

Rates, causes of spinal surgery-tied mortality quantified

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(HealthDay)—The overall mortality rate associated with spinal surgery is 1.8 per 1,000 and varies based on factors such as patient age and primary diagnosis, according to a study published in the Nov. 1 issue of *Spine*.

Justin S. Smith, M.D., Ph.D., of the University of Virginia Medical Center in Charlottesville, and colleagues conducted a retrospective study using data from the Scoliosis Research Society Morbidity and Mortality database from 2004 to 2007 for 108,419 adult and pediatric patients who underwent [spinal surgery](#). The rate and causes of mortality associated with spinal surgery were assessed.

The researchers identified 197 mortalities, correlating with 1.8 deaths

per 1,000 patients overall, with rates of 2.0 and 1.3 per 1,000 for adults and pediatric patients, respectively. [Mortality rates](#) were highest in those who underwent spinal surgery for a primary diagnosis of fracture (5.7 per 1,000), kyphosis (4.4), and other (3.3), and were lowest for those who had [spine surgery](#) due to scoliosis (1.8) and degenerative conditions and spondylolisthesis (0.9 each). The most common causes of death were respiratory/pulmonary, cardiac, sepsis, stroke, and intraoperative blood loss. Most of these deaths (79 percent) occurred prior to hospital discharge. Higher American Society of Anesthesiologists score, [spinal fusion](#), and implants correlated significantly with increased mortality rates. Death rates increased with age, from 0.9 per 1,000 for patients aged 20 to 39 years to 34.3 per 1,000 for patients aged 90 and older.

"These findings may prove valuable for patient counseling and efforts to improve the safety of patient care," the authors write.

One or more of the authors disclosed [financial ties](#) to a commercial party related directly or indirectly to the study.

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