able to be crumbled by hand.

According to Ferry Farm's 1989 AHERA management plan, friable asbestos-containing materials were found at Ferry Farm, as well as both friable and nonfriable suspected asbestos-containing materials. At the time, identified and assumed asbestos-containing materials were located in the ceiling tile, pipe and boiler insulation, floor tile and adhesives throughout the school.

More recently, results of six-month and three-year reinspection reports, which are mandated under AHERA, show that identified and assumed asbestos-containing materials still exist in fire doors throughout the school, tile adhesive in the storage room, art room and basement wing, glue dots behind chalk and bulletin boards in the original portions of the school, the stage curtains and the blue floor tile in the cafeteria and associated spaces.

According to the most recent two reviews, conducted by Apex Cos. in

September 2018 and April of this year, all the identified and assumed asbestos-containing materials are in good shape with low potential for future damage—with the exception of the blue floor tile in the cafeteria, where cracking adjacent to the stage has "high potential for future damage."

In April, the EPA confirmed that it was investigating the Ferry Farm complaint about noncompliance.

"EPA has received and is reviewing a complaint from a concerned citizen regarding compliance with [AHERA] at the Ferry Farm Elementary School," EPA spokesman Roy Seneca wrote in an email to The Free Lance-Star.

According to Scott Horan, assistant superintendent for operations at Stafford County Public Schools, "No inspection was done by EPA."

"We just exchanged some information through phone calls and emails, very informal," he wrote in a May 15 email forwarded by Johnson to The Free Lance-Star.

In an April 11 email exchange between Horan and EPA compliance and enforcement officer Christine Convery, forwarded to The Free

Lance-Star by the Ferry Farm community member, Convery wrote, "It is EPA's position that [local education agencies] may put AHERA info and documents on their website, however relevant parties must be notified at least once a year in writing (example: in local paper, as a flyer home to parents, etc.) of the availability of the info. In other words, the relevant parties must be notified that the information is on the website, otherwise they will have no idea that it's there."

In his May 15 email, Horan wrote that the division will "improve our communication to the community by ensuring the AHERA information is on each school website as well as a future notice will be sent out to the community through the school newsletter once a year."

"We are in the process of making all the AHERA reports accessible on the division's website by going to the website," he continued. "In the past, we just had our required statement and who to contact. To date, we have several school data reports in place and the remaining should be in place by the end of [May]."

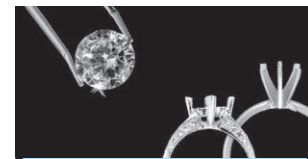
Convery wrote to the

member on April 24 that she is still working with the school to determine when the school community will first receive a notice in writing about identified and assumed asbestos-containing materials.

Regarding the upcoming renovation, Horan said asbestos abatement plans would be posted on the school's website and the division's website when final design documents are completed in late August.

The 2019-20 school year begins Aug. 12 for Stafford County Public Schools.

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