

Dr. Dan Gibson

Ascension Wisconsin

Bold new hope for stroke sufferers.

BY LAUREN SIEBEN | PHOTOS BY LAURA DIERBECK

Dr. Dan Gibson got the call around 2 a.m.: A 44-year-old patient named Andrew had arrived at Ascension All Saints Hospital in Racine with acute ocular thrombosis — a type of a stroke, Gibson says, with a fatality rate of around 85 percent. The team in Racine was preparing to transfer Andrew to Dr. Gibson at Ascension Columbia St. Mary's in Milwaukee when suddenly the patient stopped breathing.

"I don't know how close to dying he was, but you don't get much closer than that," says Gibson, director of neurointerventional radiology at Ascension Wisconsin.



When Andrew arrived in Milwaukee, Dr. Gibson performed an emergency thrombectomy, a procedure that removes blood clots from the brain with catheters and stent retrievers. The procedure took less than 10 minutes, and by the next day, Andrew was back to his normal self.

"That's the 'miracle' part of it," Gibson says. "But 'miracles' don't just happen by themselves. ... Miracles happen a lot more often when we have the best-in-class protocols."

For Gibson, those protocols include endovascular thrombectomy, a treatment that started to spread around 2015 after clinical trials showed promising results. For patients with strokes caused by large vessel occlusion — which, according to the National Institute of Health's National Center for Biotechnology Information, account for between 24-46 percent of the most common forms of strokes — thrombectomy can significantly improve outcomes.

When Gibson came to Ascension in 2018, he brought his experience in performing thrombectomies along with rapid CT perfusion, a type of brain imaging that produces a detailed scan within just 60 to 90 seconds. Patients' brain scans can be sent directly to Gibson's smart watch, which helps expedite the timeline for treating strokes.

For decades, the outlook for many stroke patients was grim. The conventional wisdom was that strokes could only be treated within the first few hours; if a patient arrived at the emergency room more than four or five hours after symptoms started, there wasn't much that doctors could do.

"Historically, people thought 'Well, maybe we can get the clot-busting drug, but if not, that's OK,'" Gibson says.

That clot-busting drug, called tPA, rose to prominence in the 1990s. But patients can only be treated with tPA up to 4.5 hours after their symptoms start, which means that for many stroke patients, including those traveling from rural areas to the nearest hospital, tPA is not an option. Patients would often be left with life-altering disabilities, paralysis or problems with language and memory after a stroke.

Now, thrombectomies are extending the treatment timeline for some patients. A thrombectomy can be performed to remove clots up to 24 hours after the onset of symptoms, with encouraging odds that the patient will regain full function.

"You can go from 75 to 80 percent chance of being in a nursing home or permanently disabled to a 50/50 chance of going home," Gibson says.

This treatment has meant the difference between life and death for patients like Andrew, and it's a game-changer for providers like Gibson, who are beginning to eschew some of the conventional wisdom about stroke treatment. But that shift in mindset doesn't happen overnight.

At first, "it didn't seem intuitive that you could fix a stroke," Gibson says. "Stroke seemed to happen fast — the blood clot goes to the brain, and the brain dies in a matter of minutes." **MKE**