

## Case Study: Pain Prevention

*An interventional neuroradiologist joins a pain management team at Mayo Clinic in Jacksonville, Fla. to provide collaborative clinical care.*

By Linda Sowers

### Key Takeaways:

- A multidisciplinary team at the spine center at Mayo Clinic of Jacksonville, Fla., includes an interventional neuroradiologist who provides clinical care and spine intervention procedures.
- Patients and referring physicians alike appreciate having seamless access to pain medicine experts who work collaboratively under one roof.
- A central scheduling center “triages” spine consult orders and assigns patients to the appropriate pathways for treatment.

Pain affects more Americans than diabetes, heart disease, and cancer combined.<sup>1</sup> In 2011, the Institute of Medicine of the National Academies reported that more than 100 million adults in the U.S. suffer from chronic pain.<sup>2</sup> That same year, the pain management specialists at the Mayo Clinic in Jacksonville, Fla., came together to form the spine center — a new clinic with a multidisciplinary team dedicated to treating one of the most common types of chronic suffering: back pain.

A key member of the center’s clinical team is Jeffrey A. Stone, MD, FACR, an interventional neuroradiologist who focuses on spine intervention and pain management. Prior to the creation of the spine center, Stone conducted his spine intervention and pain management practice within Mayo’s orthopedic department, in addition to providing diagnostic neuroradiology services in the radiology department.

“In orthopedics, I was isolated on my own island,” he says, “but I did pretty much the same kind of work as our pain management specialists do, so it made sense that I move over to the new spine center. Pain medicine is a multispecialty discipline: anesthesia, neurology, physical medicine and rehab, and now radiology. As such, we bring an interdisciplinary clinical approach to diagnosing and treating acute and chronic pain problems with the spine.”

### Collaborative Clinical Care

In many cases, the coordinated efforts of a multidisciplinary team are more effective in managing chronic pain in patients than a standalone approach. The Mayo spine center brings together every specialty treating spine-related disorders under one roof — with centralized scheduling, clinical process templates, and a nurse who oversees “appointment triage” to get patients to the right specialist with minimal delay.

“The Mayo spine center is very collaborative, which optimizes patient care,” Stone explains. “Ordering physicians simply refer patients to the spine center, then we triage the order into one of two pathways. The first is a patient with spine-related pain who has not yet had conservative therapy. They are seen by physical medicine and rehab specialists, and the physicians



At the Mayo Clinic in Jacksonville, Fla., a multidisciplinary team of pain medicine experts—including Susan Ruddy-Maysonet, nurse supervisor; Jeffrey A. Stone, MD, FACR, interventional neuroradiologist; and Salim Ghazi, MD, chairman, Department of Pain Medicine—collaborate to treat patients with back pain.

design noninvasive treatment programs. If a patient has already maximized conservative therapy and still has pain, the order goes into the clinic as a ‘spine center-injection likely’ consult to be seen by specialists in the pain medicine department.”

Beyond Stone, the other partners in the spine center are pain medicine specialists from different backgrounds: neurology, anesthesia, and physical medicine and rehabilitation. “We have a great suite of complementary skills and talents that we deploy collaboratively to treat our patients,” says Stone. “We consult with each other and share knowledge. As an interventional neuroradiologist, it’s particularly valuable because I now have referring physicians in my own group. For instance, one of my partners is an expert in spinal cord stimulators, so I refer my patients to him. And vice versa: I am consulted on imaging and spinal fractures potentially needing vertebral augmentation. Each of us has our niche, and we all get along.”

Stone emphasizes that the team approach is also equitable for the spine center partners. “For spine consults, patients are assigned to the first slot available, so all of our clinics are completely full,” he says. “Each day when I’m in the spine center, I have a full clinic — and so do my partners in pain medicine. We share appointments and patients based on availability. The needs of the patients come first, so appointments are

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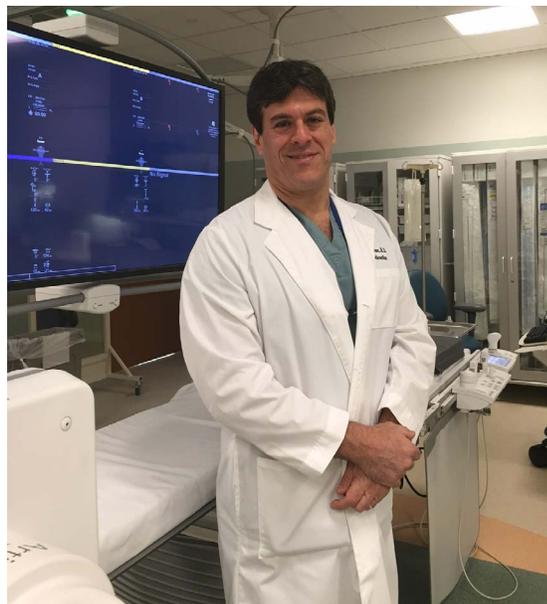
assigned based on what is most convenient for them. We function as a unified group, so it's seamless for the patient and for us."

### Good for Patients

A key underpinning of the team approach is the spine center's scheduling and order routing system. Stone says it works well at Mayo Clinic because the partners are all in one place, but collaborative scheduling systems and order triage processes could also help disparate providers deliver coordinated care. Otherwise, he says, one department gets backed up several months on patient appointments, and another one struggles to get enough patients to stay busy (and may try to compete for them with other departments). "Collaborating allows us to take better care of patients, and it means patients don't have to wait as long for pain medicine appointments," he says.

Mayo's electronic health record (EHR) system helps physicians streamline the scheduling process for spine center procedures and consults. Patients scheduling an appointment through the Mayo Clinic web page are presented with a series of screening questions to stratify exactly what type of specialist they need to see. Everything is integrated in the EHR and in the scheduling system, so it is seamless for the patients and for the doctors, as well.

Stone appreciates that the spine center is set up for maximum efficiency in performing clinical procedures,



Stone also performs complex spine interventions—including vertebral augmentation procedures, tumor ablation, and facet radiofrequency ablation—in the Mayo Radiology department's state-of-the-art bi-plane interventional neuroradiology suites.

with no downtime between patients. "In the spine center, I can do two-and-a-half to three times the number of procedures I could in a radiology suite. We have a template for pain medicine injections and a very efficient pre- and post-procedure care process. Everybody is in place, and we do a team huddle before we start each morning or afternoon. We review the patient flow, make sure there are no last-minute issues, and then we start rolling. It's the peak of efficiency, and having those systems and templates and processes in place to optimize the workflow is really impressive and personally satisfying." This streamlined approach provides a better patient experience, while lowering the cost of care.

"Our patients get faster care, and I have a full schedule," says Stone. "I don't have to compete for patients or referring physicians. Patients know they're going to the spine center for their pain. If one team member is away for a week or two, patients can still get an injection or a prescription refill. There's always availability. They can easily get an appointment. That gives them peace of mind, more convenience, and a better patient experience overall."

### Good for Referrers

The spine center is proving to be more convenient for referring physicians, as well. "When patients have back pain, the referring physician doesn't have to think through all of the options to determine the best place to refer them," states Stone. "The order simply says 'spine consult' and the referring physician simply indicates whether the patient most likely needs conservative therapy, spine injection, or both."

Stone says that the feedback from referring physicians — especially primary care doctors — has been outstanding. "It's very simple for them to communicate with patients. Now they just say, 'Mayo Clinic has a spine center; it's perfect for you. I'll draw up the order and get you scheduled.' The patient leaves knowing who's going to be caring for them, and they already have an appointment set up with one of us. It's completely patient centered."

### Next Steps

Interventional radiology practices that want to establish a well-functioning spine center and be part of a collaborative clinical care team should:

- Get all multidisciplinary players involved ahead of time to ensure they have similar attitudes and work ethics. Can you work together? Do you all realize that each partner brings unique strengths that can help build your practice?

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- Determine how to make it equitable for all partners. Decide how to collaborate to “grow the entire pie rather than competing for each other’s slices.”
- Design systems, templates, and access to a centralized scheduling system. Consider adding dedicated scheduling resources and a triage nurse to stratify orders and assign them to the right provider.

### End Notes

- 1) The American Academy of Pain Medicine: *AAPM Facts and Figures on Pain*.
- 2) Institute of Medicine Report from the Committee on Advancing Pain Research, Care, and Education: *Relieving Pain in America, A Blueprint for Transforming Prevention, Care, Education and Research*. The National Academies Press, 2011.

### Join the Discussion

Want to join the discussion about how interventional radiologists can become part of a collaborative spine care team? Let us know your thoughts on Twitter at #imaging3.

Have a case study idea you'd like to share with the radiology community? Please submit your idea to <http://bit.ly/CaseStudyForm>.



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ACR  
1891 Preston White Drive  
Reston, VA 20191  
703-648-8900  
[www.acr.org/Imaging3](http://www.acr.org/Imaging3)

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Media contact: [pr@acr.org](mailto:pr@acr.org)