

Trigger Tool – Clinical Assessment Form for Potential Adverse Drug Events

What are adverse drug events (ADEs)?

Adverse drug events (ADEs) are defined by the Institute of Medicine (IOM) as, “injuries resulting from a medical intervention related to a drug and can manifest as signs, symptoms or laboratory abnormalities.”¹ ADEs are common in elderly nursing home (NH) residents and are often a result of polypharmacy, multiple co-morbid illnesses, and difficulty with monitoring prescribed medications.²⁻⁴

What is a trigger tool?

Trigger tool methodology includes retrospective review of resident records using predetermined “triggers” to detect adverse events and/or potential adverse drug events (pADE). Facilities can customize trigger tools to best fit their setting with their specified choice of triggers.

Why use a trigger tool to detect pADEs?

Despite the consequences and costs associated with ADEs, the vast majority of these events go undetected using traditional methods including comprehensive chart reviews, direct observation, and voluntary reporting. Therefore, alternative surveillance strategies are needed in NHs to supplement existing detection strategies and minimize the potential consequences of ADEs.⁵ The trigger tool methodology greatly simplifies the chart review process by allowing rapid and systematic examination of charts to extract relevant data for the detection of potential ADEs. The technique requires minimal training and is versatile as it can be tailored to specific clinical settings.

What are examples of ADE triggers?

The triggers themselves represent specific events including the ordering of certain medications (e.g., antidotes, such as Vitamin K), the results of certain laboratory studies (e.g., hyperkalemia, hypoglycemia, or hyponatremia), and change in clinical status or new sign or symptom (e.g., drug-induced fall or drug-related rash).⁵

What does a trigger tool look like? (see attached example)

The RAVEN Clinician Assessment Form for Potential ADEs is an example of a trigger tool used to detect common laboratory triggered ADEs in the nursing home setting. The trigger tool was developed at UPMC by Drs. Steven Handler and Joseph Hanlon in conjunction with the Institute of Health Information (IHI) through the completion of a study which analyzed laboratory, pharmacy, and Minimum Data Set triggers to expand the use of the trigger tool methodology to the NH setting.⁵

Who can use the trigger tool?

Clinical reviewers including nurses, therapists, pharmacists, physicians, etc.

What information is needed to complete a pADE trigger tool assessment?

Information needed to complete a pADE trigger tool assessment includes demographic, medication (medication administration records, order changes, etc.), clinical assessment(s), laboratory value(s). All necessary information should be accessible within a resident's chart.

How can you use this data from the trigger tool for your facility?

The IHI recommends using the results of this tool to measure the number of ADEs in an organization over time and determine whether or not the changes a facility is making results in improvement. Similar to other NH quality improvement initiatives, the results can be summarized and reported to the quality assessment and assurance (QAA) committee that is required to meet at least quarterly as described in F868⁶. During these meetings, the committee can develop and implement plans of action to correct the future occurrence of ADEs, including monitoring the effect of implemented changes and making needed revisions to the action plans.

References:

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4. Gurwitz JH, Field TS, Judge J, Rochon P, Harrold LR, Cadoret C, et al. The incidence of adverse drug events in two large academic long-term care facilities. *Am J Med*. 2005 Mar;118(3):251–258. [[PubMed](#)] [[Google Scholar](#)]
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6. U.S. Department of Health and Human Services and Centers for Medicare & Medicaid Services. Guidance to surveyors for long term care facilities. State Operations Provider Certification. [Accessed September 10, 2008]. <http://www.cms.hhs.gov/transmittals/downloads/R22SOMA.pdf>.