INTRODUCTION
The hospital is a 350-bed regional medical center that is the anchor of a Malcolm Baldridge National Quality Award-winning integrated delivery network. It is the sole inpatient provider in its community and serves 300,000 people in 21 counties across four states. The nearest competition is from the large, city-based medical centers that are approximately 50 miles away.

The hospital performs nearly 1,700 inpatient neuro-musculoskeletal cases annually, which includes 439 inpatient and outpatient surgical spine cases. Because it employs almost all of its primary care physicians, its three neurosurgeons, and many other specialists, the hospital is in a good position to realign referral patterns to improve care.

SOLUTION
Accelero Health Partners was brought in to plan and create a formal spine center to improve patient flow, make more efficient use of hospital resources, and improve margins for spine care. To achieve these goals, Accelero created treatment algorithms, coordinated spine services, re-educated the PCP community and eliminated conflict between physicians.

AT A GLANCE
- 350-bed regional medical center and anchor of IDN
- Sole inpatient provider in local community
- 1,700 inpatient neuro-musculoskeletal cases; 439 surgical spine cases per year

ISSUES
- Spine care is complex and inefficient
- Inconsistent primary care physicians (PCPs) referral patterns
- Low margins for spine treatment

RESULTS
The hospital introduced a streamlined and efficient spine program that integrates PCPs for improved outcomes.
Coordinating Spine Services

Initially, the spine center was virtual, with neurosurgery, physiatry, pain management, physical and occupational therapy, and the accompanying diagnostic services staying in their original locations.

An early step in the spine center’s development was the hiring of a physiatrist with an extensive background in both industrial medicine and sports medicine. He was responsible for coordinating and consolidating spine care services.

From a physician’s point of view, the advantage of having a spine center is that they do not have to spend inordinate amounts of time trying to figure out whether someone’s back pain is musculoskeletal or neurological, and what do about it when they could use the same time to see 10 additional cases. It is an advantage to have a specialist who sees spine cases all day long. For the specialist, a central spine center adds efficiency by having a central point for gathering information, doing testing, synthesizing the understanding of the case, and providing care.

After early success with the model, the physiatrist and neurosurgeon were moved to an office suite that serves as the hub of the center, in the same building that houses physical and occupational therapy. By housing the two in the same location, it makes the center more tangible by allowing patients to see both during the same visit.

Spine patients were routinely being referred to neurosurgeons as a first step, even though surgical intervention is only appropriate for about 10 - 15 percent of spine problems. The Spine Center gives primary care physicians a referral path that connects patients more efficiently with the appropriate level and type of service for their condition.

Re-educating the PCP Community

Spine ailments can be complicated and difficult to manage, and quickly worsen with insufficient or incorrect treatment. Spine patients from the community were routinely being referred to neurosurgeons as a first step, even though surgical intervention is only appropriate for 10-15% of spine problems (FIGURE 1).

The physiatrist met with PCPs in the network to explain the back and neck pain algorithms the center created and provide a referral path that connects patients more efficiently with the appropriate level and type of service for their condition.

Eliminating Conflict

Hospitals planning a spine center often have to juggle the interests of affiliated physicians. For the hospital, there is one independent group of five orthopedic physicians who do not pursue spine cases. By focusing on individual niches, they have minimal overlap and ensure the system works smoothly for patients and care givers.

SUMMARY

The presence of coordinated spine care has changed how the hospital cares for spine patients both as outpatients and inpatients. There are now formal criteria for inpatient admissions for spine problems, as well as newly revised order sets for medical treatment of back pain and other diagnoses. The hospital’s electronic medical record system now includes a spine care summary. They pay close attention to outcomes by tracking visits, patient satisfaction and by establishing quality and service measures. The measures include the time it takes the PCP office to schedule a spine center visit, the time it takes the spine center to schedule outpatient therapy visits and much more. They use the information to monitor their processes and to make improvements.

FIGURE 1   I   Breadth of spine patient symptoms and treatment.

| Least severe | Symptomatic; does not seek care | May not understand when to see medical attention |
| Symptomatic, diagnostic needed, no treatment | Seeks care at PCP, ED or surgeon |
| Symptomatic, non-surgical treatment | Rehabilitation, medication, injection |
| Surgical candidate | Orthopedic spine surgeon |

Participant in activities with risk of spine injury (occupational or recreational)