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A Systematic Review of Multidisciplinary Care of Acute Agitation in the Emergency Department: De-escalation, Pharmacology, and Disposition

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Abstract

Background: Acute agitation in the emergency department (ED) is a common, high-risk symptom that occurs secondary to diverse psychiatric, medical, substance-related, and psychosocial emergencies. Treatment has historically been reactive in nature, with a focus on physical restraint and involuntary sedation. A contemporary paradigm shift favors a proactive patient-centered multidisciplinary approach to improve safety and outcomes.

Aim: This review synthesizes evidence from 2015 to 2025 to evaluate the efficacy of integrated, multidisciplinary protocols for managing acute agitation. It specifically assesses the roles of nursing de-escalation, physician medical evaluation, pharmacist-informed pharmacology, and social services-led disposition planning.

Methods: An extensive review of the literature was performed, synthesizing research on protocols that officially combine non-pharmacological and pharmacological approaches. Interdisciplinary collaboration and its effects on major clinical, safety, and operational indicators were the focus.

Results: The literature conclusively substantiates that coordinated, team-based protocols significantly enhance patient and staff safety by reducing physical restraints and seclusion. They reduce negative clinical outcomes, enhance adherence to evidence-based standards, and enable more suitable and humane patient dispositions. Success is contingent upon systematized order sets, frequent staff training, and seamless coordination between disciplines.

Conclusion: The optimal care of acute agitation is a multidisciplinary process. Integrated protocols that utilize the unique skill set of nursing, medicine, pharmacy, and social services are superior to the previous fragmented systems and translate into safer, more effective, and more dignified patient care.

Keywords: acute agitation, emergency department, multidisciplinary management, de-escalation, chemical sedation.

Introduction

Acute agitation in the emergency department is a common and challenging clinical problem that compromises patient safety, staff well-being, and the overall efficacy of healthcare delivery. The agitated patient is at the interface of medicine, psychiatry, and social work, and as such, their management is inherently multifaceted. The etiologies are multifactorial, from primary psychiatric emergencies such as schizophrenia and bipolar mania, substance-related emergencies (such as stimulant intoxication or alcohol withdrawal), underlying medical illnesses like metabolic encephalopathy or infections of the central nervous system, and acute reactions to extreme psychosocial stress (Wilson et al., 2012). The traditional treatment strategy was often aimed at rapid control, too often brought about by the use of physical restraints and intramuscular antipsychotics or benzodiazepines. Despite being sometimes necessitated by imminent harm, the practice has been subject to growing criticism for its tendency to escalate violence, traumatic patients, and cause physical harm, including positional asphyxia, cardiac problems, and

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psychological damage (Knox & Holloman, 2012; Wong et al., 2022).

Given these risks, the contemporary standard of care has evolved to advocate for a patient-centered, multidisciplinary approach. This model tries to anticipate and reduce agitation through early intervention and a hierarchy of intervention in which the least restrictive interventions are attempted first. The major components of this model include: 1) De-escalation: Non-verbal and verbal communication skills provided primarily by nursing staff to diffuse the patient and resolve the situation without physical or pharmacological intervention. 2) Medical Clearance & Evaluation: Aggressive physician evaluation to rule out organic etiologies and manage co-morbid medical illness. 3) Pharmacological Management: Judicious use of sedative medications, with increasing dependence on pharmacist consultation to optimize agent selection, dosing, and monitoring, particularly in complex cases. 4) Disposition & Crisis Intervention: The critical role of psychiatric and social service resources in evaluating risk, mobilizing resources, and planning for safe discharge or appropriate inpatient admission.

The objective of this 6000-word review is to synthesize the literature from the past decade (2015-2025) to determine the efficacy of protocols formally integrating these four domains. Through examination of the evidence for each component and its interaction effects, this review aims to provide a whole picture of best practice and map future directions for research and practice in the multidisciplinary care of acute agitation.

De-escalation and Non-Pharmacological Interventions

The first and most essential line of intervention in the management of the agitated patient is non-pharmacological de-escalation. Grounded in the principles of therapeutic communication and trauma-informed care, de-escalation aims to reduce the patient's level of arousal, restore a sense of control, and build rapport, obviating the need for coercive interventions. The nursing staff, as the healthcare providers with the most continuous patient contact, are ideally positioned to lead these efforts.

De-escalation is a collection of skills and environmental modifications, more than any single technique. The most significant principles implicated are showing respect and empathy, taking a non-threatening posture and tone of voice, trying to discover the patient's underlying problems, offering choices where possible, and setting clear and firm boundaries (Richmond et al., 2012). Environmental interventions are also important; these involve moving the patient to a quiet, low-stimulus room, ensuring safety for themselves and staff, and removing potential weapons or items that can be used for self-harm (Agboola et al., 2021). The evidence for de-escalation is robust. Several studies have demonstrated that the delivery of effective de-escalation training to ED staff leads to a significant reduction in physical restraint and seclusion use. For instance, one systematic review of Gaynes et al. (2017) determined that training programs in de-escalation techniques were associated with a reduction of 15-40% in violent events and the use of restraint across a variety of healthcare settings, inclusive of the ED.

The effectiveness of de-escalation is dependent heavily on staff training and organizational culture. Training programs like the Management of Assaultive Behavior (MAB) and Crisis Prevention Institute (CPI) training are used extensively and have yielded favorable outcomes in terms of enhancing staff confidence and competency (Price et al., 2015). Furthermore, the deployment of specialized "behavioral response teams" within hospitals, which can be sent to the ED, has been shown to provide specialist de-escalation assistance, lowering injury rates among patients and staff (Spezzano et al., 2023). However, challenges remain, including staff turnover, insufficient time and resources to train, and the high-stress, high-velocity environment of the ED, which can make proactive de-escalation hard to prioritize (Zicko et al., 2017). Despite these challenges, de-escalation remains the cornerstone of ethical and effective agitation management, the building block upon which all other interventions are based.

Medical Evaluation and the Role of the Physician

As de-escalation continues, a simultaneous and critical process must be initiated: the medical evaluation of the agitated patient. The doctor's initial responsibility is to diagnose and treat any underlying medical condition that may be causing or contributing to the agitation. To assume agitation is solely of psychiatric origin is to commit a dangerous and common diagnostic error. The differential diagnosis is broad, and medical illness can often present in a manner that simulates primary psychiatric illness, occasionally referred to as "medical mimicry" (Wilson et al., 2023).

The medical evaluation must be systematic, beginning with a rapid assessment of the patient's airway, breathing, and circulation (ABCs), followed by a focused history and physical examination. It can be difficult to get a history from a disturbed patient, and collateral information from family, friends, emergency medical services, or old medical records is very helpful (Roppolo et al., 2021; Nasr et al., 2025). The key elements of the examination are vital signs (with special focus on fever, tachycardia, hypertension, and hypoxia), neurological examination, and examination for signs of trauma, infection, or toxidromes. Critical diagnostic tests typically include point-of-care glucose, basic metabolic panel, complete blood count, urinalysis, thyroid function tests, and toxicology screening. Further workup, such as computed tomography (CT) of the head, lumbar puncture, or other imaging, would be warranted based on clinical suspicion (Nordstrom et al., 2012).

The concept of "medical clearance" is evolving. It is no longer considered a simple binary choice but rather a process of excluding acute, life-threatening medical etiologies that would necessitate urgent medical, rather than psychiatric, inpatient care (Korn et al., 2000; Roennfeldt et al., 2021). Several standardized protocols, such as the "Brigham and Women's Hospital Medical Clearance Protocol," have been developed to streamline this process, removing unnecessary testing without sacrificing patient safety (Boudreaux et al., 2009). The physician's role extends from diagnosis to the co-management of the patient's agitation. They must decide when de-escalation has failed or is insufficient and pharmacologic treatment is necessary for the patient's and others' safety. This decision-making is a critical part of the multidisciplinary process, generally made in consultation with nursing staff and increasingly with clinical pharmacists.

Pharmacologic Management and the Emerging Role of the Pharmacist

When de-escalation techniques are insufficient to ensure safety, pharmacologic treatment is necessary. The goal of sedative therapy is to calm the patient effectively and safely enough to allow continued evaluation and treatment. The choice of agent is not one-size-fits-all and should be guided by the suspected etiology of the agitation, the patient's medical co-morbidities, the desired route of administration, and the potential for adverse effects.

The foundation pharmacological classes for the treatment of acute agitation are typical antipsychotics, atypical antipsychotics, and benzodiazepines. Typical antipsychotics, i.e., haloperidol, are potent dopamine D2 receptor antagonists. They are effective but carry a risk of extrapyramidal symptoms (EPS), i.e., acute dystonia and akathisia, and QTc prolongation on electrocardiogram (ECG) (Wang et al., 2022). Atypical antipsychotics such as olanzapine, ziprasidone, and risperidone have a potentially lower risk of EPS and are widely used. Intramuscular olanzapine is at least as effective as haloperidol, and the combination of olanzapine with benzodiazepines is not advised due to an increased risk of excessive sedation (Klein et al., 2018; Kim et al., 2021; Chan et al., 2021). Benzodiazepines, i.e., lorazepam, are particularly effective for agitation due to alcohol or sedative-hypnotic withdrawal and when antipsychotics are contraindicated. They function by enhancing GABAergic inhibition. They can, however, cause respiratory depression, especially when combined with other central nervous system depressants (Hoffmann et al., 2015).

The choice between these agents is increasingly being directed by clinical pharmacists who are integrated into the ED. Pharmacists have a vital role to play in patient safety and care improvement in this setting. A few of their roles include: 1) Agent Selection: Recommending the most appropriate drug and dose based on the patient's age, renal/hepatic function, drug allergies, and potential drug-drug interactions. 2) QTc Prolongation Risk Mitigation: Screening for medications and conditions that prolong the QTc interval and suggesting ECG monitoring requirements and alternative agents (e.g., avoiding the use of droperidol or haloperidol in a patient with a known long QT syndrome) (Beshbishy, 2024). 3) Preparation and Administration: Confirming correct preparation of medications, particularly for intravenous administrations, and suggesting timing and sequencing of doses to avoid oversedation. 4) Monitoring: Directing monitoring for side effects, such as respiratory depression or neuroleptic malignant syndrome.

Evidence for the impact of ED pharmacists is growing. Madkhali et al. (2024) demonstrated that the presence of a clinical pharmacist in the ED was associated with a significant reduction in medication errors, sedative and antipsychotic related medication errors. Furthermore, pharmacist involvement in the development of standardized agitation order sets has also been shown to improve compliance with evidence-based guidelines and reduce practice variation (Patanwala et al., 2025). The synergy between the diagnostic abilities of the physician and the pharmacotherapeutic expertise of the pharmacist makes it a very strong safeguard against iatrogenic harm (Table 1).

Table 1: Commonly Used Pharmacological Agents for Acute Agitation in the ED

Medication Class/Agent	Typical Adult Dose (IM)	Onset of Action (IM)	Key Advantages	Key Disadvantages / Monitoring Considerations
Typical Antipsychotic				
Haloperidol	2.5 - 10 mg	20-40 min	Potent, widely available, low cost.	High risk of EPS, QTc prolongation. Monitor ECG.
Atypical Antipsychotics				
Olanzapine	5 - 10 mg	15-30 min	Low risk of EPS, rapid onset.	Can be sedating; avoid combination with benzodiazepines.

Ziprasidone	10 - 20 mg	15-30 min	Low risk of EPS, antimanic properties.	QTc prolongation risk (less than haloperidol). Monitor ECG.
Benzodiazepine				
Lorazepam	1 - 4 mg	20-40 min	Excellent for EtOH/withdrawal, anticonvulsant.	Respiratory depression, paradoxical reactions.
Combination Regimens				
Haloperidol + Lorazepam	5 mg + 2 mg	20-40 min	A synergistic effect may lower individual doses.	Increased risk of oversedation and respiratory depression.
Sources: Wang et al., 2022; Nordstrom et al., 2012; Klein et al., 2018				

Disposition, Crisis Intervention, and the Role of Social Services

The management of acute agitation does not end with sedating or calming the patient. Disposition—what to do with the patient next—is a difficult and, at times, complex process that relies heavily on the abilities of social workers and crisis intervention teams. It involves assessing the patient's ongoing risk, engaging appropriate resources, and planning for a safe discharge or arranging an appropriate inpatient admission.

Social workers in the ED are trained to carry out psychosocial assessments. They gather data about the patient's social support system, living situation, financial resources, access to medications, and history of substance abuse. This information is important in contextualizing the agitation and in planning for a safe discharge. For patients with primary psychiatric illness, the social worker, in consultation with psychiatric consultants, determines the level of care required, whether voluntary or involuntary psychiatric hospitalization, a crisis stabilization unit, or an intensive outpatient program (Twohy & Sommerhalder, 2024). The logistics of psychiatric admission may be fraught with challenges, including bed unavailability and insurance authorization delays, that may lead to prolonged ED boarding, a process known to exacerbate agitation and distress in psychiatric patients (Nolan et al., 2015).

For patients whose agitation is secondary to substance use or psychosocial crisis, the disposition plan may be different. Social workers also coordinate referrals to detoxification facilities, substance abuse programs, homeless shelters, or other local services. Social workers engage in safety planning that may include the exploration of coping mechanisms, triggers, and establishing a support system for the patient upon discharge (Hawk & D'Onofrio, 2018; Haddash, 2025). Utilization of peer support specialists—individuals with lived experience of mental health or substance use disorders—is an emerging and promising practice that has the potential to enhance engagement and reduce recidivism (Abou Seif et al., 2022).

A safe and effective disposition is the culmination of the overall multidisciplinary process. It requires the integration of medical information from the physician, behavioral observations from the nurses, pharmacotherapeutic history from the pharmacist, and the psychosocial assessment from the social worker. Failure in this integration puts the patients at high risk of early re-presentation to the ED. One study by Kromka & Simpson (2019) found that patients who were discharged in an agitated state and without intensive social work involvement and crisis planning had an ED 30-day revisit rate nearly twice as high as patients who had undergone intensive disposition planning.

The Synergy of Integrated Protocols and Team-Based Approaches

The highest success in acute agitation management is realized not when each discipline works in isolation, but when their efforts are blended into coordinated, standardized protocols (Table 2 & Figure 1). The protocols provide all staff with a shared mental model and language, reduce variation in practice, and assure a consistent, evidence-based level of care. A bundled protocol typically dictates a stepwise progression, beginning with de-escalation, followed by medical evaluation, then pharmacological intervention if required, and finally disposition planning, with clearly defined roles and responsibilities for all team members at each stage.

Evidence in favor of such protocols is compelling. Hospitals that have implemented multidisciplinary agitation management protocols, sometimes termed "Agitation Codes" or "Behavioral Emergency Response Teams," report improvement in key outcomes. A pre-post study by Wong et al. (2022) evaluated the implementation of a multidisciplinary protocol that included mandatory de-escalation training, a standardized medication order set, and a defined role for social work. They found a 52% reduction in the use of physical restraint, a 38% reduction in staff injuries caused by patient violence, and a 25% reduction in patient arrival to commencement of definitive treatment time for agitation. Similarly, in a systematic review, Romanelli et al. (2025) concluded that formal interdisciplinary protocols were consistently associated with reductions in coercive measures and in patient and staff satisfaction.

The team process synergy is evident in several ways. An example is a nurse successfully de-escalating a patient provides the physician with the window of opportunity to conduct a more thorough physical examination. The pharmacist's recommendation of a specific antipsychotic avoids a harmful drug interaction with a medication that the physician may not have recalled the patient was taking. The social worker's early assessment and initiation of discharge planning can prevent boarding in the ED, freeing up resources and reducing stimuli that can re-agitate the patient. This collaborative model also holds important implications for staff morale and resilience. When staff feel supported by a formal protocol and a cohesive team, they feel less burned out and are more likely to engage in empathetic, patient-centered approaches (Agboola et al., 2021).

Table 2: Significant Outcomes Associated with Multidisciplinary Agitation Management Protocols

Outcome Category	Specific Metrics	Reported Impact of Multidisciplinary Protocols	Exemplary Study
Patient Safety	Use of Physical Restraints	40-60% reduction	Wong et al., 2022
	Patient Injuries (falls, self-harm)	Significant reduction	Zicko et al., 2017
	Adverse Drug Events (e.g., oversedation)	Reduced with pharmacist involvement	Madkhali et al., 2024
Staff Safety	Staff Injuries from Assaults	30-50% reduction	Spezzano et al., 2023
	Staff Satisfaction & Confidence	Marked improvement	Price et al., 2015
Operational Efficiency	Time to Sedation	Decreased	Tommasini et al., 2020
	ED Length of Stay	Mixed results, but improved flow for admitted patients	Twohy & Sommerhalder, 2024
	Rates of Patient Recidivism	Trend towards reduction	Kromka & Simpson, 2019
Clinical Care Quality	Adherence to Guidelines	Improved	Patanwala et al., 2025
	Use of Verbal De-escalation	Increased	Richmond et al., 2012

Sources: Synthesized from multiple studies cited in the text.

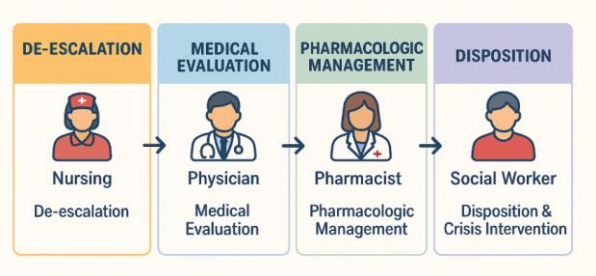

Figure 1: Multidisciplinary Model for Acute Agitation Management in the Emergency Department

Special Populations and Considerations

One-size-fits-all is not suitable for the nuanced presentation of acute agitation. Certain populations require special considerations and exceptions from the usual management protocol. Agitation in children and adolescents is highly distressing and requires a specialized approach. The etiology commonly includes autism spectrum disorder, intellectual disability, trauma-related disorders, and mood dysregulation. De-escalation is the first line of intervention, with intense emphasis on parental or caregiver engagement. Pharmacological treatment must be deployed with extreme caution. Atypical antipsychotics like risperidone or aripiprazole are often preferred, and dosing based on weight is necessary. Trauma-informed care principles are prioritized, with coercive practices being particularly harmful for this population (Abutalib, 2025).

Delirium is the cause of agitation in older adults and is brought on by underlying medical conditions such as infection, dehydration, or side effects from medications. The adage "treat the cause" is never truer than in geriatric delirium. Pharmacological sedation is a last resort because older patients are extremely sensitive to the effects of antipsychotics and benzodiazepines, which can worsen delirium, cause falls, and cerebrovascular events. Treatment is mainly non-pharmacological, with family presence, reorientation, and the provision of sensory aids (spectacles, hearing aids) (Flaherty & Little, 2011; Fallatah et al., 2024).

Agitation due to intoxication or withdrawal requires a special strategy. In stimulant intoxication (e.g., cocaine, methamphetamine), benzodiazepines are generally first-line for agitation and autonomic hyperactivity management. In alcohol or benzodiazepine withdrawal, benzodiazepines are the

preferred treatment to prevent life-threatening complications like seizures and delirium tremens. Antipsychotics can lower the seizure threshold and typically are added as adjuncts with caution in this population (Hoffmann et al., 2015). A non-judgmental, harm-reduction approach by the entire team is essential to treat such patients. Figure 2 summarizes the measurable outcomes of team-based protocols.

Figure 2: Impact of Integrated Multidisciplinary Protocols on Agitation Outcomes

Gaps in the Literature and Future Directions

Despite significant advances, there are numerous gaps in the evidence base. Future research must close some crucial areas. First, more randomized controlled trials directly comparing different multidisciplinary protocol structures to determine the most effective and efficient models are required. Second, the long-term impact of such interventions, such as patient recovery, trust in the healthcare system, and recidivism rates in the long term, is understudied (Rajwani et al., 2023). Third, research on the optimum pharmacological treatment of special populations, such as children and elderly individuals, is lacking.

The addition of newer agents and technologies is also promising future directions. The use of dexmedetomidine, a selective alpha-2 agonist, for refractory severe agitation in the ED is an area of active research, offering sedation with less respiratory depression (Lin et al., 2021). Furthermore, the development of new formulations, i.e., inhaled loxapine for acute agitation, provides a non-invasive route that in some cooperative patients may be more attractive than intramuscular injection (Allen et al., 2011; Faden & Citrome, 2019). Finally, research on the implementation science of these protocols—how best to overcome cultural and logistical barriers to their uptake and sustainability in diverse ED settings—is desperately needed (Wong et al., 2015; Tommasini et al., 2020).

Conclusion

The management of acute agitation in the emergency department has evolved over the years from a reactive, at times coercive, to a proactive, patient-centered, multidisciplinary process. This review has synthesized a decade of evidence demonstrating that ideal practice integrates the distinct but complementary skills of nursing, medicine, pharmacy, and social services. De-escalation sets the required foundation, medical evaluation ensures that organic etiologies are not missed, pharmacologic management is optimized by interprofessional collaboration, and safe disposition is facilitated by comprehensive crisis intervention. Implementing such protocols in a standardized manner that operationalizes this interprofessional collaboration yields unequivocal benefits: enhanced safety for patients and staff, reduced restraint utilization, fewer adverse drug events, and more appropriate and dignified patient dispositions. As emergency medicine continues to evolve, this commitment to this team-based, evidence-based, and empathetic approach is the gold standard for the management of one of the most vulnerable and challenging patient populations in emergency medicine.

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