

FALL/WINTER 2023



Mary Greeley  
MEDICAL CENTER

# Health

## CONNECT



# TEAMMATES

An Iowa State student-athlete faces a life-changing health crisis.

- ▶ Carroll residents find severe back pain relief
- ▶ Get a look inside our new Behavioral Health unit
- ▶ Antibiotic stewardship: Why it's vital to your care

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By **Brian Dieter**  
Mary Greeley President and CEO

FALL/WINTER 2023

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## Thank You, Sarah

**S**arah Buck started work at Mary Greeley in 1972, making \$2.65 an hour as a secretary to an assistant administrator.

In December, after nearly 50 years of service to the medical center in a variety of roles, she will complete her final term as a member of our Board of Trustees.

Mary Greeley has served central Iowa for more than a century, and many people – doctors, nurses, administrators, and so many others – have helped shape the care it provides. Few have had as significant an impact as Sarah.

A year after joining the hospital staff, she was named executive assistant to John Worley, who was then president of the medical center. In 1980, she was appointed director for Marketing and Information Services, essentially creating the department that continues to promote the services of Mary Greeley.

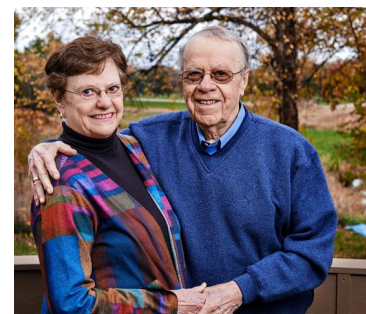
She left Mary Greeley in 1987 for a position at the Iowa State University Foundation, but her commitment to the hospital continued. She successfully ran for the Board of Trustees in 1993, serving a total of 30 years, including 24 years as the Board chair. During her tenure, the hospital hired new leadership, added new services, and expanded its facility.

Active with the Iowa Hospital Association, Sarah has been instrumental in ensuring that each Board of Trustees member is IHA certified. Few hospital boards in this state have consistently achieved this. Certification ensures that our Trustees are truly involved in the state's healthcare community and making deeply informed decisions.

She has been an example to everyone who has served alongside her. She's the ultimate volunteer, giving her time and talents to organizations devoted to improving lives in central Iowa. Her volunteer work has been recognized by Mary Greeley, the Story County Alliance for Philanthropy, Arc of Story County, and more.

I could go on about Sarah, but she would likely want me to stop now. Her contributions have been significant, but she remains a humble leader.

She also has been, and will always be, an inspiring one.



Sarah Buck and her husband, Ben.

## CONNECT WITH US!



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To learn more about supporting the priorities of Mary Greeley, visit [www.mgmc.org/foundation](http://www.mgmc.org/foundation).



### Visit us online

Learn more about Mary Greeley's programs and services at [www.mgmc.org](http://www.mgmc.org).

### Contact us

Individuals are encouraged to contact Mary Greeley Medical Center if they have any concerns about patient care and safety in the hospital that have not been addressed. If the concern continues, individuals may contact the Iowa Department of Inspections, Appeals, and Licensing, 321 E. 12th St., Des Moines, IA 53119. You may also call 515-281-7102 or e-mail [webmaster@dia.aow.gov](mailto:webmaster@dia.aow.gov).

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# Q&A

Mary Greeley Medical Center has been recognized as an Antimicrobial Stewardship Center of Excellence by the Infectious Diseases Society of America. This means we know what we're doing when it comes to antibiotics. Here, Jill Bode, Mary Greeley pharmacy clinical manager, explains antibiotic stewardship and what it means to our patients.

## What is antibiotic stewardship and why is it important?

Antibiotic stewardship is the effort to measure and improve how antibiotics are prescribed by clinicians and used by patients. Improving antibiotic prescribing and use will help better treat infections and protect patients from the harms of unnecessary antibiotic use, including antibiotic resistance.

## Why should patients care about it?

Thirty percent of all antibiotics prescribed in U.S. hospitals are not needed or are not optimal. Globally, at least 700,000 people die each year due to drug-resistant diseases. Inappropriate use of antibiotics could lead to common infections becoming untreatable. By the year 2050, antibiotic resistant infections could cause 10 million deaths if no action is taken.

At Mary Greeley, we focus on making sure patients get the right drug, dose, and duration. After a few days of treatment, your healthcare team might change or even stop your antibiotic once they have more information on your condition. The benefits of our antibiotic stewardship efforts include better infection cure rates and fewer treatment failures, adverse effects, and antibiotic resistance.

## What should people know about antibiotics?

If a patient needs an antibiotic, the benefits outweigh the risks of side effects or antibiotic resistance. However, taking an antibiotic when it is not needed could cause harm. Common side effects of antibiotics are: nausea, diarrhea, rash, dizziness, or yeast infections. A more serious side effect known as C. diff (*Clostridioides difficile*), may cause diarrhea that can lead to severe colon damage and death. Some patients may also have a severe or life-threatening allergic reaction to the antibiotics.

Antibiotics do not work on infections caused by viruses like colds, flu, bronchitis, and runny noses. Any time antibiotics



Jill Bode (middle), pharmacy clinical manager, confers with Dr. Dan Fulton and Dr. Lindsey Rearigh, McFarland Clinic infectious disease specialists.

are used, they can cause side effects as previously described.

If you are prescribed antibiotics, take them exactly as prescribed. Talk with your doctor or pharmacist if you have any questions or if you develop side effects, especially diarrhea. In some cases, your doctor may give you a prescription for antibiotics, but tell you to wait and see if you feel better in a few days before filling it. If you feel better, you do not need to fill the antibiotic prescription.

## Who is involved in our antibiotic stewardship program?

We have a diverse team of pharmacists, nurses, clinicians, and more. Our stewardship program is co-led by infectious diseases specialist Dr. Dan Fulton, McFarland Clinic, and me in the pharmacist role. Dr. Lindsey Rearigh, McFarland Clinic infectious diseases specialist, is also a top advisor to our program. Additionally, we have a core group of antibiotic stewardship trained pharmacists who review patients daily and make evidence-based recommendations to providers. Clinicians process a lot of complex information on their patients. The Antimicrobial Stewardship Team

provides them with education and recommendations using the latest evidence-based prescribing practices.

## Finally, why should patients care that we are an Antimicrobial Stewardship Center of Excellence?

The Infectious Diseases Society of America's Centers of Excellence program recognizes hospitals that show excellence in antimicrobial use and preventing antimicrobial resistance. By achieving this designation we highlight that we have processes and policies in place to consistently provide high-quality stewardship principles and demonstrate a high-level commitment to antibiotic stewardship.

To learn more about antibiotics and how they are used, visit

[www.cdc.gov/antibiotic-use/pdfs/BAA-Brochure-Smart-Use-Best-Care-P.pdf](http://www.cdc.gov/antibiotic-use/pdfs/BAA-Brochure-Smart-Use-Best-Care-P.pdf)

or

[www.cdc.gov/antibiotic-use/pdfs/Improving-Antibiotic-Use-508.pdf](http://www.cdc.gov/antibiotic-use/pdfs/Improving-Antibiotic-Use-508.pdf)



# A Hopeful Place

## Mary Greeley Opens A New, Advanced Behavioral Health Unit.

**W**ith the opening of a new adult inpatient Behavioral Health unit, Mary Greeley has expanded our ability to provide high-quality mental health care.

The inpatient unit is a key component of our comprehensive mental health treatment program, which includes an Outpatient Behavioral Health Clinic, dedicated mental health treatment space in our Emergency Department, and a Transitional Living-Subacute Care facility.

The new inpatient unit has three specific areas: High acuity, moderate acuity, and the general unit. This structure enables us to deliver a level of care suitable to each patient and in a safe, comfortable environment. The new unit has 24 patient beds. All patient rooms are single occupancy except for two double-occupancy rooms. We have more single rooms than in our previous inpatient unit, which enables us to care for more patients and lessen situations where patients need to be turned away for lack of beds.

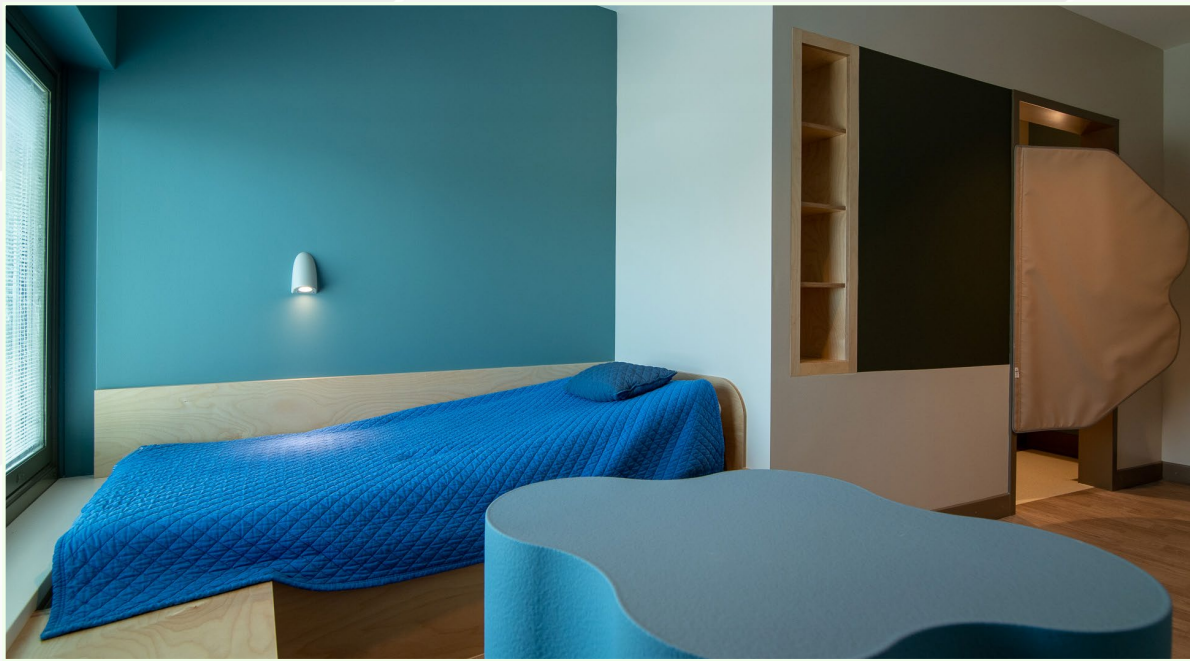
Our rooms have a uniform design and a variety of safety features, including:

- A built-in bed with a one-piece mattress cover and bedspread
- Large, foam rubber table
- Non-ligature fixtures
- Breakaway bathroom door
- Security cameras in high and moderate acuity rooms
- A door that has an alarm that goes off if more than 2 pounds of pressure is applied to the top of it.

Other features of our new unit include:

- An intake area used during the admissions process.
- Social areas with large televisions and gaming systems.

Clockwise, beginning on opposite page: A social area in one of the three sections of the new Behavioral Health unit; a patient room; therapy room for group therapy and other activities; and a consultation room.



## ▶ VIDEO

Take a video tour of our new inpatient Behavioral Health unit  
[www.mgmc.org/BHtour](http://www.mgmc.org/BHtour)



- Benches near this area that offer a quiet space for patients. These benches were one of many features recommended by our Mental Health Patient-Family Advisory Council.
- Quiet activity rooms for when a patient wants to be alone but not in their room.
- Water stations that patients can use, which frees up staff.
- Three seclusion rooms with padded walls and floor for patients who are acting physically aggressive.
- Therapy room for group therapy, recreational therapy, pet and music therapy, and other activities.

- Flex rooms near nursing stations that can be separated by a door and used for a variety of needs. For example, the rooms can be used for patients with physical disabilities. They can be utilized to accommodate an increased census of high acuity or moderate acuity patients. They can also be used as a secure space for patients who are a danger to others or could be in danger from others.
- Rooms for consultations and court proceedings.
- Areas designated specifically for staff.

Mary Greeley's new adult inpatient Behavioral Health unit demonstrates our investment in and commitment to thoughtful, high quality mental health care. ■

# Getting to Know You

Expanded questions asked at admission aimed at enhancing care.

**By Jo-El Sprecher, Mary Greeley Patient Experience and Safety Director**



If you've ever checked into a hospital, you know the process involves a few questions.

Questions about your insurance. Questions about your current health status. Questions about personal preferences. At Mary Greeley, it's all part of getting to know you so that we can provide the level of care you expect and deserve.

Those questions are now more important than ever. Recently, we enhanced our efforts to personalize care by integrating questions on Social Determinants of Health (SDOH) into our MyChart patient portal and admission processes. This will allow us to gather valuable information, supporting a more comprehensive understanding of our patients' needs, and enabling the development of more tailored care plans for our patients and their caregivers.

## YOUR NEEDS

When you come to the hospital for an inpatient stay, you can expect to be prompted by a nurse to provide information on various aspects of your social circumstances such as: housing, employment, education, access to transportation, social support, etc. Once received, this information is stored in your medical record for review by your care team. From there, you may receive a visit from a member of our care coordination team or another member of your care team about additional support or resources that may benefit you.

Though SDOH information will enhance our understanding of your needs and help us personalize your care, we acknowledge that inquiries about social needs may appear highly personal or invasive. In addition to admission nurses asking questions about SDOH, you or your healthcare proxy also have the option to enter your own SDOH information via MyChart. Information can be

entered or updated any time similar to other demographic data that you would update before an outpatient appointment or hospital stay. Patients also have the option to decline answering any questions they choose. (If you don't have a MyChart account and would like to sign up for one, please visit [www.mgmc.org](http://www.mgmc.org) and click the MyChart icon at the top of the page.)

## YOUR DATA, YOUR CARE

Only about 20 percent of a person's health is impacted by what we do when they are with us in the hospital. Eighty percent of every individual's health is impacted by the conditions in which they live, work, and play. In recent years, healthcare organizations have recognized the importance of collecting SDOH data and using it to improve the health of patients and communities.

SDOH refers to the social and economic factors that impact an individual's health and well-being such as: income, education level, employment status, housing conditions, and access to healthy food, transportation, and social support. SDOH information allows healthcare providers to tailor their services and interventions for individual patients. For instance, with SDOH data, care coordination teams are better able to identify when patients have barriers to accessing nutritious food and can connect them with local food assistance programs or schedule follow up appointments with nutrition services to address specific dietary needs.

Additionally, they can provide patients with transportation options to ensure they can access needed resources effectively. Addressing these factors is important to a patient's overall well-being and positively impacts their overall recovery.

Hospital SDOH data collection can also promote enhanced collaboration and partnerships with community-based organizations. For instance, partnering with local housing organizations can help patients who are at risk of homelessness or living in unsafe conditions. Furthermore, collaboration with community health centers, nonprofit organizations, and faith-based organizations can help our care teams address the loneliness and social support needs that nearly one-third of adults experience and that lead to higher rates of depression, heart disease, and cognitive decline.

### PATIENT-EXPERIENCE FOCUSED

Today's healthcare landscape is dynamic and ever-changing. Quality and patient experience have become more important than ever before. Patients expect and deserve to receive the highest level of care at every touchpoint in their healthcare journey because, after all, their health and well-being are at stake. At Mary Greeley Medical Center, we believe what sets us apart is our unwavering commitment to delivering outstanding high-quality care that ensures each patient feels valued, heard, and respected. SDOH complements our other processes, including:

- **Bedside shift reports:** These ensure seamless transitions in care by involving patients in the handoff process, fostering transparency, and improving communication between healthcare teams. Hourly rounding reinforces a culture of proactive care by regularly checking in on patients, addressing their needs promptly, and proactively anticipating any potential issues.
- **MyChart Bedside:** This offers personalized access to medical information, empowering patients to actively participate in their care decisions.
- **Sonifi:** Our interactive entertainment system not only entertains patients during their hospital stay, but also provides educational content to promote a more positive patient experience.

The mission of Mary Greeley Medical Center is to advance health through specialized care and personal touch. As healthcare providers, we recognize that behind each of these data points is a person that deserves the very best from us. By enhancing the information available to our clinicians, we can provide the high-quality care Mary Greeley is known for, with consideration of each person's unique needs. Our commitment to continuous improvement extends beyond the four walls of our organization and into the community we serve and through the lives of patients. ■



# SDOH

SOCIAL DETERMINANTS  
OF HEALTH

## SDOH Questions

Social Determinants of Health (SDOH) refers to questions that you will be asked when you are admitted to the hospital. The questions are designed to help us understand your needs and, if available, recommend resources that may be of assistance to you.

Here are a few examples of SDOH questions:

- In a typical week, how many times do you talk on the phone with family, friends, or neighbors?
- In the past 12 months, was there a time when you did not have a steady place to sleep or slept in a shelter?
- In the past 12 months, has lack of transportation kept you from medical appointments or from getting medications?
- How hard is it for you to pay for the very basics like food, housing, medical care, and heating?



▶ VIDEO

Hear Cole share his story at [www.mgmc.org/Cole](http://www.mgmc.org/Cole).

Cole Carlucci's right leg remains scarred after dramatic treatment for an infection.



# MUSCLING THROUGH

How a team of specialists came together at Mary Greeley to save a young student from a life-threatening infection.

BY STEVE SULLIVAN

If Cole Carlucci is wearing shorts, someone will inevitably ask him about his scars.

There are four on his right leg and you can't miss them.

"I kind of like when people ask me about it. I'll just tell them I got a crazy infection. Pretty rare, though, so you don't have to worry about it," he said.

'Crazy' doesn't quite capture the level of health crisis Cole faced. 'Potentially life-threatening' does though.

## COLE'S TEAM

Cole knows what it means to be part of a team. He played football in high school and is an Iowa State University Cyclone wrestler. However, the most important team he joined may be the one that fought a formidable opponent: a potentially deadly infection invading Cole's body.

"This was a really challenging case," said Dr. Bryan Warne, a McFarland Clinic orthopedic surgeon who operated on Cole. "From a treatment and diagnostic standpoint, it was complicated and challenging, and one that involved multiple specialties."

"I love taking care of these hard cases, helping people through these tense situations," said Dr. Dan Fulton, McFarland Clinic infectious disease specialist. "What I loved about Cole's case is that we had all the specialists we needed from start to finish."

Cole came to Iowa State from Colorado on a full-academic scholarship. He was hoping to play football in college, but that plan changed when he was invited to visit the campus by a representative of the wrestling program.

"I fell in love with Iowa State and Iowa," he said. "I'm really happy I came here. I made the right decision for sure."

While a high school senior, Cole had surgery on his ACL. He had to sit out part of his first wrestling season at Iowa State due to the injury. In April, he was eligible to compete at the U.S. Open Wrestling Match in Las Vegas but fell ill prior to the match.

"I noticed my leg was starting to hurt. They were both swelling. It seemed like nothing new because I had had a knee injury before," he said.

He ended up at Mary Greeley's Emergency Department with a 104 ° fever. After the fever was brought down, he was sent home with antibiotics. He was ultimately diagnosed with strep throat.

The next day, still feeling miserable, Cole's trainer, Tim Weesner, sent him to the Stark Athletic Training Building. There, Cole met Warme, who works closely with the ISU Athletic Department.

"He and I went through a lot. It was a shared experience that brings people closer together," said Warme.

Cole's strep diagnosis may have been a red herring, Warme noted.

"It might have thrown the medical providers off. The strep throat could explain the high fever and why he was so sick. In reality, he had this infection brewing in his pre-patella knee area, which is in front of the knee cap. That's what was making him really sick," Warme said. "The strep throat, in retrospect, may have been just colonization of the bacteria and not an actual throat infection."

"Dr. Warme saw me, and he immediately realized how serious it was," Cole remembers. "He started talking about having to drain it, and even told me about possible surgery. I was shocked. I was like, 'I just had a fever last night, and now I'm maybe getting surgery. I'm supposed to wrestle next week in the U.S. Open in Las Vegas.'"

Cole went back to the ER, and then was admitted to Mary Greeley for 14 days. On Sunday, April 16, he was in a Mary Greeley operating room having the first of several surgeries.

# GRATEFUL PARENTS

## Cole Carlucci's mom and dad share their feelings about the care their son received.

Sending Cole Carlucci off to college in another state "was one of the hardest things we've done as parents, but we were confident that he was ready and we were so excited for him to start this new chapter of life," said Cole's mom, Elyse.

When Cole got seriously ill and had to have multiple surgeries, Elyse and Cole's dad, Brian, soon learned that sending their son to Ames, Iowa, was a good decision. The young Cyclone had great support from Iowa State University, particularly the wrestling program, his faith community, and the medical team that helped him through his crisis. Cole's parents are understandably grateful and were kind enough to share these thoughts with us:


"When you are far away from your kid it's incredibly comforting knowing there are other people that will step in and care for them when you can't. We are so thankful for the way Cole's coaches, trainers and teammates supported our family. Cole's trainer, Tim Weesner had waited with him for hours in the ER and in his hospital room. He came every day to sit with us and was an amazing go between for us and the doctors in understanding what we were up against and navigating each next step.

In addition to the support from the school and his team we appreciated the visits he had from leaders at his church and the college ministries he's involved in.

We cannot speak highly enough about our experience at Mary Greeley. During a scary and unknown time, we felt so well cared for. Dr Warme and Dr Fulton went above and beyond to explain what they could so we could understand the seriousness of Cole's sickness. Our nurses were caring and thoughtful.

Jamie (Warg) was our wound care nurse and was so knowledgeable, kind and patient. Doctors and nurses that made themselves available for Cole's surgeries, after care and as sounding boards when trying to make critical decisions. The staff at Mary Greeley made us feel seen and heard. They took amazing care of all of us. One nurse from the wound care clinic that came in over the weekend to do the hyperbaric treatment on her day off told us "if this was my son, I would hope someone would do this for him." That sums up how we saw Cole being cared for –doctors, nurses and everyone in between caring for him like he was their own.

It was a truly terrifying experience but we will forever be grateful for the Ames community, Iowa State and Mary Greeley for contributing to Cole's full recovery and the bright future he has ahead of him."



Dr. Bryan Warme, McFarland Clinic orthopedic surgeon who works closely with the ISU Cyclones, and Cole Carlucci, a Cyclone wrestler who was treated by Warme and a team of other specialists.

## FACING THE OPPONENT

During the first surgery, Warme opened up the area in front of Cole's knee and washed out the toxic materials. Cultures were sent to Mary Greeley's lab and showed that the fluid drawn from the knee had streptococcus, the bacteria that causes strep throat.

While having the diagnosis provided valuable information for antibiotic treatment, it was "concerning to me because this particular organism that causes strep throat is really dangerous when it's in soft tissues and, particularly, in areas that have what we call fascia, which is the body's material that envelops the muscle compartments," said Warme.

This concern prompted Warme to get Cole back in the OR and wash out the infected area a second time.

"I thought this was going to be routine — wash it up a second time, close everything up, send him on his way," Warme said. "When I got in there, the area that I'd washed out the two days before had spread into the quadriceps muscles underneath the skin."

"Streptococcus bacteria produces destructive exotoxins. When it's in the throat, oxygen and other factors can neutralize the effects. When the toxins are trapped under the skin, it can be hard to get control of," said Warme. A third surgery on April 21, revealed that the bacteria was moving further into Cole's leg, prompting fears of necrotizing fasciitis, which is also referred to as "flesh-eating disease." Shortly before Cole became ill, a college wrestler in Nebraska was diagnosed with this condition, intensifying concerns

about the young Iowa State student.

"Necrotizing means that the tissue is dying. So, basically, it's a rapidly progressing problem where this fascia just dies and this bacteria spreads quickly," said Warme. "I hadn't really seen that since my residency, and I'm pushing 15 years into my practice now, and that was when we asked general surgery to start weighing in on this."

Drs. Benjamin Schlicher and Gregory Sachs joined the team. The two McFarland general surgeons handle a greater volume of wound-related procedures compared to what an orthopedic surgeon typically performs. The two served as additional expert eyes in the operating room. An MRI was ordered to get a deeper look at the leg muscles.

"I remember Dr. Warme telling me, 'Red is healthy, black is dead, yours is purple.' Cole said. "He then told me, 'I am going to go open up and look at your muscle. If it's dead, I have to take it out.'"

This was an unusually stressful experience for Warme, who is accustomed to getting injured young athletes back to their sport. With Cole, he was focused on saving the young man's leg.

"As an orthopedic surgeon and one that focuses on sports medicine, I'm really wired mentally to fix things and get people back on the mat. In this case, it was the exact opposite," he said. "This is where I was having to make decisions to cut out muscle and fascia in order to save the kid's leg, which is a destructive surgery, not the reparative surgery I'm accustomed to."

"That was the part that was really hard – telling an otherwise really healthy kid who was an all-state football player, state champion wrestler, that this is a life-altering thing to radically take out dead muscle," Warne said. "Thankfully, we decided not to take much at that point, and we were starting to turn the corner and win at that point."

"It was extremely scary when you're about to be put to sleep, and you might wake up with no quad muscle," Cole said. "So, going to sleep that day, I remember just praying. I was like, 'I just want to be safe. I want to keep wrestling. I want to keep walking.' I remember coming out of surgery and just feeling my leg, and just thanking God that it was all there."

Cole still had open wounds on his leg, with pumps constantly removing potentially harmful fluid.

"By the fourth surgery, I had three giant pumps and sponges everywhere, and my leg literally looked like a cow with black spots," he said. "I just laid in bed, and I heard those pumps ticking all day. It was crazy, but at least my leg was there."

## ANTIBIOTICS

"I'm just so thankful that Dr. Fulton had him on antibiotics, which were starting to kill the virus," Warne said.

Cole didn't technically have necrotizing fasciitis but "it was pretty darn close," said Fulton.

A surgeon may opt to sacrifice a muscle in a person who may not use that muscle extensively. removal is done to speed up the intervention against the infection. With an athlete like Cole, the case gets complicated. Another obstacle he faced was the fact that the bacteria Cole carried had an unusual and unexpected resistance to antibiotics, which isn't typical with streptococcus. This made treatment more difficult. Fulton worked closely with the surgeons on the case, monitoring the condition of the tissues in Cole's leg to ensure the antibiotics were helping the team win this one.

"We all had it in our mind that this is part of who he is, and his quality of life really depended on him being able to keep his lifestyle," said Fulton. "The challenge of strep infections is that they move so fast. By the time you know you have it, it's already off to the races and you're playing catch up."

## OXYGEN THERAPY

In the period between his third and fourth surgeries, Cole was referred to Mary Greeley's Wound Clinic for hyperbaric oxygen (HBO) therapy, which was supervised by Dr. Sachs. The therapy involves a patient being placed in a hyperbaric chamber where they are treated with pure oxygen, which can help speed healing and regenerate damaged tissue. Cole and members of his team all felt that the therapy was worth trying and that ultimately, it helped.

"I'd never heard of it before, but I spent a lot of time in there. Six treatments, three hours, just watching movies. But people in the Wound Clinic were so nice," he said.

"I was shocked. I was, like, I just had a fever last night, and now I'm maybe getting surgery. I'm supposed to wrestle next week in the U.S. Open in Las Vegas."



"We really had to rely on the hyperbaric oxygen, the antibiotics, and the wisdom of other surgeons to look at things. Having both Dr. Sachs and Dr. Schlicher on board with this case was really helpful, because we're talking about catastrophic and very consequential decision-making for an 18-year-old kid. And to be able to have a consensus of the three of us on what we needed to do surgically was really helpful. And it brought peace to the family and to Cole to know that we were really thinking about this and coming to a commonality of what the right thing was to do," Warne said.

## TEAM SUPPORT

All through his ordeal, Cole had constant support. His parents arrived from Colorado. Iowa State helped him keep up with his courses, and the members of the wrestling program were a constant presence. His lifting coach even brought him light weights so he could get in some brief workouts while lying in his hospital bed.

His leg is all healed now and he's back to wrestling. He even got in some waterskiing over the summer.

He looks back at his experience with grace and gratitude.

"I felt so cared for and protected, of course, by everyone from the hospital, all my nurses, doctors, but also the people from Iowa State Athletics, my faith community," Cole said. "And Dr. Warne. I will feel forever grateful for him and how he protected me."

On Saturday, Nov. 11, Cole wrestled at his first meet in 2 years. He won four of his five matches. ■



Linda Reiman is back to her daily walks following two major surgeries to relieve neck and back pain. Both surgeries were performed at Mary Greeley by Dr. Jonathan Geisinger, McFarland Clinic spine surgeon.

# BACK TO LIFE

Dr. Jonathan Geisinger and the ‘O-Arm’ help two Carroll residents find relief after years of pain.

BY STEVE SULLIVAN

**T**om Haley has sold and serviced farm equipment for 40 years. Linda Reiman was a hairdresser for 40 years. You might not think these two have much in common, but they do. They are both from Carroll and both received long-awaited relief from debilitating back pain thanks to Dr. Jonathon Geisinger, McFarland Clinic spine surgeon who specializes in cervical and lumbar spine surgery while utilizing advanced technology at Mary Greeley.

“Seeing these outcomes is what motivates my team and myself,” Geisinger said. “Every day, when I walk into the hospital, I tell myself that the decisions we make and the things we do will impact the person we are treating for the

rest of their life. All of us at McFarland and Mary Greeley work tirelessly to change lives for the better. My goal is to always leave somebody better than when they came to us. I always hope we are able to give something back to the patient, especially when that patient is putting their faith and trust in us. I want everyone to look back with pride that they had their surgery with our team.”

## LEG PAIN

Tom has dedicated his life to a job he loves: selling farm equipment. He’s been in the field for more than 50 years and has operated his own implement business since 1979. Haley Equipment has locations in Carroll and Rockwell City.

He started experiencing back pain about 5 years ago.

“I was losing strength in my legs. They’d go numb when I was

standing up and when talking to a customer, I'd have to find a place to sit down," he said.

He was referred to Geisinger after visiting his primary physician, Dr. Josh Williams, a McFarland Clinic family medicine physician based in Carroll.

Tom had what's clinically referred to as a spondylolisthesis, or a slipped disc, at his L4-5 level which is one of the lowest levels in the lumbar spine.

"This is when one vertebral bone slips on top of the other. Nerves travel down the middle of the spine and the nerves are normally protected by the bones of the spine. But when a slipped disc happens, the back bones shift on one another and this causes the nerves to be pinched," Geisinger explained. "This led to Tom having a hard time walking. He was having pain going into his thighs and buttock, that was especially worse when he was trying to walk. Tom had progressed to an even more concerning condition where his nerves were becoming so pinched that he was beginning to have numbness into his legs."

"He looked at my X-rays and told me that I had severely pinched nerves in my lower spine and with surgery this could be corrected" Tom said. "Everybody tried to scare the heck out of me about the surgery, but it went so slick, I was up and walking around and doing whatever I wanted in a week."

"He did a wonderful job," Tom added. "I bet I've told 50 people what a great job he did."

## COMPLICATED CASE

As a hairdresser, Linda was on her feet every day. She retired 12 years ago and began having back problems 8 years ago. The pain was eventually severe enough that she was referred to Mary Greeley's Pain Clinic where she received an epidural to help ease her discomfort.

"I was going to the chiropractor and physical therapy to get by, and it worked for years," she said. "Then it wasn't working, and I was having severe pain in my legs. To relieve the pain, I would make my hand into a fist and beat my leg where it hurt."

Linda loves a good, long walk, but she eventually found that she couldn't go as far as she once did. She had to call her sister once to pick her up because the pain was too great.

"I didn't have any kind of life. I was in really good health otherwise, I always exercised," she said.

Linda was suffering from concurrent neck and back issues. In her neck she had a pinch on her spinal cord that was leading to coordination issues in her arms and legs. She was also experiencing weakness and numbness.

Multiple surgeries would be required to correct her spine conditions.

"He told me it was going to be a big surgery, but I wanted it," Linda said. "I was a very active person. My husband and I go



Tom Haley stands tall five months after back surgery. Prior to the surgery, standing was difficult because of the pain from a slipped disc.

south every winter and I couldn't walk the beach. Everything I enjoyed was being taken away, so I was going to do what it took to get that back."

## TWO SURGERIES

Linda had issues in all three areas of her spine. The neck, mid back and low back. Geisinger first operated on Linda's neck last December to help relieve the pressure on the spinal cord that was causing symptoms of numbness in the hands and incoordination.

The second surgery was done to address issues in the mid and low back. In her mid back, she had an area where her spinal cord was so severely pinched that it was bruising the spinal cord and causing it to scar. This can lead to permanent spinal cord damage. Linda also had severe pinching in her low back at several levels due to multiple slipped discs. She required a surgery from her mid back to the pelvis.

"This was a major surgery to address 10 levels in her back and one of the biggest spine surgeries ever done at Mary Greeley," Dr. Geisinger said.

Her neck surgery was a success and her second surgery, in April, went even better. The back surgery took seven hours, and she spent three days in Mary Greeley. After the first



Dr. Jonathan Geisinger and the O-Arm, an advanced surgical tool he uses at Mary Greeley to assist in minimally invasive spine surgeries. Geisinger will begin outreach at McFarland Clinic in Carroll in February.

surgery, she wore a neck brace for four weeks, and after the second, a back brace for six weeks.

“They got me up and walking the very next day. The therapists showed me how to get into and out of bed,” she said. “They told me to move 10 minutes every hour when I got home. I started walking in my house and onto my deck. Within a week, I was walking outside. I live in a split-level home and I did the 16 steps up and down. I was proud of myself and Dr. Geisinger was very happy with me too.”

“I was happy when she messaged us three weeks after the surgery that she walked around Walmart for 2 hours without any pain for the first time in years,” said Geisinger. “It was amazing that she would be doing that well that soon after a 10 level spine fusion.”

Like Tom, Linda is a big fan of her surgeon.

“He’s a very special doctor. He was loving and caring and very informative. He talked at my level so I would understand everything,” Linda said.

## O-ARM

For both surgeries, Geisinger relied on the “O-Arm,” a highly advanced tool that is part of Mary Greeley’s spine surgery program. The minimally invasive O-arm system provides real-time, intra-operative imaging of a patient’s anatomy with high quality images and a large field-of-view in both two and three dimensions.

The images provided by the O-Arm are transferred to a StealthStation Navigation System, which creates a 3-D map

of a patient’s anatomy using the O-Arm’s imaging data. Geisinger and his surgical team can view the StealthStation screen as he works on the patient’s spine or neck. The system enables Dr. Geisinger to safely and precisely navigate the placement of the instrumentation all leading to better outcomes.

The O-Arm literally encircles the patient on the operating table. After it is in place, it is activated, “spinning” around the patient and recording real time 3-D images of the patient’s anatomy at the surgical site.

“The O-Arm was amazing,” Linda said. “It’s less invasive and it’s probably why I healed so fast.”

## A FINAL RECOMMENDATION

Tom and Linda’s problem may have been related to the toll their respective careers took on their bodies. Genetics can also play a major role in people with back issues. Dr. Geisinger urges people who are having problems to consult with their physician.

“Often times, people can sense they are having issues with their spine or their nerves. They can feel something isn’t right, but for a number of reasons, people are hesitant to seek help” Geisinger said. “My recommendation is if you’re having neck pain, back pain, weakness, numbness, incoordination, or pain radiating into the arm or leg then start the conversation with your doctor. It doesn’t always mean surgery. But if surgery is an option, then it may lead to pain relief and improved function.” ■



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