

Providing Essential CT Imaging to the Community

Meyersdale Medical Center, Meyersdale, PA
Case Study

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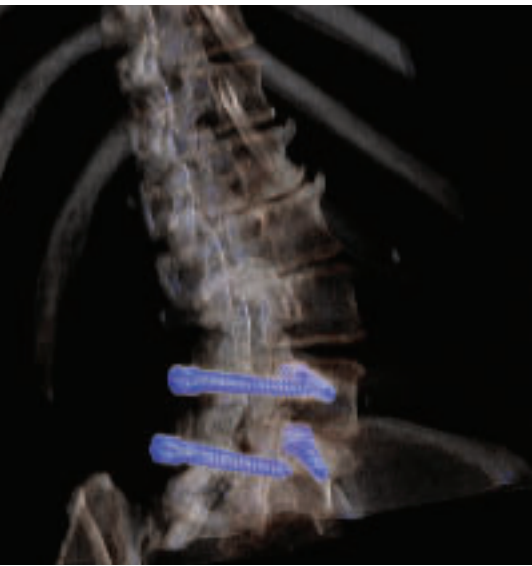
Meyersdale Medical Center, Meyersdale, PA

Like many small, rural hospitals, Meyersdale Medical Center in Meyersdale, PA, must maintain the delicate balance between delivering the best possible care to the people in its community while remaining financially stable. Using current technology is one way to affect quality care delivery. New technology often provides rural hospitals an opportunity to increase patient volume and expand services to the community. However, the cost of leading-edge equipment can place a significant strain on a community hospital's limited resources. While many small hospitals resign themselves to accept the belief that their financial profile precludes them from staying current with imaging technology, Meyersdale Medical Center is an example of how a small institution with limited resources serves its population with state-of-the-art equipment and, in doing so, improves its fiscal viability.

Nestled in the Casselman River Valley in southwestern Pennsylvania, Meyersdale has been shaped by a long history of coal, railroading and agriculture. The town sits in the shadow of Mt. Davis, the state's highest point, and its 50-mile Allegheny Highlands Trail attracts visitors from all over the world.



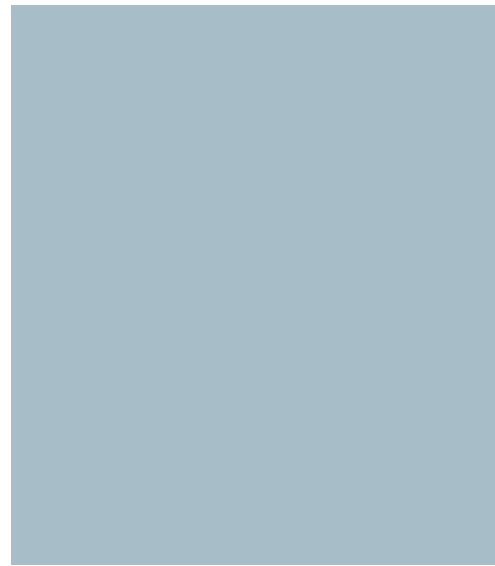
In 1944, the need for a community hospital in Meyersdale was first discussed at a Rotary Club meeting. After several years of planning, building, and fundraising, Meyersdale Community Hospital was established in 1952. The hospital was expanded with two wings in 1970. In 1994, the hospital was joined with Conemaugh's Memorial Medical Center in Johnstown, PA, forming the Conemaugh Health System. Shortly after, Meyersdale Community Hospital changed its name to Meyersdale Medical Center. Still a part of the Conemaugh Health System, today the facility serves a rural area in Pennsylvania's Somerset County. Specializing in family and primary care, Meyersdale Medical Center is a state-designated Critical Care Access Hospital with 20 licensed beds for both inpatient and outpatient care.



The Emotion 16 can deliver images without any of the typical artifacts that obscure viewing proximal anatomy.



Peripheral vascular exams become a routine procedure with the SOMATOM Emotion 16.



The Challenge

When the people of Meyersdale and the surrounding community are in need of CT scans, their closest healthcare provider is Meyersdale Medical Center. But with a single-slice CT scanner, Meyersdale could only perform routine exams of the head, neck, abdomen and pelvis. If a more complex CT angiography (CTA) scan or pulmonary embolism (PE) chest exam was needed, patients were referred to another facility. With no imaging centers in the Meyersdale area, patients and families were forced to travel 20 to 40 miles outside their community to other hospitals that had multislice CT scanners.

Moreover, the scanning that could be performed with Meyersdale's single-slice CT scanner was limited in image quality and speed, both of which affect diagnostic confidence.

"Single-slice CT scanners are virtually obsolete now, and it was becoming more and more disheartening for us to have to send patients miles away for the scans that they needed," said Mark Meekins, director of radiology at Meyersdale Medical Center. "Our biggest goal is to serve the people who live here in Meyersdale with the best medical care possible, and our limited CT scanning ability was definitely hampering that mission."

There was also an impact on the business volume in addition to the clinical challenge. Referring a patient to a distant facility often means that Meyersdale Medical Center loses that patient entirely, since those individuals typically choose to have all their needs addressed at a facility with more comprehensive options. It was becoming increasingly apparent to the care team at Meyersdale that the time had come to upgrade to multislice scanning technology. But with limited resources and space, the hospital administration questioned whether an upgrade would be financially feasible.



“Siemens quickly showed us that a 64-slice scanner would be too much for our medical center, but we didn’t have to settle for the lowest-end product either, just to stay within our budget.”

Mary Libengood, President,
Meyersdale Medical Center

The Solution: the SOMATOM Emotion 16 from Siemens

Meekins and his staff wanted to find the most appropriate CT for Meyersdale, but they were concerned that their only options would be either high-end technology that would put a strain on their budget or a low-end model that would fall short of meeting their quality care goals. But once they consulted with Siemens, their concerns were put to rest.

“Siemens quickly showed us that a 64-slice scanner would be too much for our medical center, but we didn’t have to settle for the lowest-end product either, just to stay within our budget,” said Mary Libengood, president, Meyersdale Medical Center. “The Siemens SOMATOM Emotion 16-slice was the ideal choice for the cases we see at Meyersdale. And we were pleasantly surprised to find that the lease payments for the new scanner would be a very manageable increase over the lease payments we were making for our single-slice system.”

Another benefit of the SOMATOM Emotion 16 was its small footprint. Since it was the same size as Meyersdale’s existing single-slice scanner, no additional space in the imaging room would be required to accommodate the new equipment. This would ultimately save Meyersdale the cost of expanding the room, or of finding a completely different room for the scanner.

Meyersdale installed the SOMATOM Emotion 16 in January 2008. The process took just four days from start to finish, including deinstallation of the old scanner, installation of the new scanner, and quality assurance checks.

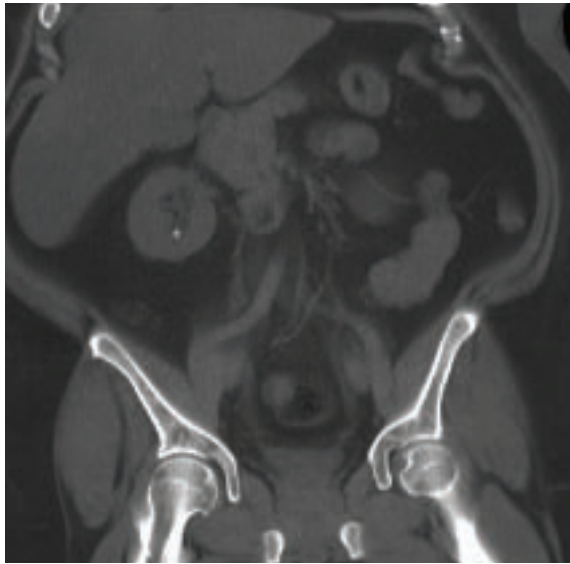
“The installation went very smoothly,” said Meekins. “Siemens did a great job. There were very few issues and very few interruptions in service. We were impressed with how quickly it went.”

Siemens conducted both onsite and offsite training of the Meyersdale staff on the SOMATOM Emotion 16 to ensure a smooth transition.

“The training was very thorough,” said Meekins. “The Siemens trainers were even willing to stay after hours to help our technicians get up to speed on the new equipment. Our staff was able to really hit the ground running once the new scanner was in place.”

With the intuitive *syngo*® user interface, the Meyersdale CT staff has found that processing data sets on the new scanner’s main operator console is comfortable, intuitive, and easy. Technicians save time because the CT has built-in imaging protocols, so they do not need to set up their own protocols.

“It’s very user friendly,” said Meekins. “The staff likes the speed of operation and the efficiency of the new scanner. And they especially like that they don’t need to get up and move the table or the gantry — they can do that without ever leaving the console.”



The SOMATOM Emotion 16 provides excellent image quality even for large patients that could pose a challenge.

The Success

With the SOMATOM Emotion 16, Meyersdale increased its patient volume by 9.5% within the first six months and expects to increase it further. In addition to the increase in CT imaging volume, the 16-slice scanner has allowed Meyersdale to perform coronary CTA exams, which expands the types of scans offered at the facility.

“The ability to perform CTA exams is also a wonderful benefit,” said Meekins. “The first request we were able to meet to do a leg runoff CTA was really exciting. It was gratifying to be able to accommodate a patient whom we previously would have had to send elsewhere.”

The SOMATOM Emotion 16 also gives Meyersdale staff the ability to deliver the same imaging studies they used to perform on a single-slice scanner in a shorter acquisition time and with more clarity.

“With the SOMATOM Emotion 16, our PE chest scans benefit from the fast acquisition and fast gantry rotation times, yielding better visualization of lung perfusion with shorter breath-holds and fewer motion artifacts,” said Meekins. “And we are now able to perform many types of image reconstruction based on what the radiologist wants to see.”

Another benefit of the new scanner is the ability to do scans on larger patients. The SOMATOM Emotion 16 can accommodate patients that weigh up to 440 lbs. This capability is especially valuable in rural communities like Meyersdale, as studies have shown that rural communities have higher rates of obesity compared with urban areas.

“In just a few months, we’ve already seen at least a dozen patients whom we wouldn’t have been able to image with the single-slice scanner due to their size,” said Meekins. “In fact, a much larger facility in our service area now refers heavier patients to us for CT scans because their 10-slice scanner can’t accommodate them.”

Still in the early phase of deployment, Meyersdale Medical Center has already experienced an increase in referral patterns due to the new scanner. “As word continues to spread throughout our referral base, and we continue to educate referring physicians about our enhanced scanning capabilities, I’m confident that volume will increase even more,” said Meekins.

“In the eyes of the people in this community, having this technology, and the expanded capabilities that go with it, is truly larger than life... it’s very exciting to be able to serve them right here in their own town.”

Mark Meekins, Director of Radiology
at Meyersdale Medical Center



In addition to allowing Meyersdale to contain costs, the new scanner has resulted in an increase in revenue. With a broader range of CT offerings coupled with enhanced image post-processing capabilities, Meyersdale has already seen a 35% increase in gross charges. The current procedure mix is 80% routine procedures and 20% sophisticated and invasive studies. With the new scanner, Meekins says that Meyersdale hopes to eventually bring the mix to 70-30 or a more even 60-40, which will further increase its revenue stream.

The high level of service that Meyersdale Medical Center receives continually validates its decision to choose Siemens for its multislice imaging needs. “Because we’re in a rural area, we do not have a service engineer at our disposal,” said Meekins. “So we really depend on the Siemens Service Team. They are completely reliable. When we call the help desk to request an engineer, they’re there when we need them.

“The sales team has been great too,” said Meekins. “They were right on the mark when they recommended the 16-slice scanner. It is the perfect fit for our facility, so we really appreciated that they didn’t try to sell us on a more expensive piece of equipment. And they worked with us to make the upgrade fit into our financial window.”

The SOMATOM Emotion 16 has provided many benefits to Meyersdale Medical Center, but according to Meekins, the enhanced service to the community is by far the most significant.

“Recently, a major academic medical center in Western Pennsylvania called us to refer a patient,” said Meekins. “The patient had travelled there from Meyersdale to see a specialist who wanted the patient to have a CTA scan. They called us to schedule it so that the patient could have the study done without having to travel the distance again. That was very satisfying to us, given the size and outstanding reputation of the larger hospital. The fact that they had the confidence in us to perform the CTA speaks volumes!

“In the eyes of the people in this community, having this technology, and the expanded capabilities that go with it, is truly larger than life,” Meekins continued. “It’s very exciting to be able to serve them right here in their own town.”

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