Antipsychotics to treat behavior in patient with delirium are indicated

****Expert consultation suggested****
Consult Psychiatry or Geriatric Medicine

Is the patient in alcohol withdrawal or have a history of neuroleptic malignant syndrome?

Yes:
- Benzodiazepines: If alcohol withdrawal, use clinical judgement for dosing
  If general delirium, lorazepam 0.25-0.5 mg
  Pearl: Benzos can cause paradoxical agitation/excitement, increase confusion

No:

Does the patient have Lewy body dementia or advanced Parkinson's?

Yes:
- First line – Quetiapine 6.25 – 12.5 mg
- Second line – Clozapine 6.5 to 12.5 mg
  Pearl: Avoid medications with high D2 antagonism (haloperidol, olanzapine, risperidone) due to neuroleptic sensitivity, worsening parkinsonism, risk of neuroleptic malignant syndrome

No:

Does the patient have a history of extrapyramidal symptoms (EPS) with prior antipsychotic use (ie, acute dystonia, drug-induced parkinsonism, akathisia, tardive dyskinesia, esophageal dysfunction)?

Yes:
- Avoid the use the use of haloperidol
- If needed, cautiously use lowest dose of an atypical antipsychotics
  Pearl: All antipsychotics carry risk of EPS, but haloperidol is the highest

No:

Does the patient have terminal delirium?

Yes:
- Consider the use of haloperidol
- Can consider cautious addition of low dose benzos for agitated delirium

No:

Do you need immediate (<15-30 minutes) onset?

Yes: Consider the use of haloperidol or olanzapine

No: Select antipsychotic from table below weighing side effect profile

	Route	Starting Dose	Initial Reassess/ Redose Frequency	Maintenance Frequency	Daily maximum	Renal adjustment	Hepatic adjustment	EPS Risk	Prolactin Elevation	Sedation	Anticholinergic Effect	Orthostatic hypotension	QTc prolongation
Haloperidol	tablet; solution; IM; IV	0.25-0.5 mg	IM q 15 minutes; oral q 30 minutes	1-2x daily	3 mg	None, but unlikely to be dialyzed (HD, PD, CRRT). Use caution	None, but primary metabolized by liver	High	High	Low	Low	Low	Oral: moderate; IV: High (telemetry)
Quetiapine	tablet; solution	12.5-25 mg	q4-6h, time to peak 1.5 hours, unclear onset	1-2x daily	50 mg	None	None	Low	Low	High	Moderate	Moderate/ High	Moderate
Ziprasidone	capsule; IM	5-10 mg	IM q2-4 hour, onset 30 minutes; oral 4-6 hours	2x daily	40 mg	None	None, but extensive hepatic metabolism	Low	Moderate	Moderate	Low	Moderate	High
Olanzapine	tablet; disintegrating tablet; IM	2.5-5 mg	q2-4 hour, IM onset 15 minutes to 120 minutes	1x daily	20 mg	None	Initial dose limited to 2.5-5 mg with fluoxetine, can cause hepatitis	Low/Moderate	Moderate	Moderate/High	Moderate	Moderate	Moderate
Risperidone	tablet; disintegrating tablet; solution; IM	0.25-0.5 mg	q2-4 hour, oral onset 70 minutes	2x daily	3 mg	None, but reduced clearance with CrCl <60	None, but free fraction of risperidone can be increased	Moderate	High	Low/Moderate	Low	Moderate	Moderate

Table adapted from UpToDate, NEJM Delirium in hospitalized patient, and Duke Geriatric expert opinion
- Starting doses for frail older adult – should aim for lower doses and up-titrate to lowest effective dose; younger, fit patients may need higher doses
- Antipsychotics should be used at lowest effective dose for shortest duration.
- For persistent behaviors necessitating antipsychotics, consider schedule and PRN (ie 2.5 mg olanzapine qhs, with 2.5 mg daily as needed)
- As delirium improves rapidly transition from schedule to PRN dosing (ie 2.5 mg olanzapine only as needed)
- Antipsychotics are used off label in delirium and associated with a black box warning