associated with nonindex readmission included younger age, male sex, and index presentation to a small (medical) or large-teaching (surgical) hospital located in a densely populated area ($p < 0.05$). Mortality among nonindex readmissions was higher in most cases. While costs for surgical readmissions did not differ, nonindex medical readmissions nationally cost hospitals an additional $554.8 million/year. Septicemia and pneumonia dominated reasons for nonindex readmissions among operative patients.

CONCLUSIONS: For common medical and surgical conditions, nonindex readmissions are associated with worse outcomes, higher costs, and increased infection rates. Targeted interventions are needed to promote enhanced care-coordination as larger health systems and quality improvement programs evolve.

Pediatric Surgeons' Perception of Treatment Risks and Benefits for Perforated Appendicitis

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INTRODUCTION: Variation in medical care is well documented but little is known about its causes. Using the case of complicated appendicitis, we analyzed variation in pediatric surgeons' recommendations for or against surgery. We hypothesized that variation is associated with differences in how surgeons perceive treatment risks and benefits.

METHODS: We presented a national sample of surgeons (n = 1,880,132 pediatric surgeons) with a detailed clinical vignette describing a teenage female with perforated appendicitis. We asked surgeons (1) to judge the probability of serious complications (risks) or full recovery (benefits) within 30 days after operative or nonoperative management, and (2) if they would operate.

RESULTS: Pediatric surgeons varied widely in their treatment recommendation (51% recommended operation, 49% recommended against operating) and in their perception of the treatment risks and benefits (range at least 4%–91%). This variation was not associated with either geographic region or practice type. Rather, surgeons were more likely to operate as their perception of operative risk decreased (Spearman rho = −0.45) and their perception of operative benefit increased (rho = 0.15). Conversely, surgeons were more likely to recommend against operating as their perception of nonoperative risks decreased (rho = −0.44) and their perception of nonoperative benefits increased (rho = 0.58). Overall, surgeons' perception of the treatment risks and benefits explained 46% of the variation in their decisions to operate.

CONCLUSIONS: For perforated appendicitis, pediatric surgeons' perceptions of treatment risks and benefits vary widely and correlate highly with their decision to operate. Decision tools that provide objective data on outcomes after medical and surgical management may decrease variations in surgical care.

Physician Reimbursement by Medicaid Favors Major Amputation over Limb Preservation

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INTRODUCTION: Considering recent analyses highlighting discrepancies between reimbursement schedules for general surgery procedures, the purpose of this study is to describe differences in Medicare (MCR) and Medicaid (MCD) reimbursements and the relative values they assign to limb preservation as compared with major amputations.

METHODS: Frequently performed procedures related to the care of lower extremity vascular disease were identified. Publicly available 2016 Medicare and Medicaid reimbursement schedules were obtained for both facility and nonfacility procedures through the Centers for Medicare and Medicaid Services and the Texas Medicaid & Healthcare Partnership, respectively.

RESULTS: Fifty-one unique procedures were categorized as: diagnostic angiography (n = 3), endovascular interventions (n = 4), open infrainguinal procedures (n = 12), major amputations (n = 5), and foot care/reconstructions (n = 27). Reimbursements by MCD were found to be 24% lower among almost all procedure categories in both the facility and nonfacility settings. The relative value of each facility procedure category, defined as reimbursement per RVU ($/RVU), ranged from 25% to 96% less by MCD. These valuation discrepancies directly translate into significant mean absolute differences that disproportionately impact limb preservation. The largest facility difference affects infrainguinal open interventions for which MCD under-reimburses by $331 per procedure (p = 0.007, Figure). For nonfacility performance, the greatest difference impacts endovascular interventions, under-reimbursed by $1,616 per procedure (p = 0.387).

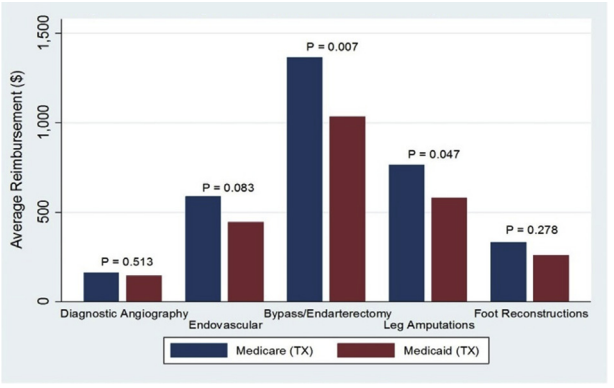

Figure. Average facility reimbursement by procedure type.

CONCLUSIONS: Discrepancies between the reimbursement schedules of Medicare and Medicaid differentially impact limb preservation procedures in Texas. Currently, Medicaid payments relatively favor major amputations over limb preservation, a finding that has significant and profound public health

implications for all patients seeking care for diabetes and peripheral arterial disease.

Quality in Cancer Care: An Assessment of the American College of Surgeons Commission on Cancer Quality Measures

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INTRODUCTION: The Commission on Cancer (CoC) is dedicated to improving survival and quality of life for cancer patients. The CoC has established a set of quality process measures, and compliance is required for hospitals to maintain accreditation. However, these measures remain largely untested with regard to patient outcomes. We sought to determine whether compliance with these measures is associated with patient outcomes, using overall survival (OS) as our primary endpoint.

METHODS: The National Cancer Data Base was used to identify patients diagnosed between 2006 to 2012 and calculate hospital-level compliance for each of 8 measures across 5 disease sites. Hospital-based quartiles were defined for each measure based on the distribution of compliance. After multiple imputation, Cox models were developed to estimate the relationship between hospital quartile and OS for each measure, adjusting cumulatively for patient/tumor, hospital, and treatment characteristics.

RESULTS: In total, 1,084,076 unique cancer cases were included at 1,273 CoC facilities. Among the 8 evaluated measures, increased hospital-level compliance was only associated with improved patient outcomes for 2 measures (12RLN, G15RLN, $p < 0.0001$). Compliance with 3 measures (RECRTCT, MASTRT, LCT) failed to demonstrate a consistent association with outcomes. Paradoxically, increased compliance with 3 measures (BCSRT, HT, LNoSurg) was associated with significantly decreased OS ($p < 0.05$).

CONCLUSIONS: Compliance with CoC quality measures is not consistently associated with improved OS, and in some cases may paradoxically be associated with inferior patient outcomes. Future efforts should be made to develop process measures that reliably discriminate hospital performance based on patient outcomes, and promote cancer care that supports the CoC mission.

Racial Disparities in Breast Cancer Persist Despite Early Detection: Analysis of Stage 1 Breast Cancer Treatment in the National Cancer Database and Effects of Private Insurance Status on Disparities

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INTRODUCTION: Breast cancer mortality is greater for black patients than white patients. Prior research demonstrates racial disparities in breast cancer treatment. Disparities are commonly attributed to more advanced stage at presentation or aggressive tumor biology. We sought to determine if racial disparities persist in the treatment of stage 1 breast cancer (T1N0), as these patients are not delayed in presentation and are often diagnosed by screening mammography.

METHODS: We selected all T1N0 breast cases in the National Cancer Database (NCDB) of the American College of Surgeons, representing a cohort treated at Commission on Cancer-accredited hospitals from 2004 to 2014. We analyzed differences in utilization and time to treatments by race.

RESULTS: There were 628,104 (509,173 white non-Hispanic, 54,745 black non-Hispanic) female stage I patients in the NCDB. Black women were younger (59.0 vs 61.8 years, $p < 0.001$) and resided in poorer counties (27.9% vs 7.4% of whites, $p < 0.001$). Significant comorbidities (Charlson/Deyo score $>/2$) were rare (2.2% of white patients, 3.9% black). Estrogen receptor (ER)-negative tumors were more common in black women (24.9% vs 13.2% white), and neoadjuvant chemotherapy was infrequent in both groups. Despite black women living closer to treating facilities than whites (14.7 vs 23.3 miles, $p < 0.001$), their time to treatment (surgery, chemotherapy, radiation, endocrine therapy) was significantly longer. When patients with private insurance were analyzed, time to care decreased (1.5 days), but racial differences remained statistically significant.

CONCLUSIONS: Despite selecting for early-stage breast cancer, racial disparities in utilization and time to treatment persist. Early detection alone will not resolve racial disparities in breast cancer treatment.

Racial Disparities in Surgical Mortality: Are We Narrowing the Gap?

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INTRODUCTION: Disparities in surgical care are pervasive. In the US, black patients are more likely to experience poor clinical outcomes, including higher mortality, compared with white patients after surgery. Despite substantial attention on disparities in surgical care, we know little about whether disparities in mortality have narrowed over time.

METHODS: Using Medicare inpatient claims data from 2005 to 2014, we identified patients undergoing the following surgical procedures: coronary artery bypass graft (CABG), pulmonary lobectomy, abdominal aortic aneurysm repair (AAA repair), appendectomy, cholecystectomy, hip and knee repair, and colectomy. Across procedures and separately, we examined trends in 30-day surgical mortality rates in black and white patients, determined whether the gap between black and white mortality