

Signal and noise: applying a laboratory trigger tool to identify adverse drug events among primary care patients.

August 1, 2012

Brenner S, Detz A, Lopez A, et al. Signal and noise: applying a laboratory trigger tool to identify adverse drug events among primary care patients. *BMJ Qual Saf.* 2012;21(8):670-5. doi:10.1136/bmjqs-2011-000643.

<https://psnet.ahrq.gov/issue/signal-and-noise-applying-laboratory-trigger-tool-identify-adverse-drug-events-among-primary>

Adverse drug events (ADEs) are difficult to capture, particularly in the [ambulatory setting](#), largely due to reliance on self-reporting by physicians and/or patients. Although in-depth [chart review](#) remains the gold standard for identifying ADEs, trigger tools have been shown to be a useful and [more efficient way](#) to screen for events. This retrospective electronic medical review of 583 patients in a single integrated public health care system evaluated the usefulness of six laboratory triggers to detect the occurrence of ADEs among ambulatory patients. These six laboratory values have been [previously identified](#) as having high positive predictive value for ADEs. However, in this study, 1342 triggers—representing 622 unique episodes—led to only 91 identified ADEs. The poor specificity of triggers led the authors to conclude that these abnormal laboratory values are "a 'noisy' method to identify the signal of ADEs" in this setting.