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Practice-level variation in postoperative pain management after ureteroscopy (URS): Lessons from a statewide collaborative quality initiative

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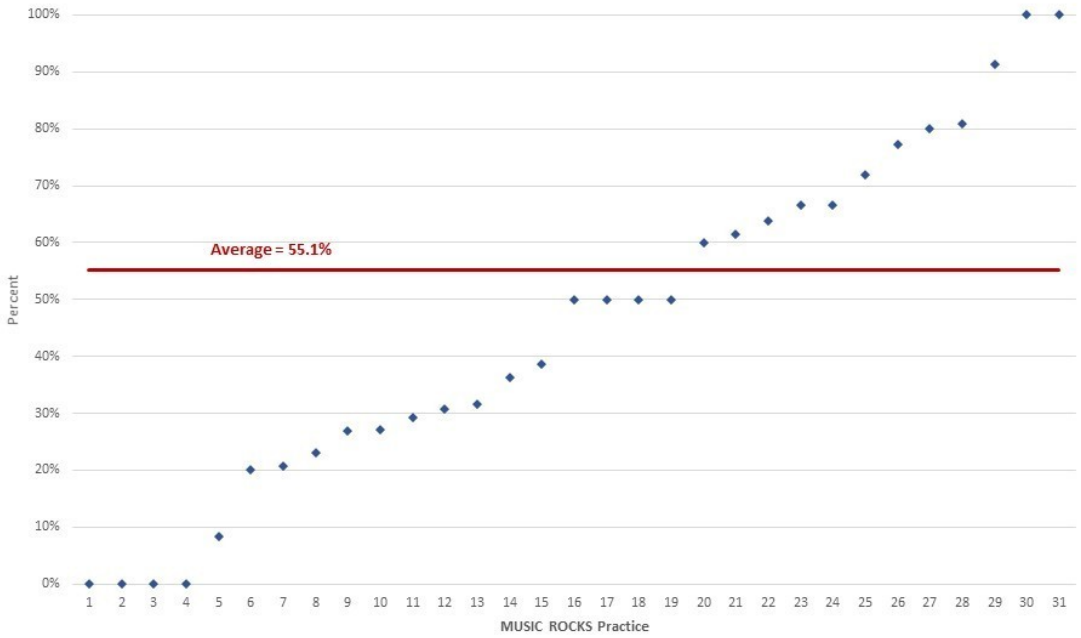
Introduction & Objectives: One of the most common reasons for emergency department visit after URS is postoperative pain. Thus, efforts focused on optimizing postoperative pain management likely will have salutary effects on patient health. However, before such efforts can be launched, baseline information on contemporary pain medication prescription patterns is needed.

Materials & Methods: For this study, we used data from the Michigan Urological Surgery Improvement Collaborative's Reducing Operative Complications from Kidney Stones (MUSIC ROCKS) initiative. MUSIC ROCKS maintains an all-payer clinical registry in which detailed patient and perioperative information is prospectively captured for patients undergoing URS at a participating practice in Michigan. We abstracted registry data on and calculated practice-level use of postoperative opiates, non-steroidal anti-inflammatory drugs (NSAIDs), and alpha blockers. We supplemented these data with a 15-item survey that was administered to MUSIC ROCKS' urologists regarding their postoperative pain management strategies (response rate, 67%).

Results: Data were available on 5,600 URS procedures performed across 34 participating practices between June, 2016 and September, 2018. 85.9% of these patients received an opiate prescription as part of their postoperative pain management, 85.1% were managed with an opiate alone. For only 11.5% of patients was an NSAID included in the postoperative pain regimen. In contrast, 46.6% of survey respondents indicated that they prescribed an NSAID after a majority of their cases. Registry data revealed that 55.1% and of patients were prescribed alpha blockers postoperatively. This rate varied substantially between practices (Figure: range 0%- 100%, P=<0.01), and only 18.7% of survey respondents prescribed anticholinergics in a majority of their patients.

Figure. Variation in use of alpha-blockers in MUSIC ROCKS practices



Conclusions: There is substantial variability in urologists' approach to pain management after URS across Michigan. Our analysis highlights low use of NSAIDs, alpha blockers, and anticholinergics, suggesting opportunities for improvement.