



MidMichigan Health

Learn about the collaboration tools designed, engineered, and integrated by AVI-SPL to improve the way MidMichigan Health trains healthcare professionals.

Patient Quality and Safety

On the campus of MidMichigan Medical Center – Midland, employees take part in orientation, and safety and quality training. Today, a new addition — the Gerstacker Building — stands as the result of a commitment to producing today’s qualified healthcare providers.

“The vision of the building really was for education,” says Kelly Hill, director of MidMichigan’s Family Medicine Residency Program. “And the family medicine program has been in Midland and at this institution for almost 40 years.”

The Gerstacker Building is 3 stories and over 70,000 square feet of advanced IT and AV technology supporting medical education and health care for real patients. Physicians with the Family Practice Center of MidMichigan Medical Center –Midland are located within medical offices in the new building.

“From the get-go we had the idea to focus on quality and safety for the patient,” says Jason Sheffer, director of educational development and services for MidMichigan Health.

MidMichigan, which is owned in part by the University of Michigan, awarded AVI-SPL the contract for implementing the AV and related communication systems in this project. Successful work with AVI-SPL in previous projects, and a strong relationship with project manager Jim Williams that extends back over 20 years were big factors in trusting the project to our team.

“We knew AVI-SPL could handle this project because of their size and capabilities,” says Sheffer. “AVI-SPL is a preferred vendor and Jim has great history of working with our administration and meeting our business objectives. From the initial sales meeting with AVI-SPL through the product selection, we’ve

“I’m very proud of what I was able to accomplish. This facility is all about what we need to do to provide the best quality and safety for our patients.”



viewed them as an expert. Never once did we doubt their capability and skills to achieve our end goals.”

A Precision Implementation

AVI-SPL’s involvement in the project started early on with preliminary design and engineering, and developing the scope, which included all audio-visual systems, electrical requirements, and drawings of materials.

“Scoping phases were all done with precision, and AVI-SPL delivered on their promises,” says Sheffer. “Even when designs changed, those were answered quickly and promptly.”

By April 2014, AVI-SPL began the integration process, which included all the monitors and cable TV distribution in public areas. The bulk of the implementation focused on three areas:

- **Education area.** Over 3000 square feet, most of this space is occupied by a multi-room simulation center (with manikins supplied by Gaumard), control systems, and domed cameras.
- **Preceptor.** This training area monitors resident physician interactions with real patients, and records them for review. Digital domed cameras deliver feeds via the network from 12 examiner rooms that also include Polycom audio systems. A control center with Crestron touch panels receives the images and audio from those rooms, and can control the pan, tilt, and zoom functions of the cameras.
- **Divisible conference room.** Undivided, the space can hold over 100 people. It can also become three separate spaces, including one small conference room with control systems for residency program faculty and medical students.

Because MidMichigan wanted Wi-Fi capability

and the ability to use smart phone apps, the simulation center depends on Samsung, which is a leader in those areas. Custom-programmed Crestron systems manage all areas of the simulation center, including the cameras that staff can adjust for student monitoring. Those cameras are integrated with a paging system that gives the instructors full visibility into each room and enables them to zoom into specific tasks.

“AVI-SPL made sure we understood the paging,” says Sheffer. “We ran that through user groups to make sure that the users were able to navigate through the paging and know exactly what was in the room and how it would be used.”

In all of the conference rooms as well as in the auditoriums and classrooms, four medical-grade Epson projectors display high-resolution images.

For the project’s duration, Williams’ team stayed in continuous contact with MidMichigan.

“Jim is very honest, and he’s there for the customer,” says Sheffer. “He will get the right person to meet our objectives.”

A New Way to Train

Just over year after its initial groundbreaking, the Gerstacker Building opened in late July 2015. Less than three weeks removed from that opening, MidMichigan Health administrators and instructors used its new spaces to provide training for about 80 coaches, assistants, EMS personnel, and local volunteers on how to treat student athletes should they get injured on the football field. All the rooms are linked together and they worked as a unit for this program.

“The simulation center is a new option to train learners, physicians, and medical students in

“As our customers’ requirements and technology solutions in aerospace advance, so must this environment. That’s where we will count on our design and engineering partners to deliver and bring that vision to life.”

a lot of different things,” says Hill. “Not just procedures, but a team-based approach to patient care. It opens up a whole new way to train healthcare professionals.”

From the adjoining control room, medical instructors can control the manikins and give them the appearance of breathing and talking. Sheffer emphasizes that the video monitoring is easy enough for physicians to use as a training tool and complex enough so it can't be hacked into.

“Because we have the utmost concern for patient privacy, AVI-SPL helped us make sure we had a HIPAA-compliant, closed-loop network,” says Sheffer.

MidMichigan Health has been in communication with several community members that can benefit from this technology. For example, the local fire department has toured the facility and has consulted with simulation staff on how to provide more hands-on training for its team.

“One of the biggest changes in technology for us in our new office is in how we do precepting,” explains Hill. “We previously sat in a room, and residents would come in and talk to us about their patients. Now when residents come into the room, we have the capability to watch the interaction on video

with audio, and then give them feedback.”

Joyce Cook, MidMichigan senior simulation specialist, says, “Being able to film residents and then play it back for them so they can see what's going on in the room really helps them to see how they impact others.”

Sarah Hewitt, a resident at MidMichigan, can attest to that. “You see what you did well, what you can improve on,” Hewitt says. “You can actually watch what you did, and you have the opportunity to critique yourself.”

AVI-SPL gave MidMichigan staff the capabilities they were seeking: a way to conduct training and education for resident physicians that is hands-on, safe, and reviewable. In turn, MidMichigan is supporting its community of learners and advancing its mission.

“I'm very proud of what I was able to accomplish,” says Sheffer. “This facility is all about what we need to do to provide the best quality and safety for our patients. The technology is a tool to help us provide the best education we can.”

At A Glance

Organization
MidMichigan Health

Location
Midland, MI

Market
Healthcare, Education

Solutions
Crestron
Epson
Polycom
Samsung

Services
Integration

About AVI-SPL

AVI-SPL designs, builds, integrates and supports solutions for AV and video communication, digital media, advanced visualization, and control systems for all types of organizations around the world. We also provide a wide range of support services, including cloud-based video conferencing, onsite staffing, call launching for video conferencing, and remote monitoring of AV and video systems to ensure optimal performance. Our Customer Care program delivers manufacturer-certified tech support and maintenance through our 24/7/365 help desk. Since 2006, we have been ranked the number one systems integrator in North America by *Systems Contractor News*.

About Featured Partners

Crestron: For 40 years, Crestron has been the world's leading manufacturer of advanced control and automation systems.

Epson: Epson has an outstanding projector for every environment: corporate meeting rooms, small classrooms, auditoriums.

Polycom: Polycom video collaboration solutions address everywhere we work today – our desk, the meeting space, our home, and on the road.

Samsung: For 70 years, Samsung AV products have made a better world for all types of organizations.

Featured Partners





Fig 1.1



Fig 1.2



Fig 1.3



Fig 1.4



Fig 1.5

Images

Fig 1.1
The education area includes a multiroom simulation center, control systems, and domed cameras.

Fig 1.4
MidMichigan Health is powered by Crestron, including custom-programmed systems that manage all areas of the simulation center.

Fig 1.2
From the adjoining control room, medical instructors can control the manikins and give them the appearance of breathing and talking, while keeping track of the students via the cameras and monitors.

Fig 1.5
The divisible conference room can become three separate spaces, including one small conference room with control systems for residency program faculty and medical students.

Fig 1.3
MidMichigan Health's Gerstacker Building is 3 stories and over 70,000 square feet of advanced IT and AV technology supporting medical education and health care for real patients.