The Numeric Scoring of Pain: This Practice Rates a Zero Out of Ten

Steven M. Green, MD*; Baruch S. Krauss, MD, EdM

*Corresponding Author. E-mail: steve@stevegreenmd.com.

SEE RELATED ARTICLE, P. 1

The directive to routinely ask patients to score their pain, although well intentioned, has instead proven counterproductive. Pain scores do not accurately predict which patients want or should receive analgesics. Their application encourages health care providers to react to—and treat—a number rather than the individual patient. The adoption of pain scoring has predictably increased the use of opioids—and, with that, their associated adverse effects. This practice has been an enormous cumulative waste of professional time. Fortunately, there is a simple, patient-centered, and clinically practical alternative.

In this issue of Annals, Chang et al1 return to basics by studying what happens when you titrate opioids according to the patient’s preference rather than guided by scoring. It is not surprising that by using this patient-centered approach they achieve satisfactory pain control 99% of the time.

WHY DO WE SCORE PAIN?

Since the 1990s, physicians have been criticized for inadequate recognition and treatment of pain, even when much of the purported evidence for such “oligoanalgesia” evaluated pain scores and diagnoses rather than clinically meaningful outcomes such as patient satisfaction and a desire for further analgesia.2 In 2000, The Joint Commission (TJC) mandated screening pain assessments, including periodic reassessments “when clinically required.”3 Most hospitals, to ensure guaranteed compliance with this directive, opted to require providers to routinely assess and document the numeric rating scale, ie, “Please rate your pain on a scale of 0 to 10.” Pediatric settings similarly deployed smiley face/sad face charts. TJC encouraged the American Pain Society’s “Pain Is the 5th Vital Sign” campaign,4 effectively catapulting the numeric rating scale from an obscure research tool to part of the routine medical lexicon. All of this occurred in the absence of convincing research that such scoring was either accurate or capable of improving patient outcomes.

WHAT ARE PAIN SCORES MEASURING?

The key pitfall with pain scoring is that it measures the wrong thing. Multiple studies from diverse settings have consistently found that patient-reported scores do not accurately predict the desire for analgesic therapy.5-11 In their article, Chang et al1 corroborate these previous findings, with 51% of their subjects declining further analgesics at least once despite reporting a pain score of 5 or greater and 21% similarly declining analgesics despite a score of 7 or greater. The authors observe that “the large variability…reinforces the necessity of asking patients if they want additional medication rather than basing treatment decisions on patients’ reported level of pain.”1

Pain scores measure something, but this something may not be reliable or helpful. Indeed, the numeric rating scale is only moderately predictive of more robust measures of pain.9-13 Pain is neither a vital sign nor a disease. Pain is a symptom—a subjective condition affected by a multitude of clinical, emotional, cultural, and psychological factors. It is an oversimplification to base analgesic therapy on an arbitrary pain score threshold. Instead, analgesics should be administered to patients who, after a careful clinical evaluation, are judged to be able to receive them safely and appropriately, and for whom such therapy is actually desired.

WHAT ARE WE TREATING?

The mandate to ask and document pain scores puts busy health care providers on the spot. Now there is an “abnormal” number on the chart that, if not corrected, makes us look negligent. Social psychology dictates that it is far easier to simply fix the number than it is to take the time to document why the value is misleading, or why therapy is undesirable. As observed by Walid et al,14 the act of pain scoring “may unintentionally deteriorate into a bureaucratic checklist item supplanting, rather than enhancing, communication.” Instead of pain management
being a nuanced and thoughtful patient interaction, it may devolve into a reflex 3-step chore: (1) asking a standard question, (2) entering a numeric value into an electronic medical record, and then (3) reacting to the value. Busy staff may say, “No, don’t describe your pain. Rate it from 0 to 10.”

Given this potent incentive to treat the number rather than the patient, the outcome should not be a surprise. Three studies have shown that the addition of mandated pain scoring in emergency department (ED) triage results in more frequent analgesic administration,15–17 mirroring that in other settings.18 Is such analgesia appropriate, or are we pressuring patients to receive treatment that they don’t want or shouldn’t receive? As with other notable TJC performance initiatives, pain scoring may “improve” a surrogate measure of debatable importance (ie, reduce a given pain score from an 8 to a 5) while failing to ultimately benefit patients.

Historically, it has been fashionable to lament the epidemic of pain undertreatment.2 Currently, it is fashionable to lament the epidemic of opioid overuse.18 Physicians walking this tightrope are being castigated as a single integer of dubious merit. Routine pain scoring is a proven failure and should be abandoned.

DO ALL PATIENTS IN PAIN WANT ANALGESICS?

As emergency physicians, we regularly encounter patients in pain who do not want analgesics. Many are willing to tolerate even substantial discomfort to remain reliably alert and coherent. Often their primary focus is not attaining relief, but rather understanding the cause of their condition.5,19 Some patients decline pain medications because of concerns about drug-associated adverse effects (eg, nausea, pruritus, constipation, not feeling in control), allergy, potential opioid addiction (even if unfounded), or the need to drive themselves home.5–7,19 Still others want analgesia, but would prefer to leave the ED quickly with their prescription in hand and begin treatment in the comfort of their own home. Others reporting pain are established drug seekers for whom opioids should be appropriately refused, or have absolute or relative contraindications to opioid administration such as hypotension, respiratory impairment, allergy, or altered mentation.

When ED patients in pain are offered analgesia, prospective studies demonstrate that nearly half of them decline it.5,19 The majority of ED patients who truly want analgesics receive them.5,19,21 Patient satisfaction can be high despite low rates of analgesic administration and high levels of reported pain at discharge.22,23

The numeric rating scale is unidimensional. For many patients, however, their perception of pain is multifaceted—potently synergized by anxiety, nausea, dyspnea, or lightheadedness.11,14 Thoughtful ED care, including reassurance and, when appropriate, antiemetics, oxygen, hydration, or extremity splinting, may not eliminate pain altogether but may render it below a patient’s preferred threshold for analgesia.

CONCLUSION

The numeric rating scale is helpful for pain research but is inaccurate and counterproductive for standard patient care. TJC mandates that pain be identified and addressed but does not specifically require pain scoring. What happened to the old-fashioned questions such as “Are you in pain?” and “Do you want pain medication?” Pain scoring in electronic medical records could be more appropriately replaced with a single yes/no checkbox per encounter: “Was pain evaluated and addressed?” as noted by Walid et al,14 The use of the 0-to-10 pain scale…as a sole measure of pain assessment undercuts compassionate communication.” Let’s evaluate pain as the complex, nuanced symptom that it is, rather than oversimplifying it as a single integer of dubious merit. Routine pain scoring is a proven failure and should be abandoned.


