

# The Agitated Patient in the Emergency Department

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**Abstract** A 32-year-old male with a past history of paranoid schizophrenia and methamphetamine use presents to the emergency department requesting help. He is vague in his requests for help and seems paranoid about staff harming him. He is not taking his psychiatric medication. He is directable in triage, but after being placed into a room begins to escalate. By the time the physician and nurse go to see him, he attempts to strike the physician. He is talking loudly and breaks a portable computer. Security must be called immediately to the bedside.

**Keywords** Agitated patients · Treatment of violent patients · Care methods for agitated patients · Second-generation antipsychotics

## Introduction

Many emergency physicians think that agitated patients like the one above are some of the easiest to treat: all that is required is lots of security personnel, haloperidol, and perhaps some Ativan. If this is your practice, you might be surprised to discover that the use of haloperidol alone is discouraged by the latest Cochrane reviews [1]. You might also be surprised to discover that the combination of haloperidol + lorazepam is no longer considered first-line treatment by many experts, even for the patient above [2].

Haloperidol may still have its place in the ED of course, but newer antipsychotics are likely preferred in most instances. In fact, many experts have called for a complete overhaul in the treatment of agitated patients, with a bundle of new practices for agitated patients that are not unlike the “resuscitation bundle” of critical care. In this bundle, agitated patients are evaluated and treated with a variety of approaches such as

- the use of standardized agitation scales to objectively measure agitation;
- the use of verbal de-escalation to calm the patient when this can be done safely;
- the careful use of medication targeted to the specific type of agitation;
- the use of oral medicines whenever possible;
- the use of second-generation antipsychotics (SGAs) over first-generation antipsychotics (FGAs) in most situations not involving alcohol intoxication.

The review below, based primarily on the 2012 expert consensus guidelines from the American Association for Emergency Psychiatry and other published literature, discusses agitation, the initial approach to agitated patients in the emergency setting, the proper goal of sedation,

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pharmacologic treatment of patients with agitation, and the use of physical restraints [2–4]. Since most emergency clinicians are already quite familiar with medical causes of agitation such as alcohol withdrawal, hypoxia, or hypoglycemia, the focus is instead on agitation of a psychiatric origin.

### What is Agitation?

Although most clinicians “know it when they see it,” agitation is more formally defined as excessive motor or verbal activity [5–7]. It is not related to any particular emotion, psychological state, or psychiatric disorder and may be related to a myriad of potential causes [7]. Agitation may quickly escalate to aggression or violence, like the patient above, which anecdotally is when many emergency clinicians first notice that the patient is agitated. There may be more options for treatment of agitation if the patient is less agitated, and treatment of markedly agitated patients like the one in the case above is likely more difficult. The emergency medicine literature is replete with studies of such difficult patients, and often the only seeming controversy is which intramuscular preparation results in the quickest and most long-lasting sedation. Consequently, many experts have argued that emergency clinicians should intervene earlier when less coercive measures may be more successful. This is discussed in more detail below.

Since agitation is difficult to define, its prevalence is also difficult to measure. Previous studies, therefore, have operationalized agitation as “staff perceptions of safety” or “instances of verbal and physical aggression.” If these definitions are used, agitation may be surprisingly common. At 65 U.S. emergency departments, nearly 25 % of ED staff felt safe at work “sometimes,” “rarely,” or “never” [8]. In a 1994 study, Anglin and colleagues found that 62 % of emergency medicine residents in California reported worry about their workplace safety [9]. Finally, a 2011 Emergency Nurse Association study indicated that 54.5 % of EM nurses were physically or verbally abused at work in the past 7 days [10]. Agitation is thus an important issue for patients and staff alike.

There are multiple agitation rating scales available that can be quickly and easily used in the ED. The use of a scale, especially when used routinely, may aid in early recognition of agitation [11].

### What is the Initial Approach to the Agitated Patient in the Emergency Department?

Extreme caution should be exercised when approaching an agitated patient, especially if the patient is violent. There are four main goals of agitation treatment: calming & protecting the patient; calming & protecting staff; allowing

the patient’s participation in care whenever possible; and finally evaluation & disposition of the patient. These goals are of course not mutually exclusive, and safety in regards to the agitated patient starts even before these patients arrive in the ED. Staff should be trained in verbal de-escalation techniques and should have a prepared patient room away from potential weapons and sharp objects, and there should be an agreed-upon plan with hospital security.

Despite the popularity of anti-aggression training, the use of verbal de-escalation techniques in psychiatric settings, and the growing consensus among psychiatrists that SGAs are more useful than FGAs in agitation of psychiatric origin, many emergency departments nationwide still have not adopted these measures. This may have to do with tradition, with the limited data about the use of SGAs in the acute setting, or because the population of agitated patients in the ED is different than that in the psychiatric inpatient unit [12, 13]. This is discussed in more detail below. Therefore, although experts agree on the concepts, the exact details of the approach to the acutely agitated patient may be somewhat controversial.

### Verbal De-escalation with Agitated Patients?

Much like the bundling of resuscitative measures in sepsis care, expert consensus panels have stated that a variety of approaches are needed to deal with acutely agitated patients. The first and perhaps most important approach is the use of verbal de-escalation [7, 14, 15]. Verbal de-escalation is the use of targeted words and phrases to calm a patient, and is not the mere reading of a script [16]. The use of verbal techniques in the ED is perhaps not widespread as in other settings. This may be because emergency clinicians often perceive themselves as too busy for verbal de-escalation techniques or because they are better trained in pharmacologic treatments. In addition, although there is evidence that non-confrontational approaches work, there is little empiric evidence about which types or techniques are most effective.

At least one study has illustrated the potential power of any verbal technique with acutely agitated patients [17]. Isbister and colleagues in 2010 actually wished to investigate the use of droperidol and midazolam in the treatment of acutely agitated patients in Australian emergency departments. As a requirement of the study, however, investigators had to attempt verbal de-escalation before giving either of these medications. As a result, 60 of 223 security calls (26.9 %) were lost to the study, since they were calmed to the point of no longer needing medication. Although security staff were free to use any verbal technique they wished, this study indicates that these techniques may actually be quite powerful treatments in and of themselves.

A recent consensus panel suggested the use of the following principles in verbal de-escalation [16] (Tables 1, 2).

**Table 1** 10 principles of verbal de-escalation

1. Respect personal space of the patient
2. Do not be provocative
3. Establish verbal contact
4. Be concise
5. Identify wants and feelings
6. Listen closely to what the patient is saying
7. Agree or agree to disagree
8. Lay down the law and set clear limits
9. Offer choices and optimism
10. Debrief the patient and staff

**Table 2** Useful verbal strategies in verbal de-escalation

“What helps you at times like this?”	Strategy: invite the patient’s ideas
“I think you would benefit from medication”	Strategy: stating a fact
“I really think you need a little medicine”	Strategy: persuading
“You’re in a terrible crisis. Nothing’s working. I’m going to get you some emergency medication. It works well and it’s safe. If you have any serious concerns, let me know”	Strategy: inducing

Utilizing these principles, many experts think that verbal de-escalation can be accomplished in only a few minutes.

### What About the Kinds of Patients That are Violent? Or are Brought in by the Police Already Agitated?

Patients whose behavior continues to deteriorate or who refuse medication pose a safety problem in the ED. In this instance, a show of force is typically recommended. This is often termed a “show of concern” instead so as to reinforce the caring nature of the intervention [6]. Oral medication is typically offered as a last-ditch intervention.

Although the decision to forcibly inject meds during such scenarios is often made quickly, the decision is rife with potential ethical and legal implications. When forced medications are ordered, the emergency clinician has implicitly made the determination that the patients lack the capacity to make decisions about their own care. Simply being on a psychiatric hold, refusing to cooperate with treatment, or not following ED rules are not acceptable grounds for forcing medication and may potentially leave the clinician open to charges of battery [18]. In the case presented at the beginning, oral medication should be offered to the patient as a final option. If he refuses, injection may be warranted given the danger that the patient presents to other patients, clinicians, and himself.

### How Should Agitation be Treated?

The type of agitation should guide the choice of medication [2]. Agitation that is not psychiatric in origin should generally not be treated with antipsychotics. Hypoglycemia, for instance, should be treated with glucose, hypoxia with oxygen, thyroid storm with appropriate beta-blockers, anti-thyroid medications, etc. [5, 19]. Substance withdrawal is typically treated with benzodiazepines.

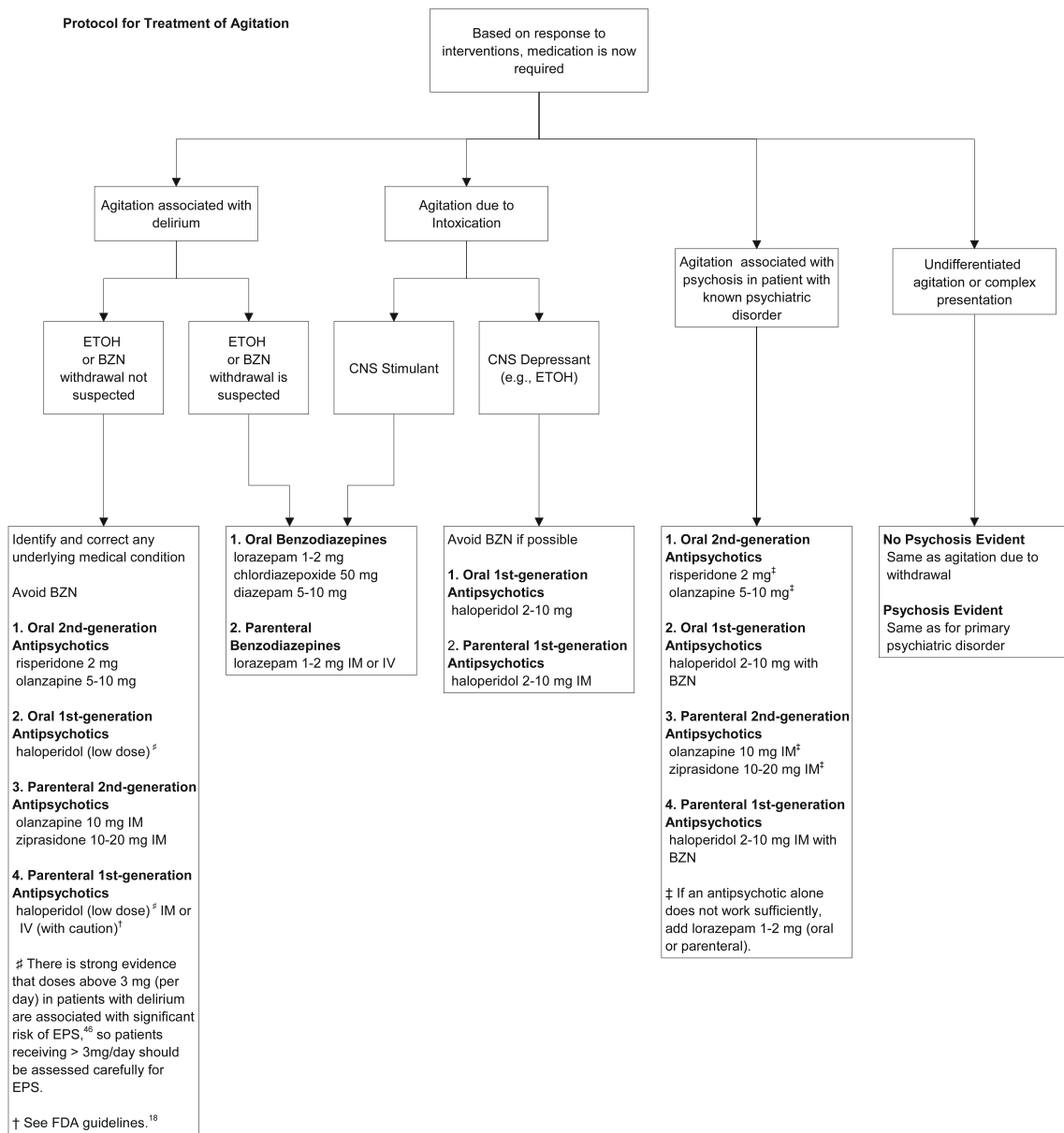
For acute agitation of psychiatric origin, there are a number of different treatment options. Intramuscular haloperidol + lorazepam may still perhaps be the most common combination although it is not recommended first-line [13]. Haloperidol, first FDA-approved in 1967, is a butyrophenone with primary activity at the dopamine 2 (D2) receptor. Although there is little activity at other receptor types, there are a few important side effects. First, haloperidol carries a black-box warning about the risks of using to treat dementia-related psychosis. Haloperidol lengthens QT intervals and may have a higher risk of side effects when administered IV. Be mindful when using these medications with cardiac patients because of the potential to prolong QT. Finally, because of action at the D2 receptor, which is located primarily in the basal ganglia, haloperidol is associated with movement disorders and rigidity.

Given the large number of side effects, haloperidol alone is only recommended if no other alternative exists. A 2012 Cochrane review concluded the following [1]: “If no other alternative exists, sole use of intramuscular haloperidol could be life-saving. Where additional drugs to offset the adverse effects are available, sole use of haloperidol for the extreme emergency, in situations of coercion, could be considered unethical.”

The use of haloperidol with adjunctive medications such as promethazine compared to the use of alternative antipsychotics is controversial. The authors of other Cochrane reviews concluded that the evidence for using haloperidol + promethazine was stronger than that for using SGAs [20]. However, expert consensus guidelines have nonetheless continued to recommend SGAs over haloperidol + promethazine as the complex pharmacologic profile of SGAs is thought to be less sedating. Importantly, FGAs are still likely preferred in instances of alcohol intoxication, as the use of various medications has not been clearly studied (see Fig. 1).

### Why Give These Medications Orally? Is This Something Out of the Ivory Tower?

When the use of oral medications was broached in the ED literature, initial feedback was skeptical. Many ED clinicians assume that oral antipsychotics are inappropriate



**Fig. 1** American Association for Emergency Psychiatry expert consensus guidelines on the pharmacologic treatment of agitation

since the average agitated ED patient is “too agitated” for oral medications. This may reflect the fact that agitation is not treated early enough in the ED stay.

Surprisingly, oral SGAs may work just as well as IM injections of haloperidol + lorazepam in patients with mild to moderate agitation. Gault et al. (2012) performed a literature review of all studies of acute use of oral medications typically in use in the ED (risperidone, olanzapine, ziprasidone, or aripiprazole) [21]. Studies were included if the major time points of evaluation were <24 h, as this is the timeframe most important for emergency physicians. In a review of 11 studies with various methodologies, Gault et al. found support for the use of oral medication in acute

agitation. However, there is little good evidence for its use in severely agitated patients, as these patients are typically too agitated to give informed consent for participation in research studies.

The study with the strongest methodology, performed by Currier et al. (2004; see Fig. 2), examined a mixture of ED patients and inpatients [22•]. In this prospective randomized rater-blinded study, 162 agitated patients were randomly assigned either 2 mg risperidone + 2 mg lorazepam PO or 5 mg haloperidol + 2 mg lorazepam IM. At all time points, oral medications were just as effective as IM medications at reducing agitation. However, statistically fewer patients who received oral medication fell asleep

compared to patients who received IM injections, thus potentially increasing the ability to disposition patients. However, patients had to be able to provide consent and so were likely only mild to moderately agitated.

Current guidelines on sedation state that the proper goal of sedation is to calm the patient without inducing sleep. Although this theoretically allows the patient to participate in their own care, it also has a practical side as well. Patients who are not asleep are generally easier to disposition from the emergency department, since sleeping patients cannot be evaluated by consultants.

In addition, oral medications may have fewer side effects than IM injections. In a study comparing decreases in oxygen saturations in alcohol-intoxicated patients who received olanzapine and benzodiazepines, Wilson and colleagues found that these decreases were only noted in patients who received IM olanzapine [23]. Patients who received oral olanzapine did not show the same effect (see Fig. 2).

### Why Not Just Restrain All Patients?

Restraints may be placed as frequently as 3.7 % of all patients [24, 25]. The decision to restrain a patient, while generally made fairly quickly without forethought, is actually fraught with philosophical and legal implications. The disadvantages of restraint are many. Improperly applied restraints may cause injury to the patient, and most injuries to staff occur during the restraint process [3, 7]. For these reasons, virtually every patient-rights organization has come out strongly against the use of restraints [18]. Restrained patients must be frequently checked by nursing staff, are the ethical equivalent of arrest, and often consume a disproportionate share of ED resources. In addition, in a

study on ED psychiatric patients, Weiss et al. (2012) analyzed components of the length of stay, finding that restrained patients stay 4.2 h longer on average than other psychiatric patients [26].

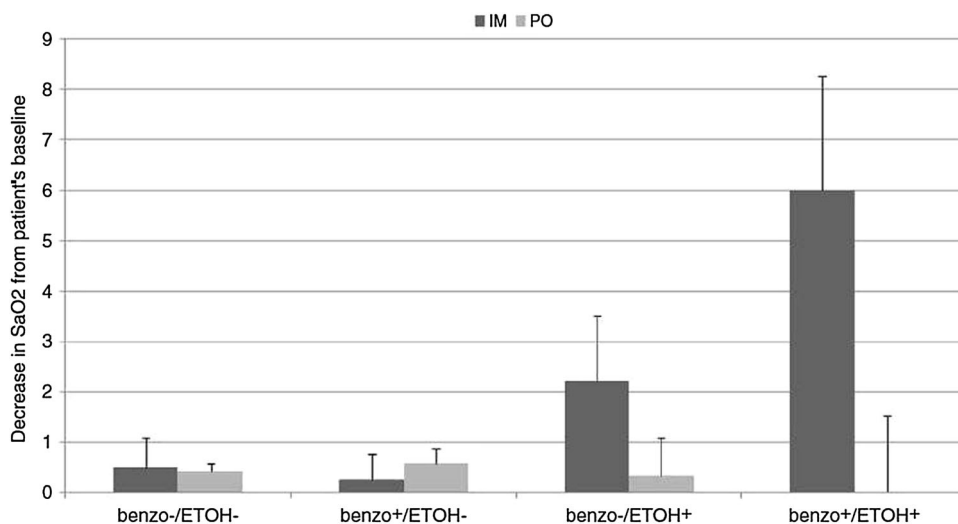
### What About Agitation Due to Alcohol Intoxication?

One of the more controversial topics concerns treatment of the agitated intoxicated patient. Alcohol intoxication is ubiquitous in the emergency department, with as many as 46 % of visits related to this [27]. Very little evidence-based research has investigated how and when to sedate the drunk agitated patient, but three studies conducted in the emergency department (Martel et al., Nobay et al., and Knott et al.) have compared antipsychotics and benzodiazepines [28–30]. Although alcohol-intoxicated patients tend to have more respiratory complications with benzodiazepines, this difference is statistically non-significant. Consequently, under the theory that any medication which reduces sympathetic drive may predispose patients to respiratory complications, the AAEP expert guidelines have stated that no medication, including benzodiazepines, is first-line in these patients. Instead, non-pharmacologic methods such as reducing external stimuli and verbal de-escalation should be tried first. If administered, FGAs like haloperidol may be safer than SGAs like olanzapine or ziprasidone [2].

In a 2009 review, two of the authors offered the following series of interventions which still seem reasonably evidence based [6]:

1. All agitated intoxicated patients who can be approached safely should undergo verbal de-escalation and be placed into a dark quiet room.

**Fig. 2** Decreases in oxygen saturations in alcohol-intoxicated patients who receive olanzapine are larger than in patients who receive intramuscular injections



- If these interventions are successful, medication becomes unnecessary. However, if medication is required, this should be offered orally if possible.

## Case Wrap-Up

A 32-year-old male with a past history of paranoid schizophrenia and methamphetamine use presented to the emergency department requesting help. He was vague in his requests, and his agitation soon escalates. By the time the physician sees him, he is aggressive and violent. Security had to be called immediately to the bedside. The errors in this case stem mostly from the delayed recognition of agitation. By the time the patient was recognized as being agitated, he was a danger to others in the emergency department and was unable to cooperate with oral medications. More sedating intramuscular medications and physical restraints had to be administered. This placed both security officers and nursing staff in harm's way, not to mention increasing the patient's length of stay.

## Conclusions

Agitation may be surprisingly common in the ED setting. Although many emergency clinicians treat all patients with IM haloperidol, this medication may not be preferred in most instances. If haloperidol is administered, a second agent should usually be given as well in order to reduce side effects. Restraints, which are often thought to make patients and staff safer, can themselves be dangerous. Restraints have been linked with more ED resources, longer lengths of stay, increased staff injuries, and decreased patient dissatisfaction.

Some key points:

- Agitated patients should be approached with safety in mind, and this safety planning should start even before arrival in the ED.
- Consistent use of an agitation rating scale should be considered, as it may help identify agitation early and in milder forms.
- Verbal de-escalation and oral medication should be attempted in all patients.
- If agitation persists or worsens, a "show of concern" should be attempted.
- If used, restraints should be used sparingly and only to protect staff. Restraints should never be used as punishment.

## Compliance with Ethics Guidelines

**Conflicts of Interest** The authors of this paper have nothing to disclose.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

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