

## Increase in Hospital Relative to Surgeon Reimbursement for Surgical Fixation of Hip Fractures

**Background:** The allocation of resources between hospitals and surgeons is an essential discussion in health care economics. The objective of the present study is to evaluate trends and variations in hospital charges and payments relative to surgeon charges and payments for surgical treatment of hip fractures in the US Medicare population.

**Methods:** Hospital and surgeon charges and payments following treatment of hip fractures by closed reduction and percutaneous pinning (CRPP), open reduction internal fixation (ORIF), or intramedullary nail (IMN), along with corresponding patient demographics, 90-day and one-year mortality, Charlson Comorbidity Index (CCI), and length of stay (LOS) from 2005-2014 were captured from the 5% Medicare Standard Analytic Files (SAF). The ratio of hospital to surgeon charges (CM: Charge Multiplier) and the ratio of hospital to surgeon payments (PM: Payment Multiplier) were calculated for each year and region of the US and trended over time. Correlations between the CM and PM and LOS were evaluated using a Pearson correlation coefficient ( $r$ ).

**Results:** 3,028 patients who underwent CRPP and 25,341 patients who underwent ORIF/IMN were included. The CM for CRPP increased from 10.1 to 15.6,  $p < 0.0001$ . The CM for ORIF/IMN increased from 11.9 to 17.2,  $p < 0.0001$ . The PM for CRPP increased from 15.1 to 19.2,  $p < 0.0001$ . The PM for ORIF/IMN increased from 11.5 to 17.4,  $p < 0.0001$ . LOS decreased for both CRPP and ORIF/IMN (CRPP: 3.2 to 2.8; ORIF/IMN: 3.7 to 3.4) despite increasing patient complexity as measured by CCI (CRPP: 6.0 to 7.8; ORIF/IMN: 6.2 to 8.4). Both the CM (CRPP:  $r^2 = -0.75$ ; ORIF/IMN:  $r^2 = -0.76$ ) and PM (CRPP:  $r^2 = -0.3$ ; ORIF/IMN:  $r^2 = -0.67$ ) were inversely associated with LOS.

**Discussion:** Hospital charges and payments have continually increased relative to surgeon charges and payments for treatment of hip fractures despite decreasing LOS.

Best,

Dennis Chen, MD

PIC: 6326

Orthopaedic Surgery PGY-4