

SIEMENS

usa.siemens.com/healthcare

How Tipton Hospital Grew MRI Volume by More than 50%

Growing referrals, expanding applications with the MAGNETOM Aera



How Tipton Hospital Grew MRI Volume by More than 50%

Growing referrals, expanding applications
with the MAGNETOM Aera

Maintaining a strong physician referral base was one of the biggest challenges in imaging at IU Health Tipton Hospital. This 25-bed critical access hospital provides a wide range of medical specialties and services in Tipton County, IN, and the surrounding communities. Since Tipton Hospital is part of IU Health, a comprehensive healthcare system comprised of hospitals, physicians, and allied services, their physicians have options when referring a patient for imaging.

For Gayle Jordan, manager of Radiology Services at IU Health Tipton Hospital, a decreasing community population and a 60% Medicare case mix meant maintaining—or even increasing—imaging referrals was of primary importance. Jordan knew that one logical way to do that was to invest in high-quality imaging systems similar to those found in larger academic institutions, which isn't easy to justify for a rural, critical access hospital. However, she knew it was worth exploring.

“We looked at several different types of MRI systems from various vendors, then we saw the MAGNETOM Aera, which would help us expand our services into lumbar spine and abdominal work, and we knew we wanted that one.”

Gayle Jordan, Manager of Radiology Services
Tipton Hospital



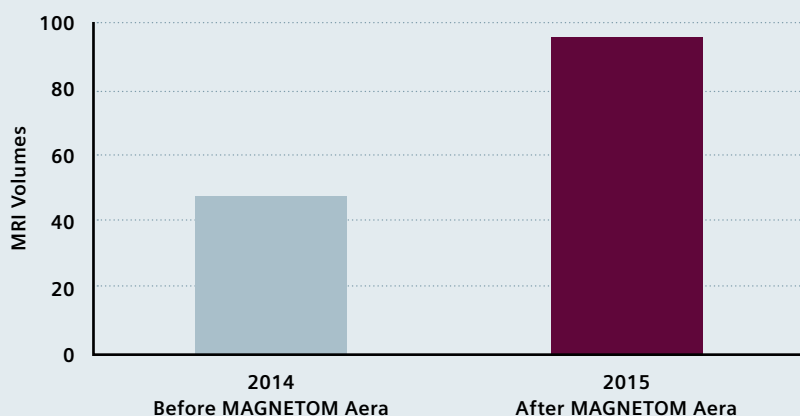
Tipton Hospital



"In a shrinking community, it's important for us to continue to market our services to the surrounding areas," Jordan says. This was hard to do, however, when it came to MRI services. At the time, the hospital's MRI system was in a mobile unit next to the hospital building. The system was older technology and before long, referring physicians saw the lack of high-quality MRI as a negative for the hospital. "As time went on, we couldn't do some of the orthopedic or abdominal imaging they requested," says Jordan. "Eventually, we had to stop doing a lot of the exams we had done previously."

IU Health Tipton had space for an in-house MRI system. When the administration talked about possibly using the space for something other than MRI, Jordan successfully demonstrated how a high-quality MRI service could provide value for the hospital. "I felt we were doing a real disservice to our community by continuing to utilize the old mobile MRI scanner," she says. "It caused us to lose a lot of business as well as the confidence of some of our referring physicians."

Average Monthly Increase of MRI Volumes at IU Tipton Hospital



“It’s amazing to be able to realize that kind of growth.”

Gayle Jordan,
Manager of Radiology Services
Tipton Hospital

Exceeding Expectations

Fortunately, the administration agreed. The next step was to determine which MRI system would best serve the community at a price the hospital could afford. “We looked at several different types of MRI systems from various vendors; we liked Siemens and the MAGNETOM Espree,” says Jordan. “Then we saw the MAGNETOM Aera, which would help us expand our services into lumbar spine and abdominal work, and we knew we wanted that one.” Once everyone agreed on the system, Siemens worked with Jordan and her administrative team on a configuration for the MAGNETOM Aera that supported IU Health Tipton’s plans for high quality imaging while keeping costs in line with their budget.

The timeline for installation, however, was short. Jordan received approval to purchase the equipment in August but the system had to be installed by the end of December. “That was a very short timeline but the Siemens team was very supportive and we got the job done,” says Jordan. “I appreciated Siemens’ response time and how quickly I was able to get questions answered.”

Ken Buckwalter, MD, IU Health Physicians Radiology Service Line leader, sees the difference Siemens and the MAGNETOM Aera can offer facilities like IU Health Tipton Hospital. “We recognize Siemens’ commitment to innovation in MR technology,” he says.

Further, Dr. Buckwalter, who works with the technologists at IU Health Tipton, notes that transitioning from one vendor and system to another can sometimes be intimidating but the experience was very positive for IU Health Tipton. “I’ve spoken with the technologists, and they are extremely pleased,” he says.

According to Jordan, the installation and transition to the new Siemens system went very well. The construction team worked very closely with the Siemens representatives, and there were very few setbacks during installation. The impact on the hospital since then has been significant: In just six months, the volume of MRI exams has increased by 50.8%. “It’s amazing to be able to realize that kind of growth,” says Jordan.

Greater Image Quality & Ease of Use Through Standardization

Jordan and her team attribute much of that increased volume to the image quality the MAGNETOM Aera delivers. The 1.5T system uses Tim® 4G integrated coil technology, which provides ultra-high density coils combined with high channel configurations. With this technology, higher resolution imaging and faster acquisition and exam times are possible.

The MAGNETOM Aera also uses Siemens Day optimizing throughput (Dot™) technology, which provides a customizable framework for patient personalization, step-by-step user guidance, and exam automation. “There are so many different protocols but with the Dot engine, it brings up the protocols that you use the most for your complex exams,” says David “Skip” Lewis, MR technologist at IU Health Tipton. “Or you can just choose the one you’re going to use for a particular patient.”

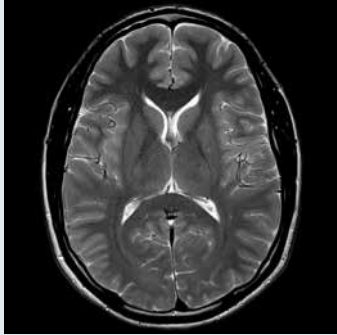
To help create the protocols that IU Health Tipton’s staff needed, the technologists worked with a Siemens applications specialist. “She was phenomenal,” says Shanna Lacy, CT MR technologist. “Our applications specialist built every protocol at optimum image quality and speed of sequence. It’s made a big difference.”

“The image quality on the Aera makes a big difference to us in terms of our confidence in diagnosing a problem. We can read faster and with higher confidence when we have high-quality images.”

Ken Buckwalter, MD
IU Health Physicians Radiology Service Line Leader

Dot technology can help achieve standardization across facilities—as well as increased consistency and reproducibility across staff and exams, greater ease of use, and an up to 50% increase in productivity. “I cross-trained in MR but my predominant area of expertise was CT,” Lacy continues. “Although I don’t have as many years of experience as Skip, working with our applications specialist and learning about the Aera’s capabilities makes me feel like I can bring more to the table than I could before. It’s a very user-friendly system.”

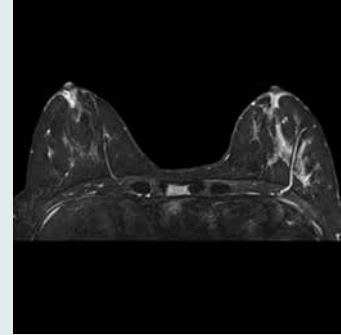
IU Health Tipton Hospital, along with other IU Health facilities, has its images read by a centralized radiology group. Those radiologists, who read for approximately 10 facilities in the IU Health system, have also noticed the difference in image quality. Dr. Buckwalter notes that the images are greatly improved—so much so that the radiologists can’t tell if the images are from IU Health Tipton or another hospital in the system. “The image quality on the Aera makes a big difference to us in terms of our confidence in diagnosing a problem,” he says. “We can read faster and with higher confidence when we have high-quality images.”



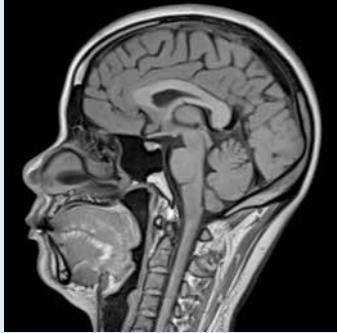
Quiet Suite
T2 TSE
matrix 512
SL 5 mm
TR 5000
TE 98.4
TA 3:35 min



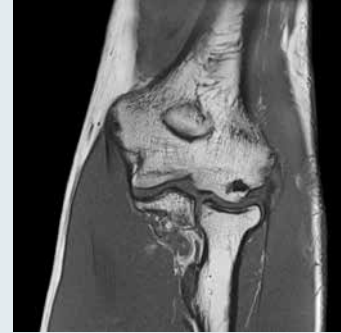
T2 TSE
4 steps
GRAPPA 2
matrix 512
SL 4 mm
TR 3500
TE 83
Total TA 11:14 min



T2 TIRM
GRAPPA 2
8-channel
Sentinelle coil
matrix 320
SL 4 mm
TR 3500
TE 51
TI 170
TA 2:54 min
NSLIJ Imaging
at Syosset
New York, NY



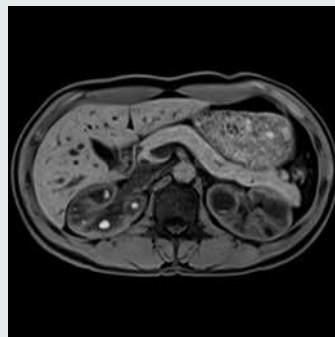
3D T1 SPACE
Isotropic
GRAPPA 2
matrix 256
SL 1 mm
TR 600
TE 8.2
TA 5:29 min



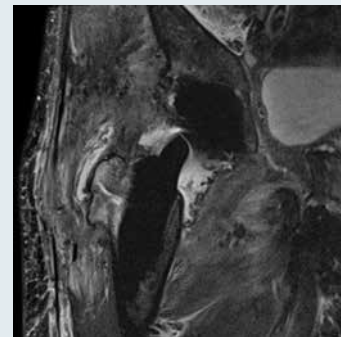
T1 TSE
GRAPPA 2
matrix 384
SL 3 mm
TR 600
TE 14
TA 2:06 min



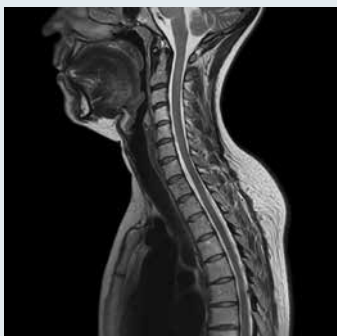
3D FLASH TOF
VRT
GRAPPA 2
matrix 256
SL 0.5 mm
TR 27
TE 7
TA 5:08 min



3D T1 VIBE FatSat dynamic
with contrast
CAIPIRINHA 4
matrix 256
SL 3 mm
TR 4.4
TE 2.2
TA 12.7 s/phase
Mount Sinai Hospital,
New York, NY



WARP
VAT
T2 TIRM
matrix 320
SL 3 mm
TR 5500
TE 32
TI 160
TA 5:13 min
Mount Sinai
Hospital
New York, NY



T2 TSE
GRAPPA 2
matrix 384
SL 3 mm
TR 3500
TE 86
TA 2:16 min



Quiet Suite
T2 TSE
matrix 448
SL 3 mm
TR 4090
TE 77
TA 3:39 min

Increasing Satisfaction & Safety

With its 70-cm bore, the MAGNETOM Aera can support higher levels of patient comfort and a full range of clinical applications. At IU Health Tipton, most of the MRI exams are brains, spines, knees, and shoulders, although they are expanding into abdominal imaging. "We have phenomenal images with this system," says Lewis. "The radiologists like the images, and the referring physicians have been really pleased."

The patient experience has improved too. "Patients are a lot more positive," Lewis continues. "They have a lot more room in the bore, so we can accommodate the more claustrophobic patient." Jordan agrees. "We actually have a physician who is also a patient of ours," she says. "He confessed to being extremely claustrophobic and was skeptical about whether or not he'd be able to be imaged. We were able to scan him in the Aera, and he had no problems. He plugged in his own music and was fine."

In addition, as the staff points out, patient safety is better with the new location of the MRI service. "Our mobile unit was on the complete opposite side of the hospital," says Lacy. "So if we had a patient who was difficult to ambulate, we would have to take someone else out of our department to come down and help us. Having the Aera in our department saves us time, is more convenient, and is safer for us and our patients."

Despite today's uncertain healthcare and imaging landscape, IU Health Tipton Hospital has been able to significantly increase MRI volume, patient throughput and overall efficiency, and improve their bottom line. Investing in the right technology is helping them stay competitive while providing optimum patient care.



"Having the Aera in our department saves us time, is more convenient, and is safer for us and our patients."

Shanna Lacy, CT MR technologist
Tipton Hospital



MRI exam increase in 6 months

The statements by Siemens' customers described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption) there can be no guarantee that other customers will achieve the same results.

On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the Siemens sales organization worldwide. Availability and packaging may vary by country and is subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features, which do not always have to be present in individual cases.

Siemens reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. Please contact your local Siemens sales representative for the most current information.

Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

Global Business Unit

Siemens Healthcare GmbH
Magnetic Resonance
Henkestr. 127
DE-91052 Erlangen
Germany
Phone: +49 9131 84-0
siemens.com/healthcare

Local Contact Information

Siemens Medical Solutions USA, Inc.
40 Liberty Boulevard
Malvern, PA 19355-9998
USA
Phone: +1-888-826-9702
usa.siemens.com/healthcare

Siemens Healthcare Headquarters

Siemens Healthcare GmbH
Henkestraße 127
91052 Erlangen
Germany
Phone: +49 9131 84-0
siemens.com/healthcare

Legal Manufacturer

Siemens Healthcare GmbH
Henkestr. 127
DE-91052 Erlangen
Germany