PURPOSE: Breast cancer affects 1 in 8 women with 232,400 new invasive cases each year. Women undergoing breast reconstruction postmastectomy face several choices, and a myriad of written patient education materials exist online. Understanding of these materials, termed health literacy, affects surgical decision-making and outcomes. The National Institutes of Health recommend writing patient education materials at a sixth-seventh grade reading level to accommodate the average reading level of the US adult. The primary goal of this study is to assess the readability of breast reconstruction educational materials online.

METHODS AND MATERIALS: Patient resources were collected from every academic hospital with an integrated plastic surgery residency program, 81 in total. These data were compared to the top nonacademic websites ranked by search engine results, 10 in total. Materials were analyzed using 3 validated readability assessment scales: Coleman-Liau Index, SMOG Readability Formula, and Flesch-Kincaid Grade Level. Average readability was analyzed, and results were compared using a one-way analysis of variance to assess for significance between the different tools and a 2-sided t test to assess for significance between academic and nonacademic readability results.

RESULTS: The mean readability scores across the academic programs were a Coleman-Liau Index of 13.27 (SD = 2.9; 13th grade), Flesch-Kincaid Grade Level of 13.05 (SD = 4.07; 13th grade), and SMOG Readability of 14.25 (SD = 2.97; 14th grade). For the 10 nonacademic sites, results showed a Coleman-Liau Index of 12.1 (SD = 0.9; 12th grade), Flesch-Kincaid of 11.93 (SD = 2.3; 12th grade), and SMOG Readability of 10.9 (SD = 1.7; 11th grade). One-way analysis of variance demonstrated no significant differences in the scoring between the 3 readability tools used (academic F = 2.7804, P = 0.06; nonacademic F = 1.14, P = 0.33).

CONCLUSIONS: This study found that readability across all websites were poor, with an average of a 13th–14th reading grade level for academic institutions, and 11th–12th grade reading level for the top nonacademic websites ranked by search engine results. Plastic surgeons should provide patient education materials fitting a wider range of reading abilities, at a recommended sixth-seventh grade reading level. By focusing on health literacy, plastic surgeons may contribute to improving patient understanding surrounding treatment options, lessening healthcare expenditure, and lowering perioperative complications.

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Intraoperative Administration of Intravenous Dexmedetomidine and Acetaminophen for Improved Postoperative Pain Management in Primary Palatoplasty

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BACKGROUND: Effective pain management for primary palatoplasty (PP) is critical to minimizing risk for postoperative complications including hemorrhage and airway loss. Administration of intravenous (IV) dexmedetomidine and IV acetaminophen is a successful intraoperative analgesic with the additional benefit of being an opioid-sparing technique. The current study assesses the efficacy of intraoperative use of these medications in managing pain after PP.

METHODS: We reviewed our ongoing prospective database of patients undergoing PP from April 2009 to July 2018. We excluded patients who did not receive both medications or received additional intraoperative ketorolac. Patients were divided into those who received
intraoperative IV dexmedetomidine and IV acetaminophen (Group 1) and those who did not (Group 2). Outcome variables included postoperative narcotic use by morphine milligram equivalents (MME), time to oral intake, need for supplemental oxygen, length of stay (LOS), and rate of complications (eg, bleeding requiring exploration or readmission) within the 30-day postoperative period. Baseline characteristics were compared in both groups. Continuous variables were compared using t test for normally distributed data and Mann-Whitney U test for skewed data, whereas categorical variables were compared using chi-square test or Fisher’s exact test. Multivariable linear regression was used to analyze continuous outcomes, and multivariable Poisson regression with robust variance estimation was used to analyze binary outcomes.

RESULTS: One hundred ninety-three patients met inclusion criteria (Group 1, N = 54; Group 2, N = 139). Median age at PP was 11.7 (interquartile range, 10.4–15.5) months for Group 1 and 11.3 (interquartile range, 9.8–14.2) months for Group 2 (P = 0.13). Baseline characteristics such as weight, gender, type of palatoplasty, Veau classification, syndromic diagnosis, and prior use of Latham device were consistent between groups. ASA scores were found significantly different (ASA 1: 11.1% versus 29.7%, ASA 2: 75.9% versus 61.6%, ASA 3: 13.0% versus 8.7%, for Groups 1 and 2, respectively; P = 0.02). Group 1 required significantly lower doses of postoperative acetaminophen (mean dose: 71.0 mg/kg, 95% CI: 57.8–84.3 versus 90.9 mg/kg, 95% CI: 82.7–99.1; P = 0.01), as well as lower fentanyl requirements in the recovery room (mean dose: 0.68 µg/kg, 95% CI: 0.48–0.88 versus 1.18 µg/kg, 95% CI: 1.06–1.31; P < 0.001). Although Group 1 patients had shorter LOS, shorter duration to oral intake, lower pain scores, less narcotic requirements for breakthrough pain, and less 30-day complication rates (1.8% versus 5.0%; P = 0.45), these differences did not reach statistical significance.

CONCLUSION: The addition of intraoperative IV dexmedetomidine and IV acetaminophen during PP provides effective perioperative pain control, resulting in statistically significant decreased need for postoperative pain medication. Our study also documents an overall trend for decrease in LOS, time to oral intake, pain scores, total narcotic requirements, and postoperative complications. These results warrant larger studies to confirm the statistical significance of some variables.

Does the Strengthen Opioid Misuse Prevention Act Reduce Opioid Prescriptions Associated With Hand Surgery?

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PURPOSE: The opioid epidemic has become a leading cause of death in America. Various states have put into effect legislation to limit the amount of opioids that can be prescribed. In North Carolina, The Strengthen Opioid Misuse Prevention (STOP) Act came into effect January 1, 2018, which outlined new limitations on prescribing opioids to no more than 7 days after surgery. However, the efficacy of state mandated opioid laws have not been evaluated in hand surgery.

METHODS AND MATERIALS: A single-center retrospective chart review was performed for patients who underwent hand surgery between January 2015 and December 2019. Patients were excluded if they were under 12 years of age, had a multisystem trauma, inpatient admission for more than 48 hours, or had incomplete records. A review of the North Carolina Controlled Substances Database (PMP Aware) was conducted to assess for preoperative and perioperative (within 30 days of surgery) prescriptions filled. The total amount of opioids filled was converted to morphine milligram equivalents (MME). The average MME was compared between those who underwent surgery prior to and after initiation of the STOP Act. Subgroup analysis was performed in patients who underwent different types of surgery including metacarpal, tendon, phalangeal, and amputation. Additional analysis was performed to evaluate the patients who received excessive amount of opioids (>600 MME).

RESULTS: Of the 500 patients who met inclusion criteria for the study, 175 were in the before group and 325 were in the after group. The demographics, patient risk factors, and complications did not differ between groups. There was an overall 69.3% decrease in opioids dispensed per patient. This statistically significant decrease was also observed in metacarpal and tendon groups (84.2% and 60.9%, respectively). Although there was an observed decrease in the