

CENTER FOR SURGICAL TRIALS AND EVIDENCE-BASED PRACTICE (C-STEP):

Selected Publications

QUALITY AND PATIENT SAFETY

Checklists

- 1) ***Anderson KT, Bartz-Kurycki MA***, Masada KM et al. Decreasing intraoperative delays with meaningful use of the surgical safety checklist. *Surgery* 2017 Nov 9. [Epub ahead of print].
- 2) ***Bartz-Kurycki MA, Anderson KT*** et al. Debriefing: the forgotten phase of the surgical safety checklist. *J Surg Res* 2017 Jun; 213: 222-227.
- 3) ***Putnam LR, Anderson KT***, Diffley MB et al. Meaningful use and good catches: More appropriate metrics for checklist effectiveness. *Surgery* 2016 Dec; 160(6): 1675-1681.
- 4) ***Putnam LR, Levy SM***, Sajid M et al. Multifaceted interventions improve adherence to the surgical checklist. *Surgery* 2014 Aug; 156(2): 336-44.
- 5) ***Levy SM***, Senter CE, Hawkins RB et al. Implementing a surgical checklist: more than checking a box. *Surgery* 2012 Sep; 152(3): 331-6.

Imaging wisely

- 6) ***Anderson KT, Bartz-Kurycki M***, Austin MT et al. Approaching zero: Implications of a computed tomography reduction program for pediatric appendicitis evaluation. *J Pediatr Surg* 2017 Dec; 52(12): 1909-15.
- 7) ***Anderson KT, Putnam LR***, et al. Imaging gently? Higher rates of computed tomography imaging for pediatric appendicitis in non-children's hospitals. *Surgery* 2017 May; 161(5): 1326-1333.
- 8) ***Anderson KT***, Greenfield S, ***Putnam LR*** et al. Don't forget the dose: improving computed tomography dosing for pediatric appendicitis. *J Pediatr Surg* 2016 Dec; 51(12): 1944-1948.

Healthcare Associated Infections

- 9) Lee JC, Williams GW, Kozar RA, Kao LS, ***Mueck KM*** et al. Multitargeted feeding strategies improve nutrition outcome and are associated with reduced pneumonia in a Level 1 Trauma Intensive Care Unit. *JPEN J Parenter Enteral Nutr* 2017 Mar 1. [Epub ahead of print].
- 10) ***Mueck KM***, Kao LS. Patients at high-risk for surgical site infection. *Surg Infect* 2017 May/June; 18(4): 440-446.
- 11) ***Mueck MK, Putnam LR, Anderson KT***, Lally KP, Tsao K, Kao LS. Does compliance with antibiotic prophylaxis in pediatric simple appendicitis matter? *J Surg Res* 2017 Aug; 216: 1-8.
- 12) ***Holihan JL***, Flores-Gonzalez JR, Mo J et al. How long is long enough to identify a surgical site infection? *Surg Infect* 2017 May/June; 18(4): 419-423.
- 13) ***Cherla DV, Holihan JL***, Flores-Gonzalez JR et al. Decreasing surgical site infections after ventral hernia repair: a quality-improvement initiative. *Surg Infect (Larchmt)* 2017 Oct; 18(7): 780-6.

- 14) **Putnam LR**, Chang CM, Rogers NB et al. Adherence to surgical antibiotic prophylaxis remains a challenge despite multifaceted interventions. *Surgery* 2015 Aug; 158(2): 413-9.
- 15) **Alawadi ZM**, Kao LS. Chlorhexidine gluconate, 4% showers and surgical site infection reduction. *JAMA Surg* 2015 Nov; 150(11): 1033.
- 16) **Levy SM**, Holzmann-Pazgal G, Lally KP et al. Quality check of a quality measure: surgical wound classification discrepancies impact risk-stratified surgical site infection rates in pediatric appendicitis. *J Am Coll Surg* 2013 Dec; 217(6): 969-73.
- 17) Kao LS and **Phatak UR**. Glycemic control and prevention of surgical site infection. *Surg Infect (Larchmt)* 2013 Oct; 14(5): 437-44.
- 18) Hawkins RB, **Levy SM**, Senter CE et al. Beyond surgical care improvement compliance: antibiotic prophylaxis implementation gaps. *Am J Surg* 2013 Oct; 206(4): 451-6.

Perioperative Outcomes

- 19) **Putnam LR**, **Levy SM**, Johnson E et al. Impact of a 24-hour discharge pathway on outcomes of pediatric appendectomy. *Surgery* 2014 Aug; 156(2): 455-61.
- 20) **Phatak UR**, Chan WM, Lew DF et al. Is nighttime the right time? Risk of complications after laparoscopic cholecystectomy at night. *J Am Coll Surg* 2014 Oct; 219(4): 718-24.
- 21) Goodenough CJ, Liang MK, Nguyen MT, Nguyen DH, **Holihan JL**, **Alawadi ZM** et al. Preoperative glycosylated hemoglobin and postoperative glucose together predict major complications after abdominal surgery. *J Am Coll Surg* 2015 Oct; 221(4): 854-61.

Patient Safety Education

- 22) Landgren R, ***Alawadi Z**, Douma C, et al. Barriers of pediatric residents to speaking up about patient safety. *Hosp Pediatr* 2016 Dec; 6(12): 738-43.
- 23) **Putnam LR**, Pham DH, Ostovar-Kermani TG, **Alawadi ZM** et al. How should surgical residents be educated about patient safety: a pilot randomized controlled trial. *J Surg Educ* 2016 Jul-Aug; 73(4): 660-7.
- 24) **Putnam LR**, **Levy SM**, Kellagher CM et al. Surgical resident education in patient safety: where can we improve? *J Surg Res* 2015 Dec; 199(2): 308-13.

Quality Reporting

- 25) **Hamilton EC**, Pham DH, Minzenmayer AN et al. Are we missing the near misses in the OR? – underreporting of safety incidents in pediatric surgery. *J Surg Res* 2018 Jan; 221: 336-42.
- 26) **Putnam LR**, Ostovar-Kermani TG, Le Blanc A, **Anderson KT** et al. Surgical site infection reporting: more than meets the agar. *J Pediatr Surg* 2017 Jan; 52(1): 156-160.
- 27) **Mueck KM**, **Putnam LR**, Kao LS. Improving the quality of quality improvement reporting: Standards for Quality Improvement Reporting Excellence (SQUIRE) 2.0 Guidelines. *JAMA Surg* 2016 Apr; 151(4): 311-2.
- 28) **Putnam LR**, **Levy SM**, Blakely ML et al. A multicenter, pediatric quality initiative improves surgical wound class assignment, but is it enough? *J Pediatr Surg* 2016; 51(4): 639-44.

- 29) **Putnam LR, Levy SM**, Holzmann-Pazgal G et al. Surgical wound classification for pediatric appendicitis remains poorly documented despite targeted interventions. *J Pediatr Surg* 2015 Jun; 50(6): 915-8.
- 30) **Levy SM, Phatak UR**, Tsao K et al What is the quality of reporting of studies of interventions to increase compliance with antibiotic prophylaxis? *J Am Coll Surg* 2013 Nov; 217(5): 770-9.

PEDIATRIC SURGERY

- 31) **Hamilton EC**, Miller CC 3rd, Cox CS Jr et al. Variability of child access prevention laws and pediatric firearm injuries. *J Trauma Acute Care Surg* 2017 Dec 28. [Epub ahead of print].
- 32) **Hamilton EC**, Balogh J, Nguyen DT et al. Liver transplantation for primary hepatic malignancies of childhood: The UNOS experience. *J Pediatr Surg* 2017 Oct 12. [Epub ahead of print].
- 33) **Hamilton EC**, Curtin T, Slack RS et al. Surgical feeding tubes in pediatric and adolescent cancer patients: a single-institution retrospective review. *J Pediatr Hematol Oncol* 2017 Jul 3 [Epub ahead of print].
- 34) **Hamilton EC**, Lazar D, et al. Pediatric tracheobronchial injury after blunt trauma. *J Trauma Acute Care Surg* 2017 May 22. [Epub ahead of print].
- 35) **Putnam LR, Anderson KT**, Tsao K et al. The impact of cardiac risk factors on short-term outcomes for children undergoing a Ladd procedure. *J Pediatr Surg* 2017 Mar; 52(3): 390-4.
- 36) **Putnam LR**, Gupta V, Tsai K et al. Factors associated with early recurrence after congenital diaphragmatic hernia repair. *J Pediatr Surg* 2017 Jun; 52(6): 92-32.
- 37) **Putnam LR**, Tsao K, Lally KP et al. Minimally invasive vs. open congenital diaphragmatic hernia repair: is there a superior approach? *J Am Coll Surg* 2017 Apr; 224(4): 416-22.
- 38) Harting MT, Hollinger L, Tsao K, **Putnam LR** et al. Aggressive surgical management of congenital diaphragmatic hernia: worth the effort? A multicenter, prospective, cohort study. *Ann Surg* 2017 Jan 217. [Epub ahead of print].
- 39) **Putnam LR**, Harting MT, Tsao K et al. Congenital diaphragmatic hernia defect size and infant morbidity at discharge. *Pediatrics* 2016 Nov; 138(5).
- 40) **Putnam LR**, Tsao K, Morini F et al. Evaluation of variability in inhaled nitric oxide use and pulmonary hypertension in patients with congenital diaphragmatic hernia. *JAMA Pediatr Surg* 2016 Dec 1; 170(12): 1188-1194.
- 41) Covey SE, **Putnam LR, Anderson KT**, Tsao K. Prophylactic versus symptomatic Ladd procedures for pediatric malrotation. *J Surg Res* 2016 Oct; 205(2): 327-330.
- 42) **Putnam LR**, Richards MK, Sandvall BK et al. Laboratory evaluation for pediatric patients with suspected necrotizing soft tissue infections: A case-control study. *J Pediatr Surg* 2016 Jun 51(6): 1022-5.
- 43) Freemayer B, **Hamilton E**, Warneke CL et al. Treatment outcomes in pediatric melanoma-Are there benefits to specialized care? *J Pediatr Surg* 2016 Dec; 51(12): 2063-7.
- 44) **Putnam LR**, Nguyen LK, Lally KP et al. A statewide analysis of specialized care for pediatric appendicitis. *Surgery* 2015 Sep; 158(3): 787-92.

- 45) **Putnam LR**, John SD, Greenfield SA et al. The utility of the contrast enema in neonates with suspected Hirschsprung disease. *J Pediatr Surg* 2015 Jun; 50(6): 963-6.
- 46) **Levy S**, Tsao K, Cox CS Jr, **Phatak UR**, et al. Component separation for complex congenital abdominal wall defects: not just for adults anymore. *J Pediatr Surg* 2013 Dec; 48(12): 2525-9.
- 47) **Levy SM**, Lally PA, Lally KP et al. The impact of chylothorax on neonates with repaired congenital diaphragmatic hernia. *J Pediatr Surg* 2013 Apr; 48(4): 724-9.
- 48) Iqbal CW, **Levy SM**, Tsao K et al. Laparoscopic versus open distal pancreatectomy in the management of traumatic disruption. *J Laparoendosc Adv Surg Tech A* 2012 Jul-Aug; 22(6): 595-8.

COMPARATIVE EFFECTIVENESS AND COST EFFECTIVENESS

- 49) Robinson JR, Avritscher EBC, Gay JC, Willis ZI, **Putnam LR** et al. Measuring the value of a clinical practice guideline for children with perforated appendicitis. *Ann Surg* 2017 Jul; 266(1): 195-200.
- 50) **Holihan JL**, Hannon C, Goodenough C et al. Ventral hernia repair: a meta-analysis of randomized controlled trials. *Surg Infect* 2017 May 30 [Epub ahead of print].
- 51) **Alawadi Z**, **Phatak UR**, Huy CY et al. Comparative effectiveness of primary tumor resection in patients with stage IV colon cancer. *Cancer* 2016 Aug 1. [Epub ahead of print].
- 52) **Holihan JL**, Nguyen DH, Flores-Gonzalez JR et al. A systematic review of randomized controlled trials and reviews in the management of ventral hernias. *J Surg Res* 2016 Aug; 204(2): 311-8.
- 53) **Holihan JL**, Askenasy EP, Greenberg JA et al. Component separation vs. bridged repair for large ventral hernias: a multi-institutional risk-adjusted comparison, systematic review, and meta-analysis. *Surg Infect* 2016 Feb; 17(1): 17-26.
- 54) **Holihan JL**, Nguyen DH, Nguyen MT et al. Mesh location in open ventral hernia repair: A systematic review and network meta-analysis. *World J Surg* 2016 Jan; 40(1): 89-99.
- 55) **Phatak UR**, Li LT, Karanjawala B et al. Systematic review of educational interventions for ostomates. *Dis Colon Rectum* 2014 Apr; 57(4): 529-37.
- 56) **Phatak UR**, Pedroza C, Millas SG et al. Revisiting the effectiveness of interventions to decrease surgical site infections in colorectal surgery: A Bayesian perspective. *Surgery* 2012 Aug; 152(2): 202-11.

DISPARITIES

- 57) Joseph M, **Hamilton EC**, Hayes-Jordan A et al. The impact of racial/ethnic disparities on survival for children and adolescents with extremity sarcomas: A population-based study. *J Pediatr Surg* 2017 Oct 12. [Epub ahead of print].
- 58) **Hamilton EC**, Miller CC, Cotton BA et al. The association of insurance status on the probability of transfer for pediatric trauma patients. *J Pediatr Surg* 2016 Dec; 51(12): 2048-2052.
- 59) **Hamilton EC**, Saiyed F, Miller CC 3rd, et al. The digital divide in adoption and use of mobile health technology among caregivers of pediatric surgery patients. *J Pediatr Surg* 2017 Sep 1. [Epub ahead of print].

- 60) Austin MT, ***Hamilton E***, Zebda D et al. Health disparities and impact on outcomes in children with primary central nervous system solid tumors. *J Neurosurg Pediatr* 2016 Aug 19; 1-9. [Epub ahead of print].
- 61) ***Hamilton EC***, Nguyen HT, Chang YC et al. Health disparities influence childhood melanoma stage at diagnosis and outcome. *J Pediatr* 2016 Aug; 175: 182-7.
- 62) Nguyen BC, ***Alawadi ZM***, Roife D et al. Do socioeconomic factors and race determine the likelihood of breast-conserving surgery? *Clin Breast Cancer* 2016 Aug; 16(4); e93-7.
- 63) Henchcliffe BE, ***Holihan JL***, Flores-Gonzalez JR et al. Barriers to participation in preoperative risk-reduction programs prior to ventral hernia repair: An assessment of underserved patients at a safety-net hospital. *JAMA Surg* 2016 May 1; 151(5): 488-90.
- 64) ***Putnam LR***, Tsao K, Nguyen HT et al. The impact of socioeconomic status on appendiceal perforation in pediatric appendicitis. *J Pediatr* 2016 Mar; 170: 156-60.
- 65) ***Alawadi ZM, Phatak UR***, Kao LS, et al. Race not rural residency is predictive of surgical treatment for hepatocellular carcinoma: Analysis of the Texas Cancer Registry. *J Surg Oncol* 2016 Jan; 113(1): 84-8.
- 66) ***Alawadi ZM***, Leal I, ***Phatak UR*** et al. Facilitators and barriers of implementing enhanced recovery in colorectal surgery at a safety net hospital: A provider and patient perspective. *Surgery* 2016 Mar; 159(3): 700-12.
- 67) Millas SG, ***Alawadi ZM***, Wray CJ et al. Treatment delays of colon cancer in a safety-net hospital system. *J Surg Res* 2015 Oct; 198(2): 311-6.
- 68) ***Phatak UR***, Kao LS, Millas SG et al. Interaction between age and race alters predicted survival in colorectal cancer. *Ann Surg Oncol* 2013 Oct; 20(11): 3363-9.
- 69) Wray CJ, ***Phatak UR***, Robinson EK, et al. The effect of age on race-related breast cancer survival disparities. *Ann Surg Oncol* 2013 Aug; 20(8): 2541-7.

PATIENT-REPORTED AND PATIENT-CENTERED OUTCOMES

- 70) ***Cherla DV***, Moses ML, Viso CP, ***Holihan JL*** et al. Impact of abdominal wall hernias and repair on patient quality of life. *World J Surg* 2018 Jan; 42(1): 19-25.
- 71) ***Mueck KM***, Leal IM, Wan CC et al. Shared decision-making during surgical consultation for gallstones at a safety-net hospital. *Surgery* 2017 Dec 6. [Epub ahead of print].
- 72) ***Mueck KM, Cherla DV***, Taylor A, Ko TC, Liang MK, Kao LS. Randomized controlled trials evaluating patient-reported outcomes after cholecystectomy: a systematic review. *J Am Coll Surg* 2017 Nov 4 [Epub ahead of print].
- 73) ***Holihan JL***, Flores-Gonzalez JR, Mo J et al. A prospective assessment of clinical and patient-reported outcomes of initial non-operative management of ventral hernias. *World J Surg* 2017 May; 41(5): 1267-1273.
- 74) ***Holihan JL***, Henchcliffe BE, Mo J et al. Is nonoperative management warranted in ventral hernia patients with comorbidities?: a case-matched, prospective, patient-centered study. *Ann Surg* 2016 Oct; 264(4): 585-90.

- 75) **Alawadi ZM**, Leal IM, Flores JR et al. Underserved patients seeking care for ventral hernias at a safety net hospital: Impact on quality of life and expectations of treatment. *J Am Coll Surg* 2017 Jan; 224(1): 26-34.
- 76) **Holihan JL**, Henchcliffe BE, Mo J et al. Is nonoperative management warranted in ventral hernia patients with comorbidities? A case-matched, prospective, patient-centered study. *Ann Surg* 2016 Oct; 264(4): 585-90.

TRIAL PROTOCOLS

- 77) **Mueck KM**, **Wei S**, Liang MK et al. Protocol for a randomized trial of the effect of the timing of cholecystectomy during initial admission for predicted mild gallstone pancreatitis at a safety-net hospital. *Trauma Surgery & Acute Care Open* 2018 (in press).
- 78) Price BA, Bednarski BK, You YN, Manandhar M, Dean EM, **Alawadi ZM** et al. Accelerated enhanced Recovery following Minimally Invasive colorectal cancer surgery (RecoverMI): a study protocol for a novel randomized controlled trial. *BMJ Open* 2017 Jul 20; 7(7): e015960.

HERNIAS

- 79) **Holihan JL**, Liang MK. Nomenclature in ventral hernia repair. *World J Surg* 2017 Oct 10. [Epub ahead of print].
- 80) **Cherla DV**, Lew DF, Escamilla RJ, **Holihan JL** et al. Differences of alternative methods of measuring abdominal wall hernia defect size: a prospective observational study. *Surg Endosc* 2017 Sep 15. [Epub ahead of print].
- 81) **Cherla DV**, Moses ML, **Mueck KM** et al. External validation of the HERNIAScore: an observational study. *J Am Coll Surg* 2017 May 26 [Epub ahead of print].
- 82) **Mueck KM**, Holihan JL, Mo J et al. Computed tomography findings associated with the risk for emergency ventral hernia repair. *Am J Surg* 2017 Jul; 214(1): 42-46.
- 83) **Holihan JL**, Li LT, Askenasy EP et al. Analysis of model development strategies: predicting ventral hernia recurrence. *J Surg Res* 2016 Nov; 206(1): 159-167.
- 84) Liang MK, **Holihan JL**, Itani K, **Alawadi ZM** et al. Ventral hernia management: expert consensus guided by systematic review. *Ann Surg* 2017 Jan; 265(1): 80-89.
- 85) **Holihan JL**, **Alawadi ZM**, Harris JW et al. Ventral hernia: patient selection, treatment, and management. *Curr Probl Surg* 2016 Jul; 53(7): 307-54.
- 86) **Holihan JL**, Chen JS, Greenberg J et al. Incidence of port-site hernias: a survey and literature review. *Surg Laparosc Endosc Percutan Tech* 2016 Dec; 26(6): 425-430.
- 87) Ventral Hernia Outcome Collaborative, Mitchell TO, **Holihan JL**, et al. Do risk calculators accurately predict surgical site occurrences? *J Surg Res* 2016 Jun 1; 203(1): 56-63.
- 88) **Holihan JL**, Bondre I, Askenasy EP et al. Sublay versus underlay in open ventral hernia repair. *J Surg Res* 2016 May 1; 202(1): 26-32.
- 89) Bondre IL, **Holihan JL**, Askenasy EP, et al. Suture, synthetic, or biologic in contaminated ventral hernia repair. *J Surg Res* 2016 Feb; 200(2): 488-94.

- 90) **Holihan JL**, Karanjawala B, Ko A, Askenasy EP, Matta EJ, Bharbaoui L, Hasapes JP, Tammisetti VS, Thupili CR, **Alawadi ZM** et al. Use of computed tomography in diagnosing ventral hernia recurrence: a blinded, prospective multispecialty evaluation. *JAMA Surg* 2016 Jan; 151(1): 7-13.
- 91) **Holihan JL**, **Alawadi Z** et al. Adverse events after ventral hernia repair: the vicious cycle of complications. *J Am Coll Surg* 2015 Aug; 22(2): 478-85.
- 92) Goodenough CJ, Ko TC, Kao LS, Nguyen MT, **Holihan JL**, **Alawadi Z** et al. Development and validation of a risk stratification score for ventral incisional hernia after abdominal surgery: hernia expectation rates in intra-abdominal surgery (the HERNIA project). *J Am Coll Surg* 2015 Apr; 220(4): 405-13.
- 93) Nguyen MT, **Phatak UR**, Li LT et al. Review of stoma site and midline incisional hernias after stoma reversal. *J Surg Res* 2014 Aug; 190(2): 504-9.

ETHICS

- 94) **Cherla DV**, Olavarria OA, **Bernardi K**, Viso CP, Moses ML, **Holihan JL** et al. Investigation of financial conflict of interest among published ventral hernia researchers. *J Am Coll Surg* 2017 Dec 21. [Epub ahead of print].
- 95) **Cherla DV**, Olavarria OA, **Holihan JL**, Viso CP, Hannon C, Kao LS, Ko TC, Liang MK. Discordance of conflict of interest self-disclosure and the Centers of Medicare and Medicaid Services. *J Surg Res* 2017 Oct; 218: 18-22.
- 96) Olavarria OA, **Holihan JL**, **Cherla D** et al. Comparison of conflicts of interest among published hernia researchers self-reported with the Centers for Medicare and Medicaid Open Payments Database. *J Am Coll Surg* 2017 May; 224(5): 800-804.

TRAUMA

- 97) **Pommerening MJ**, Rahbar E, Minei K et al. Splenectomy is associated with hypercoaguable thromboelastography values and increased risk of thromboembolism. *Surgery* 2015 Sep; 158(3): 618-26.
- 98) **Pommerening MJ**, Cardenas JC, Radwan ZA, et al. Hypercoaguability after energy drink consumption. *J Surg Res* 2015 Dec; 199(2): 635-40.
- 99) **Pommerening MJ**, Goodman MD, Holcomb JB, et al. Clinical gestalt and the prediction of massive transfusion after trauma. *Injury* 2015 May; 46(5): 807-13.
- 100) McNutt MK, Chinapuvvula NR, Beckmann NM, Camp EA, **Pommerening MJ** et al. Early surgical intervention for blunt bowel injury: the Bowel Injury Prediction Score (BIPS). *J Trauma Acute Care Surg* 2015 Jan; 78(1): 105-11.
- 101) **Pommerening MJ**, Goodman MD, Farley DL et al. Early diagnosis of clinically significant hyperfibrinolysis using thromboelastography velocity curves. *J Am Coll Surg* 2014 Dec; 219(6): 1157-66.
- 102) **Pommerening MJ**, Kao LS, Sowards KJ et al. Primary skin closure after damage control laparotomy. *Br J Surg* 2015 Jan; 102(1): 67-75.

- 103) Cardenas JC, Rahbar E, ***Pommerening MJ*** et al. Measuring thrombin generation as a tool for predicting hemostatic potential and transfusion requirements following trauma. *J Trauma Acute Care Surg* 2014 Dec; 77(6): 839-45.
- 104) ***Pommerening MJ***, DuBose JJ, Zielinski MD et al. Time to first take-back operation predicts successful primary fascial closure in patients undergoing damage control laparotomy. *Surgery* 2014 Aug; 156(2): 431-8.
- 105) ***Pommerening MJ***, Schwartz DA, Cohen MJ et al. Hypercoaguability after injury in premenopausal females: a prospective, multicenter study. *Surgery* 2014 Aug; 145(2): 439-47.
- 106) ***Alawadi ZM***, LeFebvre E, Fox EE et al. Alternative end points for trauma studies: a survey of academic trauma surgeons. *Surgery* 2015 Nov; 158(5): 1291-6.