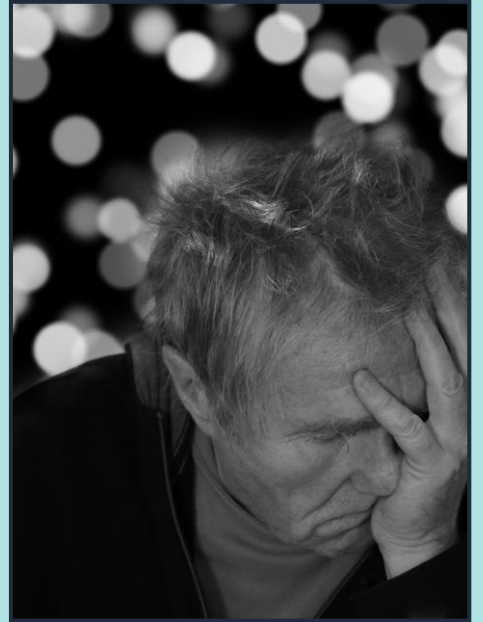




Managing Agitation in the General Hospital: *Recognition, Rapid Assessment, and Treatment*

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Disclosures

- Naomi A. Schmelzer, MD, MPH
- I have no financial disclosures or conflicts of interest with the material in this presentation



Objectives:



Recognize Contributors

Recognize common medical and psychiatric contributors to agitation

Framework for Agitation Management

Provide a framework for managing agitation events with both nonpharmacological and pharmacological strategies

Dignity Preserving Care

Integrate Dignity-preserving and Trauma-informed strategies into care of the agitated patient



Understanding the Scope and Impact



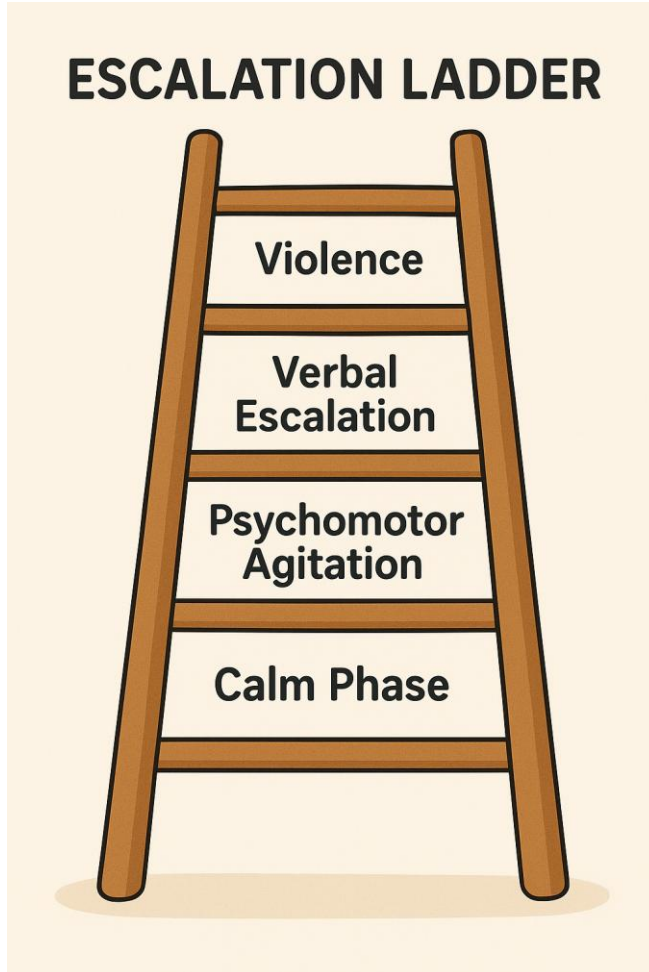
What is Agitation?



A behavioral Syndrome characterized by a state of excessive motor or verbal activity accompanied by heightened arousal and emotional distress



The Spectrum of Agitation



Violence

Escalation to overt aggression or assaultive behavior posing danger to self, staff, environment. Ex. Hitting, kicking, pushing, spitting, throwing objects, breaking equipment, self-injurious acts (head banging) or attempts to leave unsafely

Verbal Escalation

Verbal signs of frustration or hostility directed at staff, self, or environment, including boundary testing, refusal or threats; ex. Raised voice, shouting, swearing

Psychomotor Agitation

Early signs of escalating agitation with increased energy or restlessness, such as pacing, fidgeting, shifting, muscle tension, jaw tightening, heightened vigilance or irritability

Baseline/Calm Phase

Normal state of behavior and interaction, cooperative and consistent with usual presentation



A blurred background image of a clinical setting, likely a hospital hallway or ward. Several people, including healthcare workers in white coats and blue scrubs, are visible, though out of focus. The scene is brightly lit, suggesting a window in the background.

Why is agitation in the
clinical settings
problematic?

Why Agitation Matters:

Agitation is common and predictable

- There is little direct data on the prevalence of agitation in the medical setting or utilization of hospital or ED resources
- Cots et al.
 - agitation increases use of hospital resources by 8%
 - increases LOS (12 v 9 days)
 - increases mean cost of stay

Problem of Underreporting

Normalization
of violence

Need for
cultural
change

Fear of
retaliation



Impact of Agitation and Aggression in Hospital Settings



Impact on Patients

Agitation is painful, disrupts patient treatment, and can lead to adverse events and strained staff relationships. Compromises safety and increases risk of harm.

Effect on Healthcare Workers

Healthcare staff experience psychological distress, burnout, dissatisfaction, and physical injury due to patient agitation.

Organizational Consequences

Agitation increases ED resource use, length of stay, costs, and negatively impacts care quality and safety. It interrupts the smooth delivery of healthcare services, leading to delays and inefficiencies.



The Diagnostic Meaning of Agitation



Agitation as a clinical Signal

A change in behavior deserves the same clinical curiosity as a change in vital signs

Agitation may reflect a change in:

- Physiology: hypoxia, infection, glucose level, pain, urinary retention, fluid status
- Brain function: delirium, seizure, neurological illness
- Medication or substance exposure, or withdrawal state
- Perception: fear, paranoia, trauma activation
- Communication or sensory access
- The care environment or staff interaction
- Coping or stress reactions
- Primary psychiatric disorder exacerbation



The First Five Minutes - Initial Approach

1. **Maintain safety/Assess for imminent Danger**
 - Evaluate for environmental hazards, weapons
 - Imminent violence, elopement, or disruption of essential treatment (for patient or others)
 - Call for additional help
2. **Assess for Instability and establish a provisional diagnosis**
 - Airway, breathing, circulation, oxygenation
 - Glucose, vital signs, neurological status
 - Attention, arousal, fluctuations
 - Recent illness, medications, substances, withdrawal
 - Identify most likely immediate drivers
3. **Reduce distress and Unmet Needs**
 - Pain, dyspnea, urinary retention, constipation
 - Hunger, thirst, toileting, positioning
 - Glasses, hearing aids, interpreter, communication
 - Noise, crowding, fear, confusion, sleep disruption
 - Offer explanation, reassurance, meaningful choices
4. **Use Medication when Indicated**
 - Match medication to the likely cause
 - Identify treatment goals
 - Establish monitoring and reassessment interval



Common Causes in the General Hospital

Domain	Examples
Neurologic	Delirium, seizure, Stroke, CNS Infection, head injury, neurocognitive disorders
Physiologic Distress	Hypoxia, sepsis, metabolic/electrolyte disturbance, pain, urinary retention, fluid status, glucose levels, constipation
Substance/Medication	Intoxication or withdrawal, anticholinergic toxicity, steroids, dopaminergic medications, akathisia, serotonin syndrome
Psychiatric illness	Mania, psychosis, trauma, catatonia, stress reaction/coping style
Environment/communication	Sleep disruption, sensory overload, language barriers, unfamiliar care or environment, loss of control

**More than one etiology is usually present



Delirium, Primary Psychiatric Illness, or both?

Feature	Delirium more likely	Primary Psychiatric Illness more likely
Course	Acute and Fluctuating	More sustained
Attention	Impaired	Often preserved
Arousal	Variable, waxes/wanes	Usually stable
Orientation	Often impaired	Often preserved
Medical trigger	Frequently present	May be absent

- Delirium and Psychiatric illness can co-occur
- A psychiatric history is part of the differential, not a complete differential



The Hospital can contribute to agitation

- Repeated questioning by unfamiliar staff
- Conflicting explanations or plans
- Unexpected touch
- Noises, alarms, lighting, and interrupted sleep
- Exposure, loss of privacy, inability to toilet independently
- Removal of personal or familiar objects or communication supports
- Being discussed within earshot but not part of the conversation
- Security presence before the team has attempted engagement
- Imposed limits without explanation or clear next step



Interventions



Prevention Strategies for Agitation Events



System-level Measures

- Environmental modifications
- Clear protocols for agitation management, medication use
- Ongoing staff support

Simulation and Skills Training

- BERT Teams to support frontline staff
- Standardize de-escalation practices
- Regular simulation and skills training

Anticipatory Strategies

- Establish rapport and set clear expectations
- Pain control, orientation cues, sleep hygiene, minimize restraints and tubes when possible
- Safety plans or care plans: know triggers, preferred calming strategies, involve family/caregivers when appropriate

Risk Identification

- Screen early for delirium, withdrawal risk, cognitive impairment
- Recognize environmental and psychological stressors (wait times, noisy environment, communication gaps)
- Review history of agitation or violence, trauma



How agitation is commonly managed today:

 Environmental and Behavioral strategies

 Verbal De-escalation (informal, variable training)

 PRN and IM Medications

 Security presence

 Physical restraints

 Behavioral flags/alerts

 Sitters or continuous observation

 Seclusion

 Ad-hoc team responses

 Objective scales (e.g. BARS)



Team Based Responses to Agitation

Behavioral Response Team (BERT)

- Multidisciplinary rapid-response teams for behavioral emergencies
- Core members: psychiatry, nursing, security, social work, chaplaincy (varies by institution)
- Goals:
 - Support frontline staff during escalation situations
 - Standardize and reinforce verbal de-escalation
 - Reduce restraint/seclusion use and staff injuries
 - Provide post-event debriefing and support

Code De-Escalation

- Standardized team protocol to rapidly respond and assess agitation in the ED
- Prioritization of de-escalation techniques and reduction in restraint use
- Leverage interdisciplinary expertise and standardized workflows for clinically focused interventions

Environmental and System Strategies:

- Technology aids: panic buttons, EMR alerts for agitation risk
- Post-incident reviews

- Parker CB. Psychiatric emergencies in nonpsychiatric settings: perception precludes preparedness. *Psychosomatics*. 2019 Jul 1;60(4):352-60.
- Bukhman A, Im D, Powell R, Grant J, Schmelzer N, Baymon D, Callahan C, Kim I, Waters B, Sanchez L, Chen P. 270 Code De-Escalation: Effectiveness and Feasibility Pilot Study of Intervention to Decrease Restraint Use and Health Inequities in Agitation Management in a Community Hospital Emergency Department. *Annals of Emergency Medicine*. 2022 Oct 1;80(4):S118.



What Patients Need During Agitation:



Feeling Safe



Feeling heard



Feeling respected



Feeling like they have choices



Having time and space to decompress



Having staff who stay regulated and present



De-Escalation

Defined: To reduce the intensity of a conflict or potentially violent situation



Forms of De-Escalation

Collaborative De-escalation (“non-coercive”):

- Verbal de-escalation
- Voluntary medication
- Time out
- Physical comforts
- Skillful nonverbal behaviors
- Environmental modifications for a therapeutic milieu

Involuntary medication/physical hold

- Responsible use as measure of last resort



Why De-Escalate?

Help the patient gain control of their emotions and behaviors

Empowers patient to manage their own distress

Increase patient and staff safety

Model nonviolent problem solving and self-control

Engages patient in treatment

Increases disposition options

Increases patient satisfaction

Lowers use of restraint, seclusion, and other coercive interventions

Reduces overall staff involvement



Be Prepared To De-Escalate



Engage Early

Why

- Agitation is painful
- Waiting increases irritation and can provoke escalation or shutting down

When

- Engagement starts from the very first interaction – every action and tone matters

How

- Invite the patient to participate in their own de-escalation

What

- Identify opportunities to partner and align with the patient





10 Elements of De-escalation

- Respect personal space
 - Do not be provocative
 - Establish verbal contact
 - Be concise
 - Identify wants and feelings
- Listen closely to what the patient is saying
 - Agree –or– Agree to Disagree
 - Set Clear Limits
 - Offer Choices and Optimism
 - Debrief the patient and staff

Richmond JS, Berlin JS, Fishkind AB, Holloman Jr GH, Zeller SL, Wilson MP, Rifai MA, Ng AT. Verbal de-escalation of the agitated patient: consensus statement of the American Association for Emergency Psychiatry Project BETA De-escalation Workgroup. Western Journal of Emergency Medicine. 2012 Feb;13(1):17.



De-Escalation: The Opening Approach

"Hi John. I'm Dr. _____. What can I do to help you?"

- Use the patient's preferred name
- State your role
- Acknowledge the patient's experience
- Ask one question at a time
- Allow time for an answer
- Explain before moving closer or touching



De-Escalation: Listening for the Problem

Listen for:

- What the patient believes is happening
- What they fear will happen
- What they want immediately
- What physical need may be present
- What part of the request you can meet
- What would allow the patient to regain some control

Questions:

- What is bothering you the most right now?
- What are you worried is going to happen?
- What would make you feel safer?
- What do you need before we continue?



De-escalation: Choice and Control

Offer Choices that are:

- Genuine
- Limited enough to process
- Clinically acceptable
- Available immediately

Examples:

- "would you rather talk here or in a quieter room?"
- "would you prefer the tablet or dissolving medication?"
- "Would you like your daughter here while we talk?"
- "Can we check your oxygen now, or after you've had some water?"



Engaging around medication

Patients with agitation may need medication – but *how* it is offered matters

Voluntary medication:

- **Timing is key** - offering **too early** can feel dismissive
 - **If requested by patient** –stabilize then proceed
- Explain what symptoms you are trying to relieve
- Foster autonomy and choice – offer options (formulation, timing, type)
 - Use the least restrictive route
- Frame as supporting patient goals
- Allow time for the medication to work

Involuntary Medication:

- Reserve for imminent safety concerns
- Communicate clearly, with respect, and debrief afterwards
 - Explain the safety concerns to the patient
 - Describe what will happen without being threatening
 - Preserve choice as the situation allows

When verbal interventions are no longer sufficient

Consider escalation when:

- The patient cannot sustain verbal engagement
- Arousal continues to rise
- Imminent harm is likely
- Essential and urgent medical treatment cannot proceed safely
- Physiologic excitation creates additional danger
- Continued conversation is delaying necessary emergency care

The threshold for involuntary medication is immediate safety, not frustration, convenience, or failure to agree



Pharmacological Considerations:

Goal: To CALM the patient

Make a provisional diagnosis

Patient characteristics: age, comorbid conditions, environment, medication/substance exposure

Selection of Medication:

- Easy to administer and non-traumatic, route of administration
- Rapid effects (fast onset of action) without oversedation
- Sufficient duration of action
- Low risks of adverse effects and drug interactions
- Patient preference
- Availability

Medication Classes:

- First and second-generation antipsychotics
- Benzodiazepines
- Valproic acid
- alpha-2-adrenergic receptor agonists (dexmedetomidine, clonidine, guanfacine)

Wilson MP, Pepper D, Currier GW, Holloman Jr GH, Feifel D. The psychopharmacology of agitation: consensus statement of the American Association for Emergency Psychiatry Project BETA Psychopharmacology Workgroup. Western Journal of Emergency Medicine. 2012 Feb;13(1):26.



Selecting the route of administration:

Oral (PO):

Preferable if patient is accepting

Tabs, liquid, or orally dissolving tablets, sublingual film

Slowest onset of action – enters through the lower GI tract

Intramuscular (IM):

Rapid elevation of plasma level

Higher transient concentration

Intravascular (IV)

Rapid plasma levels, though requires access

Sublingual (SL) film

Rapid onset, dissolves through mucosal membranes and avoids first pass metabolism



First Generation Antipsychotics

Drug	Dose*	Route	Benefits	Adverse reactions	Other
Haloperidol	5mg	PO, IM, IV*	-minimal interactions with other drugs -negligible anticholinergic activity	-EPS, Akathisia • Lengthens QTc (IV^)	-Frequently co-administered with benzodiazepine such as Ativan, and/or other drugs to offset adverse effects (Cogentin, Benadryl)
Fluphenazine	5mg	PO, IM		- EPS, Akathisia	- High potency phenothiazine similar to haloperidol
chlorpromazine	50 PO/ 25-50 IM	PO, IM		-hypothension -anticholinergic -lower seizure threshold	-Low potency phenothiazine -keep patients lying down after IM admin x 30 min - Co-mixing with other agents in syringe not recommended
Loxapine	10 mg	inhaled	Rapid onset (Tmax 2min) Low EPS	-bronchospasm (contraindicated in COPD, asthma or lung dz)	• Administer single dose/24 hours • Available for use in limited facilities



Second Generation Antipsychotics

Drug	Dose* mg	Route	Adverse reactions	Other
Risperidone	2mg	PO		- R+A performed similarly to H+A in multiple trials*
olanzapine	5-10	PO, IM	Orthostatic hypotension, somnolence	*simultaneous Zyprexa IM + benzo IM is not recommended
Aripiprazole	9.75	IM*	nausea	+benzos = increased risk of orthostatic hypotension and sedation
Asenapine		ODT		-Tmax 30-90min, transmucosal administration
Ziprasidone	10-20	IM	-prolongation of QTc -caution in patients with impaired renal function -somnolence, nausea, dizziness	

In general, all SGA share following benefits: lower potential for EPS than FGA, Efficacious for treating agitation



Benzodiazepines:

Facilitates the activity of GABA, a major inhibitory neurotransmitter

Therapeutic effects appear linked to decreased arousal

In terms of psychiatric symptoms - can target anxiety, catatonia

Long history in use of management for agitation either alone or in combination with antipsychotics

Best for patients in whom agitation is secondary to alcohol or sedative withdrawal, stimulant intoxication, or agitated/hyperactive catatonia

side effects: excessive sedation, can be additive with other CNS depressant, avoid in patients at risk for CO₂ retention, paradoxical disinhibition



Benzodiazepines for Agitation

Drug	Dose*	Route	Benefits	Adverse reactions	Other
Lorazepam	2mg	PO, IM	- Reliably absorbed IM - Moderate half-life - No active metabolites	-emergence of respiratory depression (particularly in those with lung dz, sleep apnea) -rebound anxiety, withdrawal, etc with prolonged use	- Often combined with Haldol - When concern for sedative or alcohol withdrawal
Midazolam			- Rapid onset of action	-unexpected oversedation (IM)	- Short duration of action requiring repeat dosing



Valproate:

- VPA blocks voltage-dependent sodium and calcium channels, increases GABA synthesis, potentiates GABA activity at postsynaptic receptors, blocks GABA degradation, and attenuates the activity of glutamate receptors
- few studies to support its use in agitation in general medical setting
- several limited studies for ICU patients as second or third line
 - often used as alternative in patients with prolonged Qtc
 - TBI
- Gagnon et al (2017): shown to reduce agitation, delirium, and concomitant psychoactive medication use in ICU setting
- Less effective for agitation in dementia patients with increased side effects (Lonergeran 2009)

Gagnon DJ, Fontaine GV, Smith KE, Riker RR, Miller III RR, Lerwick PA, Lucas FL, Dziodzio JT, Sihler KC, Fraser GL. Valproate for agitation in critically ill patients: a retrospective study. *Journal of critical care*. 2017 Feb 1;37:119-25.

Lonergeran E, Luxenberg J. Valproate preparations for agitation in dementia. *Cochrane Database of Systematic Reviews*. 2009(3).



Sublingual Dexmedetomidine

- acute treatment of agitation associated with schizophrenia or bipolar I or II disorder
- Dosing:
 - •Mild or moderate agitation: Sublingual film: sublingual/buccal: Initial: **120mcg**. If agitation persists, up to 2 additional doses of 60mcg may be administered at least 2 hours apart. Max 240mcg/day
 - •Severe agitation: Sublingual film: sublingual/buccal: Initial: **180mcg**; if agitation persists, up to two additional doses of 90 mcg may be administered at least 2 hours apart. Max: 360 mcg/day
 - *Dose reductions in geriatrics, hepatic impairment: Initial 60-90 mcg can be given.*
- Warnings/precautions:
 - •Avoid use in patients with Hypotension, orthostatic hypotension, bradycardia, syncope, history of arrhythmias, hypokalemia, and/or hypomagnesemia
 - •Avoid use in patients with known QTc prolongation
 - •Avoid use in patients with alcohol intoxication
- Adverse events: Somnolence, dizziness, headache, paresthesia/oral hypoesthesia, orthostatic hypotension, QTc prolongation



Common Medication Errors

- Treating every form of agitation as psychosis or mania
- Giving benzodiazepines for undifferentiated delirium
- Repeating doses before the first dose has had time to work
- Combining sedating medications without considering respiratory risk
- Overlooking QTc, electrolytes, hypotension, parkinsonism, medical frailty, or prior adverse effects
- Mistaking akathisia for worsening agitation
- Continuing a hospital-initiated antipsychotic after the delirium or other indication has resolved
- Writing a PRN order without an indication, endpoint, or reassessment plan



Agitation in Geriatric Patients



Dementia with Behavioral Disturbance

Behavioral and Psychological Symptoms of Dementia (BPSD)

What does this look like?

Verbal Aggression

- Screaming
- Cursing

Physical Aggression

- Hitting
- Biting
- Grabbing
- Pushing

Mood-Affect

- Anxiety
- Depression
- irritability

Non-Aggressive Verbal

- Repetitive questioning
- Complaining

Non-aggressive Physical

- Wandering
- Pacing
- Intrusiveness
- Hoarding
- Hiding

Thoughts and Behaviors:

- Hallucinations
- Delusions
- paranoia



Age-Related Medication Considerations

- Multiple medical co-morbidities
- Polypharmacy/concomitant use of multiple medications
- Cognitive deficits impacting medication usage and compliance
- Age-related pharmacodynamics/pharmacokinetic changes --> vulnerability to adverse drug events and toxicity
- Potential for multiple prescribers
- Problematic prescription cascade – reduce medications or doses if possible
- "start low, go slow"

Antidepressants:

Citalopram has most compelling data, though there is a class effect of SSRIs

- RCT of citalopram v perphenazine - both improved agitation, lability, psychosis (Pollock et al, Am J Psychiatry, 2002)
- RCT citalopram v risperidone - both improved on agitation, psychosis, SE higher in risp group (Pollock et al, Am J Geri Psych 2007)
- CitAD trial (Citalopram for Agitation in Alzheimer's Disease) - 9 week placebo RCT. Advantage of citalopram in treating agitation and reducing caregiver distress
 - ~9 weeks needed for response
 - 10-30mg citalopram used
 - residents in long term care had less robust response
- CATIE-AD trial - (Siddique et al) apathy and irritability scores reduced (dosages 10-80mg/day)
- Trials in [sertraline](#), [citalopram](#), [fluvoxamine](#), [escitalopram](#) all demonstrate efficacy and tolerability

Aga VM. When and how to treat agitation in alzheimer's disease dementia with citalopram and escitalopram. The American Journal of Geriatric Psychiatry. 2019 Oct 1;27(10):1099-107.

Porsteinsson AP, Drye LT, Pollock BG, et al: Effect of citalopram on agitation in Alzheimer disease: the CitAD randomized clinical trial. JAMA 2014; 311:682-691



Antidepressants, cont.

Trazodone: multiple trials demonstrate efficacy

- Trazodone v haldol (RCT): both had modest efficacy in treating agitation, trazodone better tolerated. trend: the higher the MMSE score, the less improvement in agitation (Sultzer et al, 1997)
- follow up study (2001): improvement in agitation that occurs with mod/severe dementia related to trazodone is associated with extent of concurrent mood symptoms
- haloperidol, trazodone, behavioral management techniques, or placebo: with the highest proportion of improvement in agitated behaviors seen in the trazodone arm (Teri et al, 2000)
- Trazodone/Placebo RCT in patients with FTD: an improvement on eating disorders, agitation, irritability, and depression/dysphoria.
- sleep optimization - recommended doses 12.5mg-50mg at bedtime

clinical tips:

 For acute agitation, trazodone 12.5mg PO TID (~AM, ~lunch, ~sunset), titrate as needed



Antipsychotics in BPSD

- Neither FGA or SGA have an approved indication for BPSD
- All antipsychotics have a black box warning for increased mortality for use in patients with dementia
- the etiology of the dementia may guide treatment
- antipsychotics should only be used when "agitation and/or psychosis is "severe, dangerous, and /or causing significant distress to the patient"
- LAI should not be used unless indicated for a co-occurring chronic psychotic disorder



APA guidelines for use of antipsychotics to treat agitation and psychosis in MNCD, 2016



Some BPSD symptoms may not respond to medications

Haldol

- benefit for aggressive behavior and some improvement in psychosis, but little improvement in agitation
- found to have highest mortality risk in two large retrospective cohort studies (compared to SGA)
- not recommended as first line, routine medication for agitation related to MNCD



Document discussion of benefits/risks and alternatives

Second generation:

- Aripiprazole, olanzapine, risperidone had small but stat sign benefit for treatment of BPSD (at doses ~50% less) in meta-analysis
- Olanzapine: first line for emergent agitation, 1.25mg-2.5mg IM
- Quetiapine: has not been found more efficacious than placebo. Best for LBD/PD
- Risperidone: 0.25mg-0.5mg to start
- Aripiprazole: 2-2.25mg to start, modest effect and milder side effects



The Bedside Questions

1. Is anyone in immediate danger?
2. What changed?
3. What is driving the agitation right now?
4. What could reduce distress for this patient?
5. What is the least restrictive effective intervention?
6. What must we reassess next?



Key Takeaways

 Agitation is a clinical signal. A change in behavior that requires further investigation

 Safety, medical assessment, and de-escalation occur together

 The interaction and environment can either reduce or intensify distress

 Medication should be matched to the suspected etiology, urgency, and setting

 Restrictive interventions require continuous reassessment and rapid step-down

