

January 2018
Quality and Safety Subcommittee
Section on Surgery's Delivery of Surgical Care Committee

It has been a busy year for the Quality and Safety Subcommittee. Our current two major initiatives are: to establish surgical recommendations for the Choosing Wisely program; and to research and survey current opioid prescription practices with the ultimate goal of establishing recommendations in the effort to lower overall use and exposure to opioid medications.

Updates

1. Team training survey



Team training programs (such as TeamSTEPPS®) borrow crew resource management principles from aviation to foster communication and prevent medical errors. Gaining in popularity nationally, these programs have been shown to improve team dynamics and foster patient safety. Although evidence for the efficacy of these programs exists, there are limited data about how they can be applied to pediatric surgical teams. Last spring, we conducted a survey through the AAP regarding participation in team training for operating room teams in order to investigate usage and perception of team training programs like TeamSTEPPS® by pediatric surgeons and anesthesiologists.

We learned that about a third of children's hospitals/institutions offered team training. The vast majority of respondents who had completed team training found it helpful. Our results will be presented at the Academic Surgical Congress in Jacksonville (January 2018). We would like to thank the AAP and its members for participation in this study.

2. Choosing Wisely

Five years ago, the American Board of Internal Medicine partnered with Consumer Reports on an initiative to increase dialogue between doctors and their patients about wasteful and unnecessary medical tests, treatments, and procedures. Since its initiation, over 500

recommendations have been published. The Choosing Wisely recommendations were created by national medical specialty societies. They are considered evidence-based best practices and should be used in conversation with patients and their families when discussing the use of tests or treatments.

Using the website or application, clinician and patients may research recommendations based on medical diagnoses or symptoms. Neither APSA nor the AAP Section on Surgery has yet made formal recommendations. In conjunction with the Section on Surgery's Committee on Education, we are finalizing a list of 5 recommendations that the public and clinicians can use in regards to surgical care in the general pediatric patient. These recommendations will be geared towards reducing unnecessary tests/procedures and to establish national standards of care.

More information about the Choosing Wisely campaign can be found here <http://www.choosingwisely.org>.



An initiative of the ABIM Foundation

3. Opioid usage in children's surgery survey

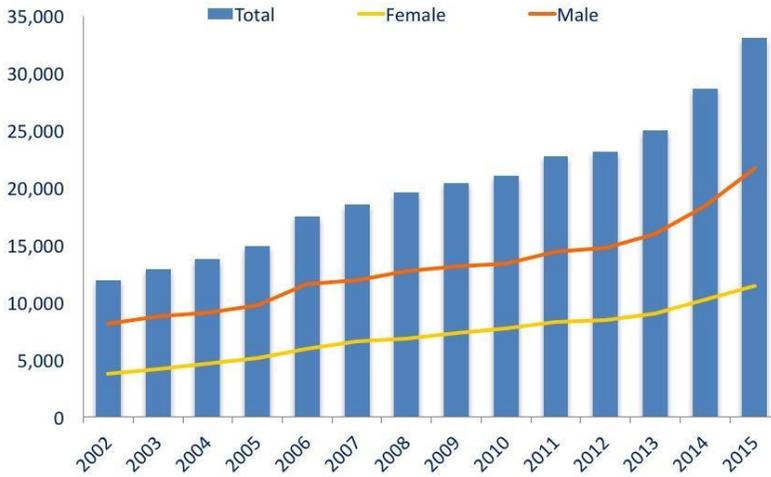
North America is in the midst of an opioid epidemic. It has been estimated that 64,000 Americans died from drug overdose in 2016¹. This number has steadily increased since the Centers for Disease Control began tracking drug overdose deaths, in 1999². Deaths from synthetic opioids have risen dramatically in the last 5 years¹. Canada has a similar problem³. Easy access to prescription narcotic medications has been said to be at least partly responsible for the problem. As health care providers, we share responsibility for ensuring appropriate access to these medications and mitigating our own contribution.

We are designing a survey to assess pain management strategies for children undergoing surgery. Specifically, we would like to learn more about opioid and non-narcotic prescribing patterns by surgeons who operate on children. Perceptions of pediatric surgical specialists about their role in the opioid crisis will also be queried. We hope these responses will help guide regional and national efforts to reduce unnecessary opioid prescribing.



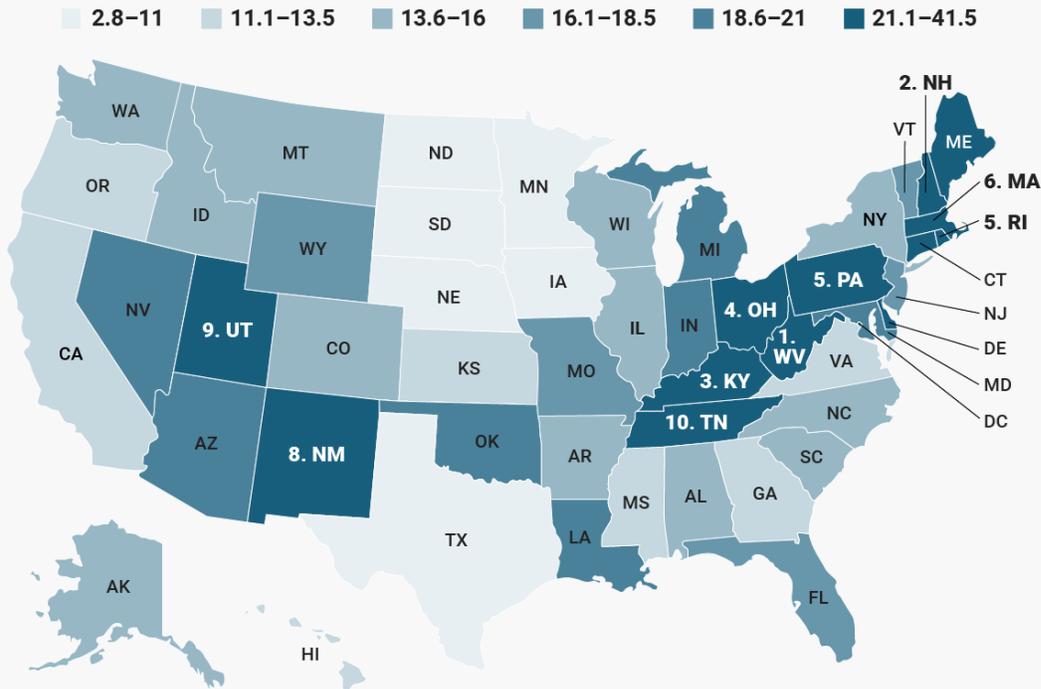
National Overdose Deaths

Number of Deaths from Opioid Drugs



Source: National Center for Health Statistics, CDC Wonder

DRUG OVERDOSE DEATH RATES BY STATE, 2015



SOURCE: Centers for Disease Control and Prevention

BUSINESS INSIDER

*death rates per 100,000 people

Upcoming meetings of interest in patient safety and quality improvement

- Institute for Healthcare Improvement (IHI) Summit for Improving Patient Care: San Diego, CA; April 26-28, 2018. For more information: <http://www.ihf.org/education/Conferences/Summit/Pages/default.aspx>
- IHI/National Patient Safety Foundation (NPSF) Patient Safety Congress: Boston, MA; May 23-25, 2018. For more information: <http://www.ihf.org/education/Conferences/IHI-NPSF-Patient-Safety-Congress-2018/Pages/default.aspx>
- American Hospital Association (AHA) Team Training National Conference: San Diego, CA; June 20-22, 2018. For more information: <http://www.aha.org/products-services/teamtraining/index.shtml>
- American College of Surgeons (ACS) Quality and Safety Conference: Orlando, FL; July 21-24, 2018. For more information: <https://www.facs.org/quality-programs/quality-safety-conference>
- 29th Annual National Forum on Quality Improvement in Health Care: Orlando, FL; December 10-13. For more information: <http://www.ihf.org/education/Conferences/Forum2017/Pages/default.aspx>

Recent literature on patient safety and children's surgery

- 1) *Decreasing intraoperative delays with meaningful use of the surgical safety checklist*⁴ Dr Tsao's group report their experience with surgical safety checklist implementation at Children's Memorial Hermann Hospital in Houston, TX. They found that in 591 cases observed between 2014 and 2016, roughly 19% had a documented intra-operative delay. Most delays were attributed to missing (50%) or malfunctioning (30%) equipment. The degree of fidelity rather than strict adherence to the surgical safety checklist was correlated with diminished intraoperative delay.
- 2) *Quality and Safety Committee. Safety culture among pediatric surgeons: A national survey of attitudes and perceptions of patient safety*⁵ The American Pediatric Surgical Association Quality and Safety Committee report the results of their survey of surgeons' knowledge, attitudes, and perceptions of patient safety. They found that surgeons in leadership positions and academic practice were more likely to report being engaged in patient safety initiatives. Surgeons in private practice were less likely to feel their own children would be safe undergoing surgery at their institution.
- 3) *Effectiveness and meaningful use of paediatric surgical safety checklists and their implementation strategies: a systematic review with narrative synthesis*⁶ Herein, the authors offer a narrative synthesis of surgical safety checklists (SSCs) used for children's surgery after a systematic review. They found having a comprehensive implementation strategy improved outcomes, particularly for high-risk surgeries in developing countries. Meaningful compliance is inconsistently measured and rarely achieved. Providing feedback to users improved compliance. Acceptance of SSCs improved when stakeholders developed implementation strategies, including team-based education.
- 4) *Time to Appendectomy and Risk of Complicated Appendicitis and Adverse Outcomes in Children*⁷ Researchers at Boston Children's Hospital sought to determine if time to appendectomy (time from emergency department presentation to appendectomy) was correlated with risk of perforation. They gathered data from the Pediatric

NSQIP appendectomy pilot database for 23 hospitals from 2013-2014. 2429 patients underwent appendectomy within 24 hours of presentation and were included in the study. 24% of patients were found to have perforated appendicitis. Increasing time to appendectomy was not associated with risk of complicated appendicitis (odds ratio per 1-hour increase, 0.99; 95% CI, 0.97-1.02). Increasing time to appendectomy was associated with longer length of stay but was not associated with increased risk of any secondary outcomes (incisional and organ space infections, percutaneous drainage procedures, unplanned reoperation, and hospital revisits). They conclude that their results support the notion that appendectomy can be safely performed on an urgent rather than emergent basis.

- 5) *Extended Versus Narrow-spectrum Antibiotics in the Management of Uncomplicated Appendicitis in Children: A Propensity-matched Comparative Effectiveness Study*⁸ In this study data from the ACS NSQIP-Pediatric Appendectomy Pilot Project were combined with antibiotic utilization data from the Pediatric Health Information System (PHIS) database for patients undergoing appendectomy for uncomplicated appendicitis at 17 hospitals. The authors found that rates of surgical site infection and hospital revisits were similar for extended-spectrum antibiotics (piperacillin/tazobactam) and narrow spectrum antibiotics (either cefoxitin or ceftriaxone with metronidazole) in children with uncomplicated appendicitis. They conclude that their findings call into question routine use of extended-spectrum antibiotics for uncomplicated appendicitis, especially given growing prevalence of antibiotic-resistant organisms.
- 6) *Clinical validity and relevance of accidental puncture or laceration as a patient safety indicator for children*⁹ Short *et al* retrospectively evaluated cases of accidental puncture or laceration (APL's) at their institution. They found only 71% of APL's were true events requiring some form of repair. The authors conclude that a large proportion of APL's are clinically irrelevant or false, therefore calling into question the use of APL as a patient safety indicator for children undergoing surgery.

Questions or ideas? Please contact us; we would love to hear from you.

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You may have noticed that our current subcommittee's numbers are few. If you are passionate about patient safety and interested in joining our subcommittee, please contact DSC Committee Chair David Rothstein at DRothstein@KaleidaHealth.org.

Cheers, Marybeth and Derek!

Acknowledgement

The patient safety subcommittee wishes to thank Dr David Rodeberg for his prior contributions and commitment to our team.

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