

## Giving spines a SPORTing chance

Can you say “degenerative spondylolisthesis” three times fast? Probably not. Even doctors at DHMC’s Spine Center use the nickname “spondy” among themselves—or DS, the official abbreviation.

In DS, a lumbar vertebra in the lower back slips in front of the one below it. This usually causes no symptoms, unless it is associated with spinal stenosis—a narrowing of the spinal canal—which pinches the nerves, causing significant leg pain that gets worse with walking. DS generally occurs in people older than 50 and is six times more prevalent in women, especially African-Americans.

A new Dartmouth-led study has shown that surgery is twice as effective as nonsurgical approaches in reducing pain and restoring functionality for patients who have DS with spinal stenosis. Published in the *New England Journal of Medicine*, the study was the second produced by the seven-year, 13-site Spine Patient Outcomes Research Trial (SPORT). The recently increased \$21-million funding for the project comes from the National Institutes of Health.

**Eligible:** The trial screened 1,164 patients diagnosed with the condition and followed 607 who were eligible for surgery and agreed to participate. Of those, 372 received decompressive laminectomy, a surgical procedure in which bone and soft tissue are removed, while 235 received nonsurgical treatments, including physical therapy, steroid injections, and pain-relieving medicines.

Patients who got surgery reported significantly reduced pain and improved functionality as early as six weeks postoperatively. But two years after enrolling in the trial, nonsurgical patients experienced only modest improvement in their condition—though on average their symptoms did not worsen.

“Up until now, we suspected surgery produced better results, but we had little objective data to support that,” said James Weinstein, D.O., in announcing the study results; Weinstein is chair of orthopaedics at Dartmouth and SPORT’s principal investigator. “With the results of this study, we can now discuss much more fully the surgical and nonsurgical options available to our patients, so that they can make an informed choice.”

**Option:** Although surgery is likely to be the best option for patients with very debilitating DS symptoms, “people who are able to manage their symptoms . . . ought to be able to do very well with nonoperative treatment, because on average they’re not going to get worse,” says Jon Lurie, M.D., one of the study’s coauthors. “They are probably going to stay where they are, or [even] get a little bit better.”

SPORT is one of the first large controlled trials on back pain. Its first study, released in November 2006, found that surgery for patients with severe back pain caused by a herniated disk and sciatica yielded only slightly better outcomes than nonsurgical treatment. A third SPORT study is expected to be released later this year. ALISSA POH

**With the study results, patients “can make an informed choice.”**



Graduate student Woltmann found that pharmacy data must be used with care.

## When just numbers aren’t enough

Numbers may not lie, but they don’t always tell the whole story. So before caregivers rely on prescription refill rates to identify mental-health patients at risk of relapse, they should consider all the facts, says a DMS study in the June issue of *Psychiatric Services*.

Other studies have shown that as many as 40% of those with serious mental illness may sometimes fail to take their prescribed medications. And as such patients’ adherence to their antipsychotic regimens declines, their risk of hospitalization rises. But using pharmacy data to assess adherence “is not exactly as perfect as one would think,” says the study’s lead author, Emily Woltmann, M.S.W. “We wanted to see how imperfect it is.”

**Charts:** Woltmann, a DMS graduate student in health policy and clinical practice, led a team that identified, from electronic medical records, 1,712 veterans with schizophrenia or bipolar disorder whose refill rates fell below a certain threshold. Then the researchers examined the same patients’ charts. And they found that in 17% of cases, refill rates were low not because patients had neglected their prescriptions but for less obvious reasons. A doctor may have discontinued a medication by making a chart notation, but without changing the official prescription record, Woltmann explains. Or patients may have moved or transferred their care elsewhere.

While the data for the study was collected in Michigan, the analysis was completed at Dartmouth, she notes. The patients included in the study all had refill rates—known as medication possession ratios (MPRs)—that fell below 80%; candidates with MPRs above 80% were judged “adherent” and not included in the 1,712 cases analyzed.

MPRs can be useful in the aggregate, though. For example, the paper notes that pharmacy data may be a good first screen to identify patients who need help with medication adherence. But it’s still important, says Woltmann, to get the patient and the caregiver “in the same room” to get all the facts. Not just the numbers. MARK DANTOS