



'This is what I want to do': Drive and a modified wheelchair set this neurosurgeon apart

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Jesse Lawrence had five major surgeries after a car accident left him paralyzed from the waist down at 8 months old. Now a 34-year-old neurosurgeon, he has performed over 2,000 surgeries of his own.

“I remember having surgeons that calmed the fears and that really made a big impression on me,” Dr. Lawrence said. “So I knew going into medical school, that was what I wanted to do for other people.”

He grew up in Waterford, Erie County, and earned a bachelor’s degree in biology from Carnegie Mellon University.

good doctor

When he entered medical school at the University of Pittsburgh, he was unsure what kind of doctor he wanted to be and whether he would be

physically able to do what was necessary. Then, in his second year at Pitt's medical school, he watched a neurosurgeon he was shadowing perform a 14-hour surgery, and that changed everything.

"I sat in the operating room for the whole thing, missed breakfast, lunch and dinner," Dr. Lawrence said. "I left the operating room and I called my brother. I was like, 'This is what I want to do. I want to be a neurosurgeon.'"

In June, he graduated from West Virginia University's seven-year neurosurgery residency program.

This month, he started a six-month fellowship at Weill Cornell Medicine in New York City, performing minimally invasive surgeries through a patient's nose or around the eyes. These are the kinds of surgeries that made him fall in love with neurosurgery in the first place, he said, calling his role a dream come true.

But there have been challenges.

Dr. Lawrence realized after his third year of medical school that he could not perform neurosurgery on the brain and spinal cord from a wheelchair. He completed three sub-internships: one at UPMC, another at the University of Michigan in Ann Arbor and the third at the Mayo Clinic in Rochester, Minn.

In Michigan, he met another neurosurgeon who operated from a wheelchair and got a chance to try it. When he realized it wouldn't work for him, he took a year off from medical school.

Standing up

"I took a year off to get a wheelchair that could stand me up," he said. "And then my dad made a bunch of modifications to the wheelchair to be able to get me to a position where I could comfortably kind of be over the operating room table and be able to do the things that we need to be able to do."

His father, James Lawrence, is a pastor and a school bus driver now living in Morgantown, W.Va. Growing up, he learned carpentry skills from his father and it became a hobby for him. He used basic skills in sheet metal work and welding to make the modifications to his son's wheelchair, he

said.

“When it goes up, it pushes him further forward than it was designed to do, but that puts him in a position that he needs to be over the table,” James Lawrence said. “The chair does rise, and that makes him tall enough to be at an operating table.”

The chair’s full extension and varying angles allow for other neurosurgeons to share Dr. Lawrence’s vision, he said.

“My dad would kind of take my vision of what I needed to be able to do and he turned it into something real that got me to be able to do it,” he said.

Neurosurgery residents at WVU work about 80 hours a week, completing between 1,600 and 2,600 cases, said Dr. Cara Sedney, director of the neurosurgery residency program and associate professor of neurosurgery at the university.

Since Dr. Lawrence was the only neurosurgery resident in his class when he began, she worked with him from day one. During his residency, he completed just over 2,000 surgeries.

‘I want to be the best’

Dr. Lawrence’s drive is part of what makes him such an easy person to train, Sedney said.

“He will say openly, ‘I want to be the best,’ and he puts in the work to make it happen...

“In combination with that, he also is one of the most compassionate people towards patients. And those two things together, being driven and being compassionate, are kind of hard to find in the same person. But it makes a really amazing doctor when you can find that.”

Dr. Jeremy Lewis, assistant director of the neurosurgery residency program at WVU and assistant professor of neurosurgery, said Dr. Lawrence is one of “the most memorable residents I have ever gotten to work with.

“There’s nothing he couldn’t do.”

Sedney’s fondest memory of Dr. Lawrence was not in the operating room,

however, but with her twin daughters when she invited the medical residents to her home.

“He spoke to them like their little 4-year-old thoughts and words were the most important in the room, and that’s how he talks to patients, too.”

His compassion and drive both contribute to him being an incredible surgeon, Sedney said.

“He eats, lives, breathes, sleeps neurosurgery, and you can tell that that’s his passion and what he is meant to do,” she said.

More accessibility

Dr. Lawrence’s presence at West Virginia prompted changes that made facilities and equipment more accessible for everyone, Sedney said.

“We got these hand controls for drills, and what we had used previously were foot controls,” she said. “And it turns out that, to my mind, it works so much better.

“So now that’s just what we use, even though Jesse has graduated. I don’t have to, but it’s truthfully just a better solution.”

Structural changes that made facilities more accessible ultimately benefited everyone, Sedney said.

“Really the biggest change was our own mindset being open to rethinking how we did certain things. In the end, what is really cool is that the changes that we made were better for everybody, not just Jesse.”

Hockey’s huge role

Dr. Lawrence had to bolster his mindset along the way too.

When he was treated at [Shriners Children’s Hospital in Erie](#), Dr. Lawrence had the opportunity to play sports that were organized by staff members at the hospital. He played wheelchair basketball in the hospital’s parking lot, and learned sled hockey through Shriners.

Playing competitive sled hockey, which required traveling to tournaments in the U.S. and Canada, helped give him the confidence to go away to college and to pursue medical school, he said.

His mother, Kathryn Lawrence, said he was extremely talented at sled hockey and his four siblings loved to watch him play.

“We all got a real grounded view of everything and an appreciation for the people who really made this available,” she said. “I mean, it was Shriners themselves that got this started, and then started recruiting other patients.”

Her son tried out for and played on the 21 and younger USA Sled Hockey team for a year.

“Shriners played a huge role in really just normalizing how I viewed my own injury,” Dr. Lawrence said. “And how I view myself really then leaks into how other people view me.”

Sedney said it is rewarding to have played a part in his development.

“I really like the idea of changing what it means to be a neurosurgeon and what neurosurgeons look like,” she said.

Her former student said being a doctor suits him.

“There’s a lot more to medicine than just showing up to your job and making money,” Dr. Lawrence said.

He strives to offer a positive attitude and a smile to each of his patients, and he’s willing to discuss every part of his amazing journey.

“When patients ask me how I’m in the wheelchair, I try to be honest with them and open, because it is kind of a unique story,” he said.

“If I’m not willing to share the struggles that I’ve had, or not willing to share the details, it kind of shuts people off, and it doesn’t become as accessible. And so I try to be open and share when the time is right, and when people ask me.”

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