

Evaluating medication outcomes: 3 key questions

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Post hoc ergo propter hoc—“after this, therefore because of this”—suggests that 2 distinct events linked temporally are related causally. Clinicians often apply this dictum when monitoring effects of psychotropics. Because of stigma associated with psychiatric medications, and the readiness with which many practitioners blame them for unexpected results, it is important to develop a rational approach to evaluating outcomes—particularly adverse ones—after administering psychotropic agents.

Consider a geriatric patient admitted to the hospital for a urinary tract infection. He becomes verbally aggressive and is given IV haloperidol. Five minutes later he strikes a nurse and receives lorazepam. Twenty minutes later, he is lying calmly in his bed. The nursing staff and primary team conclude that the patient’s agitation worsened because of the antipsychotic and responded to the benzodiazepine; the physician documents in the patient’s chart that he had an adverse reaction to haloperidol.

In light of what we know about psychotropic medications’ mechanism of action, a more plausible explanation is that whatever caused the patient to become agitated (delirium) resulted in physical aggression. Haloperidol simply did not have enough

time to exert its effect before the patient hit the nurse. It also would be wrong to automatically conclude that the last intervention (a benzodiazepine) produced the beneficial outcome. Was it the lorazepam, the haloperidol finally “kicking in,” or a combination of both? Perhaps it was none of the above but rather a worsening infection or irregular waxing and waning of delirium that was the culprit.

To avoid incorrectly attributing negative outcomes to medications, we suggest asking yourself 3 questions:

1. Is the negative outcome a potential consequence of the underlying condition?

Consider the possibility that the medication did not cause the adverse event but merely failed to adequately treat the underlying problem. A teenager who attempts suicide 2 weeks after starting an antidepressant may be exhibiting symptoms related to depression rather than behavior caused by the medication.

2. Are other medical conditions or medications responsible for the negative outcome?

Weigh the relative likelihood that these factors are contributing to your patient’s presentation. In a surgical patient who is overly somnolent after receiving an anxiolytic,

To avoid incorrectly attributing adverse outcomes to a medication, carefully evaluate any potential confounding factors

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consider the possibility that a narcotic or worsening hypoxia are contributing to her somnolence.

3. Is the negative outcome likely to have occurred spontaneously?

Consider the possibility of coincidence. Lithium might not be causing declining renal function in an older patient. A dosing

adjustment based on the patient's current renal function may be a better harm-reduction strategy than discontinuing a potentially useful medication.

Careful evaluation of these potential confounding factors will greatly reduce the likelihood of falsely identifying psychotropic medications as responsible for negative outcomes. After this, but not always because of this.

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