

Academic Emergency Medicine

Editor-in-Chief Pick of the Month

On the fight against disguised lies

This month's POTM is a systematic review that points out the promise and folly of behavioral modification. The target behavior in this case amounts to clicking an order for an imaging test for a patient with low back pain. I picked this because this issue represents the underlying problem of using a test as a surrogate for carefully reasoned reassurance.¹ Why? Reassurance takes time, cognitive energy, and patience. Limited commodities.

"I'm going to do an x-ray of your back just to be sure we aren't missing anything serious" says every emergency practitioner at some point in his or her career (including me), disingenuously, knowing with near 100% certainty that the radiograph will not make a quantum particle of difference in care.

These words sound so helpful, harmless and thoughtful. As if something more is being done. Some providers euphemize this behavior as *therapeutic testing*, although *covert chicanery* would be a more apt description. This anti-hero theme underpins the logic of "clinical decision support," or behavioral modification to reduce low value imaging for low back pain, **explored by Liu et al in this month's AEM.**

The behavioral modifications used in the five studies selected by **Liu et al** used either educational efforts (3 studies) or cognitive barriers, such as additional paperwork or a million mouse clicks (2 studies), to reduce low yield imaging. The hypothesis of the latter framework essentially presumes that a nuisance will extinguish the bad behavior. This type of behavioral modification has its roots in product safety. In the 1980s, automobile engineers successfully used annoying dings and flashing lights to nag car occupants into their seatbelts. In the ED, similar efforts have sought to reduce antibiotic prescriptions for the common cold, and CT scanning for PE in low risk patients without a D-dimer. Most of these have found modest and often unsustainable improvements.

In five studies, **Liu et al** also found mixed results for low back pain. The interventions, all employing before and after designs, led to improvements in three out of five studies, worsening in one and subgroup improvements and worsening in

another. These findings suggest only a “more likely than not” conclusion regarding the probability of success if similar efforts are repeated in different settings. The good news for practice sanity is that knowledge-based interventions worked as well as annoying knock-down flags, which some practitioners believe to kindle physician burnout. And, as is often the case with systematic reviews, current literature raises more questions than it answers. One question is about the sustainability of these efforts (e.g., from the Hawthorne effect). Another is the implicit message about the potential value of interventions designed to teach physicians how to use to empathic communication to provide reassurance, rather than engage in disingenuous test ordering.

1. Pincus T, Holt N, Vogel S, et al. Cognitive and affective reassurance and patient outcomes in primary care: a systematic review. *Pain*. 2013;154(11):2407-2416.