

Table 4: Medications consideration for management of HMDs

Medication	Labeled Indications	Off-Label Use	Mechanism of Action	Major Neurologic Side effects	Black box warning
Levodopa	Parkinson's disease	1. Dopamine responsive dystonia 2. Parkinsonism	Exogenous dopamine	- May exacerbate dyskinesia	
Tetrabenazine	1. Chorea associated with Huntington's Disease 2. Tourette Syndrome	1. Dystonia 2. Tourette syndrome 3. Tardive Dyskinesia	Reversible inhibitor of VMAT-2, decreases uptake of monoamines (dopamine, serotonin, norepinephrine, histamine)	- Extrapyramidal reaction - Akathisia	Can increase the risk of depression and suicidality in patients with Huntington Disease
Deutetrabenazine	1. Chorea associated with Huntington Disease 2. Tardive dyskinesia			- Akathisia	
Valbenazine	Tardive Dyskinesia				
Baclofen	1. Spasticity 2. Muscle spasm/Musculoskeletal pain 3. Hiccups	Myoclonus (intrathecal use)	Inhibits the transmission of both monosynaptic and polysynaptic reflexes at the spinal cord level, possibly by hyperpolarization of primary afferent fiber terminals	- Asthenia - Confusion - Drowsiness	Abrupt discontinuation of intrathecal baclofen can result in withdrawal
Carbamazepine	1. Bipolar disorder 2. Seizure disorders 3. Neuropathic pain		Limits influx of sodium ions across the cell membrane leading to decreased synaptic transmission	- Ataxia - Dizziness - Drowsiness	1. Dermatologic reactions including toxic epidermal necrolysis (TEN) and Stevens-Johnson syndrome 2. Aplastic anemia and agranulocytosis
Methocarbamol	Muscle spasm		unknown	- Dizziness - Drowsiness - Confusion	
Cyclobenzaprine	1. Fibromyalgia 2. Muscle spasm and/or musculoskeletal pain 3. Temporomandibular disorder, acute		Centrally acting skeletal muscle relax and, reduces tonic somatic motor activity influencing both alpha and gamma motor neurons	- Dizziness - Drowsiness - Confusion	
Sodium Oxybate	Narcolepsy	Experimental use for myoclonus (specifically posthypoxic myoclonus or Lance-Adams Syndrome)	Gamma-hydroxybutyrate (GHB) is a metabolite of GABA, and is hypothesized to be mediated by GABAB receptor activity	- Confusion - Dizziness - Headache	1. Obtundation and clinically significant respiratory depression 2. Abuse and misuse 3. Restricted access: because of the abuse risks, sodium oxybate is only available through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS)
Pramipexole	1. Parkinson disease 2. Restless legs syndrome	1. Tremors 2. Myoclonus	nonergot dopamine agonist with specificity for the D2 receptor	- Impulse control disorders - Psychotic-like effects	
Primidone	1. Essential tremors 2. Seizure disorders	1. Tremors 2. Myoclonus	Decreases neuronal excitability	- Emotional disturbance - CNS depression (phenobarbital is one of primidone's active metabolites)	Serious or life-threatening psychiatric and behavioral adverse reactions including suicidal ideation
Perampanel	Seizure disorders	Myoclonus	Exact mechanism unknown, it is a noncompetitive antagonist of the AMPA glutamate receptor on postsynaptic	- Dizziness - Vertigo - Aggression	Serious or life-threatening psychiatric and behavioral adverse reactions including suicidal ideation
Pimozide	1. Tourette syndrome 2. Delusional infestation		Dopamine-receptor antagonist	- Sedation - Akathisia	
Fluphenazine	1. Tourette syndrome 2. Psychotic disorders	Other tic disorders	Nonselectively blocks D2 receptors	- Neuroleptic malignant syndrome - Extrapyramidal symptoms	Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death