Health care systems have increasingly adopted a culture of opioid stewardship to promote the safer use of opioids for pain management in a way that seeks to optimize patient outcomes while reducing the risks associated with opioids. Progress in opioid stewardship for acute pain has been advanced by 2 parallel lines of work. The first has been the development of procedure-specific guidelines that tailor the recommended number of opioid pills to amounts required to cover most patients’ analgesia needs based on patient data on opioid consumption after a given procedure. The second line of work has demonstrated that lowering default opioid prescription order quantities in the electronic health record (EHR) can significantly reduce the number of pills prescribed, as clinicians tend to stay with default choices. The study by Chua and colleagues advances the field of opioid stewardship by combining both lines of work, demonstrating the effects of lowering EHR default opioid dosages to a lower amount chosen to be in line with the needs of most patients based on patient-reported data.

The study by Chua et al compared postoperative opioid prescribing patterns and patient-reported outcomes among individuals aged 12 to 25 years who underwent tonsillectomy before and after the default number of opioid dosages was decreased from 30 to 12 in the procedure discharge order set. Changes in outcomes after implementation of the order set with the lower default number were compared with a control practice of patients undergoing tonsillectomy in which there was no change to EHR order design. Overall, the study found a 45.5–percentage point increase in prescriptions for the new default dosage, which translated into a 29.2% relative reduction in the mean number of opioid dosages prescribed.

This study makes several contributions to the existing literature. First, it contributes to the growing evidence base on the profound influence of EHR choice architecture and default orders on opioid prescribing for acute pain and clinician ordering behavior in general. Like prior studies in emergency department and postoperative prescribing contexts, there was no announcement about the change in the default order, yet a similar large effect size on prescribing behavior was found. These large effect sizes are on par with what have been observed with more resource-intensive quality improvement interventions requiring direct engagement with clinicians. Default options take advantage of a common pitfall in human decision-making, the tendency to stay with the status quo, because deviating from the status quo is perceived as a potential loss or may simply require more effort. Furthermore, default options exert stronger effects when clinicians lack strong preferences and clinicians may interpret the default option as an implicit recommendation or guideline. The current culture of opioid stewardship and widely known risks of opioids made it less likely that clinicians in the study by Chua et al would opt out of the default option. Indeed, 51.9% of prescribers who used the order set stayed with the lower default.

Second, this study went beyond measuring changes in opioid doses prescribed by also measuring changes in health outcomes. This is much needed, as highlighted by the recent National Academies of Sciences, Engineering, and Medicine report calling for the measurement of health outcomes in studies for building the evidence base for opioid prescribing guidelines and interventions. Chua et al measured a wide variety of patient-reported outcomes, including satisfaction with pain control, time to pain resolution, pain scores over time, and anxiety, and there were no statistically significant differences in these outcomes. However, there was a modest but statistically significant increase in sleep disturbance among patients exposed to the lower EHR

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default opioid dosage. These are important outcomes to measure as more judicious prescribing of opioids needs to be balanced against unintended consequences. Furthermore, demonstrating that the implementation of a given opioid stewardship intervention is not associated with significant unintended consequences is key for widespread implementation.

Finally, the study by Chua and colleagues strengthened the robustness of their findings by including a control group, which is often lacking in the opioid stewardship quality improvement literature. This is important, as there has been a decreasing trend in opioid prescribing during the past 7 years, and thus any observed decrease in opioid prescribing and associated outcomes in the intervention group could be associated with contemporaneous trends.

There are some caveats with this study that have implications for generalizability and scalability. First, the study focused on one procedure in a single health system among a population of adolescents and young adults. The sample size was also modest, and the refill rate was 22.6 percentage points (95% CI, -0.4 to 45.5 percentage points) higher in intervention group. This difference may have been statistically significant if the sample size was larger and would likely be considered clinically significant. However, the potential hassles and harms generated for a minority of patients needing to obtain refills is unlikely to outweigh the potential harms of providing excessive opioid dosages to a majority of patients. The unintended consequences of this potential tradeoff can be minimized with electronic prescribing and with dedicated workflows in place to make obtaining a refill an easy process for those who need it.

Second, this study manipulated a default dose in an order set that was already routinely used by clinicians. Even in this scenario, the order set was not used for 14.8% of prescriptions. Therefore, implementing new order sets with guideline-based defaults will need to ensure the order set is placed within the clinician's routine workflow and may need to include other commonly used nonopioid discharge orders to ensure adoption and use. If new order sets are outside the routine workflow or are difficult to access, they are unlikely to have any effect on clinician behavior.

Although implementing patient-centered default opioid prescription orders is a high-impact approach for opioid stewardship, there is much room for future investigation. For example, more work is needed to determine flexible ways to implement this strategy for patients being discharged after inpatient surgery. This is because clinicians can observe a patient's response to postoperative pain therapies while in the hospital and tailor discharge opioid prescriptions accordingly. A recent trial found that, for patients who did not require opioids in the 24 hours prior to discharge, prescribing 5 pills at discharge satisfied the needs of 99% of these patients. It may also be possible to provide more dynamic clinical decision support to generate personalized default postoperative dosages based on a given patient's clinical characteristics and predictive analytics from data sets on postoperative opioid consumption. In the meantime, enacting default options to "right-size" opioid prescriptions to be consistent with patient-reported analgesia needs carries no more risk than ignoring default options that were previously set passively and would likely greatly reduce opioid-related harms and while minimizing unintended consequences.
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REFERENCES