HIGH RISK MEDICATIONS IN ELDERLY PATIENTS
(All doses listed are initial doses)

Medications of Risk	*Considerations*	*Examples of Alternatives*
Benzodiazepines- Alprazolam (Xamax) Chlordiazepoxide (Librium)* Clonazepam (Klonopin) Clorazepante (Tranxene) Diazepam (Valium)* Flurazepam (Dalmane)* Lorazepam (Ativan) Oxazepam (Serax) Temazepam (Restoril)	Adverse effects: confusion, falls, functional decline Long acting agents have a prolonged half-life (up to 4 days). If use is necessary, use low dose short period of time.	**Slow Onset (long-term use):** Sertraline **25mg daily-titrate prn** Venlafaxine (Effexor) XR **37.5-75mg daily**-titrate prn** Citalopram **10 mg daily -titrate prn** **Fast Onset:** Lorazepam (Ativan) **0.25- 0.5 mg bid-tid** Trazadone (Desyrel) **25-50mg qhs** **For Delirium: s**ee delirum orderset
Tricyclic Antidepressants, tertiary amines Amitriptyline (Elavil) Doxepin (Sinequan) Imipramine (Tofranil)	Most anticholinergic of tricyclics. Adverse effects: confusion, oversedation, orthostatic hypotension, falls, and urinary retention.	**For neuropathy**: Gabapentin (Neurontin)-**dose renally** Nortriptyline (Pamelor) **10 mg qhs** Lidocaine 5% Patch: **12 hrs on, 12 hrs off** **For depression**: Sertraline **25mg daily-titrate prn** Venlafaxine (Effexor) XR **37.5-75mg daily**-titrate prn** Citalopram **10 mg daily –titrate prn**
Antipsychotic Agents Chlorpromazine (Thorazine) Thioridazine (Mellaril) Haloperidol (Haldol) >5 mg	All have anticholinergic effects. Adverse effects::confusion, oversedation,, orthostatic hypotension, falls, urinary retention, parkinsonism, tardive dyskinesia. Studies show increased risk of mortality in elderly pts : weigh benefit vs risks	**See delirium orderset for full recommendations** Avoid haloperidol use in Parkinson's pts Haloperidol (Haldol) loading dose of **0.5-1mg po q2hrs prn until pt is calm or 0.5-1 mg IM q30 minutes until pt is calm then 0.5 mg bid , then wean off (max dose=5 mg/day)** *** Risperidone (Risperdal) **0.5 mg bid ***** Quetiapine (Seroquel) **12.5 mg bid*****
Antihistamines/Anticholinergics Dicyclomine (Bentyl) Diphenhydramine (Benadryl) Hydroxyzine (Vistaril) Hyoscamine (Levsin) Meclizine (Antivert) Oxybutynin (Ditropan)	Adverse effects: confusion, over-sedation, orthostatic hypotension, falls and urinary retention.	**For antihistamine effect**: Loratadine (Claritin) **10 mg daily, every other day if CrCl <30 ml/min** **For urinary Incontinence**: Tolterodine LA (Detrol LA) **2 mg daily** **For other uses:** Avoid use if able, if not, use lowest effective dose for shortest period of time
Antiemetics Promethazine (Phenergan) Prochlorperazine (Compazine) Thiethylperazine (Torecan) Trimethobenzamide (Tigan) Metoclopramide (Reglan)	All have anticholinergic effects Adverse effects: confusion, over-sedation, orthostatic hypotension, falls, urinary retention, parkinsonism, tardive dyskinesia. Tigan has the least efficacy and has a high incidence of extrapyramidal effects.	Avoid when possible. Use lowest effective dose. Promethazine (Phenergan) **6.25-12.5 mg IV q4-6 hrs prn or 12.5 mg po/pr q4-6 hrs prn** Ondansetron **4mg IV q8hrs prn** Metoclopramide (Reglan) **5 mg qid**

Analgesics Opioids NSAIDs (Indomethacin has highest incidence of adverse effects) Muscle Relaxants (High in anticholinergic and /or CNS effects)	**Adverse effects (Opioids):** Confusion, over-sedation and constipation **Pentazocine (Talwin)** has more CNS effects than other opioids **Fentanyl patches** have a delay to maximal effect and prolonged effects last after removal (18-36 hours or longer in patients with renal dysfunction) Rapid titration may result in overdose. Contraindicated in opioid naïve patients. **Propoxyphene (Darvon**) has more CNS effects than other equianalgesic opioids It is no longer on formulary. **Meperidine (Demerol)** is biotransformed to a toxic metabolite in patients with renal dysfunction. It is no longer on formulary except for post-op shivering **Adverse effects (NSAIDs):** GI bleed and nephrotoxicity, increased risk of cardiovascular events	**All below doses are in opioid naïve** : Scheduled acetaminophen **1 gram q8hrs or 650 mg q6hr** Add morphine **5 mg to 7.5 mg q4hrs prn** or oxycodone **2.5 mg -5mg q4hrs prn** (oxycodone preferred in renal impairment) **If parental route is needed**: Morphine **2 mg to 4 mg IV q3hrs prn** or Hydromorphone **0.5 mg IV q3hrs prn** **When opioid is needed for chronic pain:** Morphine SR **15 mg q12hrs** with Morphine **5 mg to 7.5 mg q4hrs prn** pain or if significant renal impairment Oxycodone SR **10 mg q12 hrs** with oxycodone **2.5 mg to 5mg q4hrs prn** NSAIDs and COX-2 inhibitors may be considered rarely and with extreme caution in highly selected individuals per American Geriatric Society pain guidelines. If NSAID is necessary use for short period or add proton pump inhibitor for GI protection

**Greatest potential for adverse effects* **Monitor for small increase in blood pressure ***see delirium or antipsychotic orderset 11/09