

# Pharmacy Review Resources for Surveyors

Every effort is made to assure the accuracy of the attached information.  
This information is not intended to be used as a tool to prescribe medication or provide other clinical services.  
**This information is intended as a tool for DQA surveyors to assist in evaluating medication therapy only.**  
**Updated June 2011**

## Medication Guide

| <b>DRUG<br/>Brand/Generic</b>                   | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>   | <b>DOSING</b>                    | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>   |
|---|---|--|----------------------------------|---|---|
| Abilify/<br>Aripiprazole                        | <b>Table I F329<br/>Antipsychotic<br/>Medication</b><br><br><b>Approved for children<br/>age 13 and older</b>       | Schizophrenia<br>(Will be used for<br>behaviors in dementia) | 10-15mg/day                      | ❖ <b>Antipsychotic Protocol</b><br>TD, orthostatic hypotension<br>Response to targeted behaviors.<br>Qualitative and Quantitative                     | TD, orthostatic hypotension   |
| Actonel/<br>Risedronate                         | <b>Table I F329<br/>Osteoporosis Medication</b><br><b>Must take 30-60 min<br/>prior to meal with only<br/>water</b> | Osteoporosis   | 5 mg/day or 35<br>mg weekly dose | May need vitamin D and Calcium<br>supplements if not adequate dietary<br>intake   | GI upset, dysphagia, esophagitis,<br>ulcers<br>Potential Clinical Trigger: Prilosec or<br>similar medications for GERD  |
| Actoplus Met /<br>Pioglitazone and<br>metformin | <b>Table I F329<br/>Antidiabetic Medication</b>   | Type II Diabetes   |                                  | Blood glucose levels, liver and<br>kidney function, hematocrit and<br>hemoglobin annually, signs of lactic<br>acidosis, edema, weight gain            |   |
| Actos/<br>Pioglitazone                          | <b>Table I F329<br/>Antidiabetic Medication</b>   | Type II Diabetes   | 15-30mg/day                      | Blood sugar, Liver enzymes, edema,<br>weight gain   | Hypoglycemia with symptoms<br>including tachycardia, palpitations,<br>irritability, headache, confusion,<br>seizures  |
| Adderall/Amphet<br>amine                        | <b>Approved for children 3<br/>and older</b>  | ADHD   |                                  |   |   |
| Advicor /<br>Lovastatin                         | <b>Table I F329<br/>Cholesterol Lowering<br/>Medication</b>   | High cholesterol   |                                  | LFT's: baseline, 12 weeks after<br>starting or dose increases, and<br>periodically thereafter (semiannual)  |   |
| Advil (motrin)/<br>Ibuprofen                    | <b>Table I F329<br/>Analgesic</b>   | Arthritis, pain,<br>inflammatory diseases                    | Up to 3200 mg                    | See Side effects<br>Bleeding especially if >325mg/day<br>ASA used with another NSAID, or<br>NSAIDs are used with an antiplatelet<br>or anticoagulant. | GI distress, stool for blood, flank<br>pain, increased BP   |
| AeroBid /<br>Flunisolide                        | <b>Table I<br/>Respiratory Medications</b>  |  |                                  | Rinse mouth after administration risk<br>for candidiasis (nystatin or<br>fluconazole clinical trigger<br>medication)                                  |   |
| Akineton/<br>Biperident                         | <b>Table II<br/>ANTICHOLINERGIC</b>   | Parkinson's  | Up to 6mg                        | See side effects  | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion |
| Aldactone /                                     | <b>Table I</b>  | Diuretic   |                                  | Fluid and electrolyte balance,  |   |

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|-------------------------------|---|---|---------------|---|--|
| Spironolactone                | <b>Cardiac Medication</b>   |   |               |   | urinary incontinence, falls  |
| Aldomet/<br>Methyldopa        | <b>Table I<br/>Cardiac Medications</b>  | HTN   | Up to 2000 mg |   | Sedation, nightmares, nasal stuffiness,<br>decrease heart rate, worsen depression  |
| Altace / Ramipril             | <b>Table I<br/>Cardiac Medications</b>  | Hypertension  |               |   | Blood pressure, K levels, cough  |
| Amaryl /<br>Glimepiride       | <b>Table I<br/>Antidiabetic Medications</b>   |   |               |   |  |
| Ambien/<br>Zolpidem           | <b>Table I<br/>Sedative Hypnotic</b>  | Insomnia  | 5 mg          | ❖ <b>Sedative Hypnotic Protocol</b>   | Unexplained change in cognitive or<br>ADL function or behavior, confusion.<br>Falls, Sedation, Slurred speech,<br>difficulty swallowing. Breathing<br>problems   |
| Amikacin                      | <b>Table I<br/>Cardiac Medications</b>  |   |               | Baseline and regular renal function<br>tests; serum medication<br>concentrations<br>(not necessary if given as a single<br>one time dose) |  |
| Amiodarone                    | <b>Table I<br/>Cardiac Medications</b>  | Antiarrhythmic  |               | See side effects<br>Monitor if using with digoxin or<br>warfarin  | Pulmonary toxicity, hepatic injury,<br>hypothyroidism, exacerbate existing<br>arrhythmia, worsening heart failure,<br>impaired mental function   |
| Amytal/<br>Amobarbital        | <b>Table I<br/>Sedative Hypnotic</b>  | Sedative dental/medical<br>procedures<br><b>Avoid use in COPD</b>                   | To 200 mg.    | <b>Sedative Hypnotic Protocol</b><br><br><b>Do not withdraw rapidly...must<br/>use gradual dose reduction.</b>                            | Respiratory depression, lethargy, ↓<br>cognitive and ADL functioning,<br>aggressive and psych behaviors,<br>hyperactivity, SIB, drowsiness,<br>dizziness, headache, constipation<br>mental depression, nausea, vomiting,<br>diarrhea |
| Anafranil/<br>Clomipramine    | <b>Table II<br/>ANTICHOLINERGIC</b><br><br><b>Approved for children<br/>with OCD 10 and older</b> | Obsessive compulsive<br>disorder Not drug of<br>choice for depression in<br>elderly | Up to 200mg   | Behaviors   | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain, card,<br>arrhythmia's  |
| Antara /<br>Fenofibrate       | <b>Table I<br/>Cholesterol Lowering<br/>Medication</b>  | High cholesterol  |               | CBC at baseline and after starting;<br>regular LFT's  |  |
| Aranesp /<br>darbepoetin      | <b>Table I<br/>Hemantics</b>  |   |               | Blood pressure, baseline serum Fe,<br>ferritin, frequent CBC,   |  |
| Aricept/                      | <b>Table I</b>  | Alzheimer's mild to   | 5-10mg        | For effect with standardized scale or   | Nausea, diarrhea, insomnia, fatigue,   |

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|--|--|---|---|---|--|
| Donepezil                                  | <b>Cognitive Enhancers</b>                     | moderate  |   | functional assessment. Cholinergic effect.  | muscle cramps.   |
| Artane/<br>Trihexyphenidyl                 | <b>Table II<br/>ANTICHOLINERGIC</b>            | Parkinsonism  | 6 mg  | <b>BPH</b>  |  |
| Asendin/<br>Amoxapine                      | <b>Table II<br/>ANTICHOLINERGIC</b>            | Depression  | Up to 300mg   | Tardive Dyskinesia,   | Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain.  |
| Aspirin                                    | <b>Table I F329<br/>Analgesic</b>              | Pain, fever, inflammation, anticoagulant (TIA's stroke) | Up to 3000 mg, Some enteric coated forms, some controlled release. DO NOT CRUSH | For symptoms of hemorrhaging (especially in doses >325mg/day in combination with another NSAID)                           | GI distress, ringing ears  |
| Atacand /<br>Candesartan                   | <b>Table I<br/>Cardiac Medication</b>          | Hypertension  |   | Blood pressure, K levels  |  |
| Atarax (vistaril)/<br>Hydroxyzine          | <b>Table II<br/>ANTICHOLINERGIC</b>            | itching, rash   | ➤ 50 mg   | ❖ <b>Other Psychopharmacologic Protocol</b><br>❖ <b>Sedative Hypnotic Protocol</b>  | Change in behavior, cognitive or ADL functioning, urinary retention, constipation, sedation, dry mouth, blurred vision, constipation, confusion    |
| Ativan/<br>Lorazepam                       | <b>Table I<br/>Anxiolytics</b>                 | Sleep, seizure  | ➤ 2 mg  | ❖ <b>Other Psychopharmacologic Protocol</b><br>❖ <b>Sedative Hypnotic Protocol</b>  | Unexplained change in cognitive or ADL function or behavior, confusion. Falls, Sedation, Slurred speech, difficulty swallowing. Breathing problems |
| Atromid /<br>Clofibrate                    | <b>Table I<br/>Cholesterol Lowering Agents</b> | High cholesterol  | ➤   | CBC at baseline and after starting; regular LFT's   |  |
| Atrovent/<br>Ipratropium                   | <b>Table I<br/>Respiratory Medications</b>     | COPD, asthma, emphysema, bronchitis                     | 2 inhalations up to 4 x a day   | Anticholinergic   | Nervousness, insomnia, urinary difficulty, Dry mouth   |
| Avandamet /<br>Rosiglitazone and Metformin | <b>Table I<br/>Antidiabetic Medications</b>    |   |   | Blood Sugars, FBS q 2 mo.(70-110) HBA1c q 3 mo. up to 7-8. Renal and hepatic function, vision changes, edema, weight gain |  |
| Avandia/<br>Rosiglitazone                  | <b>Table I<br/>Antidiabetic Medications</b>    | Diabetes  | 4mg/day   | Hemoglobin A1c, Liver enzymes<br>Vision changes due to new onset or worsening of macular edema, weight gain, edema        | Hypoglycemia   |
| Avapro /<br>Irbesartan                     | <b>Table I<br/>Cardiac Medications</b>         | Hypertension  |   | Blood pressure, K levels  |  |
| Avelox/                                    | <b>Table I</b>                                 |   |   |   |  |

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|---|---|---|--------------------------------|--|--|
| Moxifloxacin                              | <b>Antibiotics</b>                                  |   |                                |  |  |
| Azamacort /<br>triamcinolone<br>acetonide | <b>Table I<br/>Respiratory Medication</b>           |   |                                |  |  |
| Baclofen                                  | <b>Table I<br/>Muscle Relaxant</b>                  | Muscle relaxant   |                                | Anticholinergic  |  |
| Beclovent/<br>Beclomethasone              | <b>Table I<br/>Respiratory Medication</b>           | Inflammatory disease<br>(COPD, arthritis, skin<br>allergies)                            | Up to 2 puffs 4<br>times a day | Wt. gain, BP monthly   | Behavior changes, edema, infections,<br>worsen diabetic control  |
| Benadryl/<br>Diphenhydramine              | <b>Table II<br/>ANTICHOLINERGIC</b>                 | Drug induced EPS (tremor<br>rigidity), sleep, rash,<br>itching, Parkinson's             | 50 mg                          | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>❖ <b>Sedative Hypnotic Protocol</b> | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, constipation,<br>confusion |
| Benicar /<br>Olmesartan                   | <b>Table I<br/>Cardiac Medication</b>               | Hypertension  |                                | Blood pressure, K levels   |  |
| Bentyl/<br>Dicyclomine                    | <b>Table II<br/>Anticholinergic<br/>Medications</b> | GI Distress - Not drug of<br>choice in elderly  |                                |  | Dry mouth, blurred vision, urinary<br>retention, constipation, confusion   |
| Betamethasone                             |   | Inflammatory disease<br>(COPD, arthritis, skin<br>allergies)                            | Up to 9 mg                     | Wt. gain, BP monthly   | Behavior changes, edema, infections,<br>worsen diabetic control  |
| Blocadren /<br>Timolol                    | <b>Table I<br/>Cardiac Medication</b>               |   |                                |  |  |
| Boniva /<br>ibandronate                   | <b>Table I<br/>Osteoporosis Medication</b>          | Osteoporosis  |                                | GI complications, bone density, jaw<br>necrosis  |  |
| Brevibloc /<br>Esmolol                    | <b>Table I<br/>Cardiac Medication</b>               |   |                                |  |  |
| Bumex/<br>Bumetanide                      | <b>Table I<br/>Cardiac Medication</b>               | Edema, HTN, CHF<br><br>Loop diuretic  | Up to 2 mg                     | Potassium 30 days after start or<br>every 6 mo. if on digoxin. BP every<br>week        | Dehydration, low blood pressure,<br>muscle cramps  |
| Buspar/<br>Buspirone                      | <b>Table I<br/>Anxiolytic Medication</b>            | Generalized anxiety<br>disorder, Organic mental<br>syndrome, panic disorder,<br>anxiety | Up to 60 mg                    | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>  | Changes in cognitive or ADL<br>function, behavior  |
| Butazolidin/<br>Phenylbutazone            |   | Not drug of choice  |                                |  | Blood disorders/blood cell production<br>disorders   |
| Butisol/<br>Butabarbital                  |   | None<br><b>Avoid use in COPD</b>  | None                           | Do not withdraw rapidly...must use<br>gradual dose reduction.                          | Respiratory depression, lethargy, ↓<br>cognitive and ADL functioning,  |

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|-------------------------|--|---|---|--|--|
|                         |  |   |   | Dose reduction must occur 2x in one year to conclude contraindicated.                                  | aggressive and psych behaviors, hyperactivity, SIB, drowsiness, dizziness, headache, constipation mental depression, nausea, vomiting, diarrhea    |
| Calan/<br>Verapamil     | <b>Table I<br/>Cardiac Medication</b>        | HTN, angina, cardiac arrhythmia                             | Up to 480 mg, some forms time release, do not crush.  | BP and pulse weekly  | Constipation, bleeding   |
| Capoten/<br>Captopril   | <b>Table I<br/>Cardiac Medication</b>        | HTN, CHF, diabetic nephropathy                              | Up to 100 mg  | BP weekly, watch for cough and concomitant use of cough drops cough syrup etc.                         | Low BP, cough  |
| Carafate/<br>Sucralfate |  | Ulcer, reflux, esophagitis                                  | Up to 4000 mg. On an empty stomach. Liquid-SHAKE WELL | None   | None   |
| Cardizem/<br>Diltiazem  | <b>Table I<br/>Cardiac Medication</b>        | Angina, Tachycardia, HTN                                    | Up to 360 mg. Capsule is time release. Do not crush.  | Blood pressure weekly  | Dizziness, bleeding  |
| Cardura /<br>Doxazosin  | <b>Table I<br/>Cardiac Medication</b>        | Hypertension, BPH   |   | Titrate slowly to prevent hypotension and syncope and administer qhs                                   | Hypotension and syncope during first few doses.  |
| Celebrex/<br>Celecoxib  | <b>Table I F329<br/>Analgesic Medication</b> | Pain, anti-inflammatory, arthritis                          | 200mg a day   | None   | Dyspepsia, diarrhea, abdominal pain, peripheral edema, dizziness.  |
| Celexa/<br>Citalopram   | <b>Table I<br/>Antidepressant</b>            | Depression  | 20-40mg   | ❖ <b>Other Psychopharmacologic Protocol</b>  | Nausea, dry mouth, somnolence  |
| Centrax/<br>Prazepam    | <b>Table I<br/>Anxiolytic</b>                | Gen. anxiety, panic, OMS, sleep<br><b>Avoid use in COPD</b> | Attempt short acting first; 15mg                      | ❖ <b>Other Psychopharmacologic Protocol</b><br>Behavior, OMS quantitative counts of specific behaviors | Unexplained change in cognitive or ADL function or behavior, confusion. Falls, Sedation, Slurred speech, difficulty swallowing. Breathing problems |
| Chloral Hydrate         | <b>Table I<br/>Sedative Hypnotic</b>         | Insomnia, sedative  | Child/Over65 up to 500 mg. Under 65 up to 1000mg.     | ❖ <b>Other Psychopharmacologic Protocol</b><br>❖ <b>Sedative Hypnotic Protocol</b>                     | Behavior, cognition and ADL functioning, headache, sedation  |
| Chlorpheniramine        | <b>Table II<br/>ANTICHOLINERGIC</b>          | Not drug of choice in elderly.                              |   |  | Dry mouth, blurred vision, urinary retention, constipation, confusion  |

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|--------------------------------|---|--|---|--|---|
| Cipro/<br>Ciprofloxacin        | <b>Table I<br/>Antibiotic</b>                   | Infection to sensitive organisms   | Up to 3000 mg   | Culture and sensitivity or minimum inhibitory conc. (MIC)                                  | Diarrhea, seizure   |
| Clinoril/<br>Sulindac          |   | Pain, Anti-inflammatory, arthritis   | Up to 400mg   | GI bleed and BP  | GI distress, stool for blood, flank pain, increased BP  |
| Clozaril/<br>Clozapine         | <b>Table II<br/>ANTICHOLINERGIC</b>             | Antipsychotic  | Second line<br><br>50 mg  | ❖ <b>Antipsychotic Protocol</b>  | Low white count, orth. Hypotension, urinary retention, drooling, lethargy, fecal impaction, tremor, cognitive and ADL changes, falls  |
| Cogentin/<br>Benztropine       | <b>Table II<br/>ANTICHOLINERGIC</b>             | Parkinson, S.E. of antipsychotic meds.   | Up to 4 mg  | See side effects.  | Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, urinary retention, constipation, confusion |
| Compazine/<br>Prochlorperazine | <b>Table II<br/>ANTICHOLINERGIC</b>             | Antipsychotic  | 10 mg   | ❖ <b>Antipsychotic Protocol</b><br><br><b>Nausea and vomiting short term use expected.</b> | Abnormal movements, drooling, restlessness, mask like face, EPS, tremor, cognitive or ADL changes, falls, sedation  |
| Comptan/<br>Entacapone         | <b>Table I<br/>Antiparkinson<br/>Medication</b> | Parkinson's  | 200 mg with each dose of Sinemet  | Clinical effect  | Hallucination, hypotension, CNS depression  |
| Concerta/Methylp<br>henidate   | <b>Approved for children 6<br/>and older</b>    | ADHD   |   |  |   |
| Corgard/<br>Nadolol            | <b>Table I<br/>Cardiac Medication</b>           | HTN, angina, prevent second MI, aggressive behaviors   | To 240 mg for medical, 100mg adults/75mg child for behaviors. Capsule form is time release, do not crush. | Pulse and BP weekly, or as determined by MD if used for behaviors.                         | Slow pulse and ↓ BP, sleep problems, breathing problems, weakness, lethargy, depression,  |
| Cortone/<br>Cortisone          |   | Inflammatory disease (COPD, arthritis, skin allergies)<br>Avoid use in resident with active or recurrent gastritis, ulcer or GERD. | Up to 300 mg.   | Wt. gain, BP monthly   | Behavior changes, edema, infections, worsen diabetic control  |
| Coumadin/<br>Warfarin          | <b>Table I<br/>Anticoagulant</b>                | Anticoagulant (stroke, at. Fib., thrombosis, MI)   | Up to 10 mg   | INR  | Bleeding bruising   |
| Cozaar / Losartan              | <b>Table I<br/>Cardiac Medication</b>           | Hypertension   |   | Blood pressure, K levels   |   |
| Crestor/<br>Rosuvastatin       | <b>Table I<br/>Cholesterol Lowering</b>         | High cholesterol   |   | LFT's: baseline, 12 weeks after starting or dose increases, and                            |   |

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|-------------------------------|--|--------------------------------------|---|---|--|
|                               | <b>Medication</b>                            |                                      |   | periodically thereafter (semiannual)  |  |
| Cyclospasmol/<br>Cyclandelate |  | Not drug of choice in elderly        |   |   | Mild flushing, tingling, headache, dizziness, sweating, weakness, increased heart rate   |
| Cymbalta/<br>Duloxetine       | <b>Table I<br/>Antidepressant</b>            |                                      |   | ❖ <b>Other Psychopharmacologic Protocol</b><br>diabetic peripheral neuropathic pain: pain scale score<br><br>blood pressure, liver function<br><br>ocular pressure, in patients with raised ocular pressure or at risk of acute narrow angle glaucoma<br><br>withdrawal symptoms during abrupt discontinuation of therapy |  |
| Cyproheptadine                | <b>Table II<br/>ANTICHOLINERGIC</b>          | Antihistamine H-1 blocker            |   |   |  |
| Cytotec/<br>Misoprostol       |  | Prevent ulcer from NSAIDs            | 400-800 mg  | See side effects.   | Diarrhea   |
| Dalmane/<br>Flurazepam        | <b>Table I<br/>Sedative Hypnotic</b>         | Insomnia<br><b>Avoid use in COPD</b> | <b>Attempt short acting first.</b><br><br>➤ 15 mg | ❖ <b>Other Psychopharmacologic Protocol</b><br><br>❖ <b>Sedative Hypnotic Protocol</b>  | Unexplained change in cognitive or ADL function or behavior, confusion, weakness, dizziness, fainting, trouble walking, increased risks of falls/fractures, drowsiness, slurred speech, difficulty swallowing. breathing problems  |
| Dantrium /<br>dantrolene      | <b>Table II<br/>ANTICHOLINERGIC</b>          | Muscle relaxer                       |   |   |  |
| Darvon/<br>Darvocet           | <b>Table I F329<br/>Analgesic Medication</b> | Pain                                 | Plain to 260 mg.<br>N to 400 mg.                  | NOT RECOMMENDED IN THE ELDERLY  | Behavior changes, lethargy, seizures, constipation, cognitive loss (impaired memory, decision making, and ability to speak, understand, recognize what is seen, and coordinate learned movements)<br>Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry |

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|------------------------------------|---|--|---|---|--|
|                                    |   |  |   |   | mouth, blurred vision  |
| Daypro/<br>Oxaprozin               |   | Pain, Anti-inflammatory,<br>arthritis  | Up to 1800mg.                                     | GI bleed and BP   | GI distress, stool for blood, flank<br>pain, increased BP  |
| Daytrana/methylp<br>henidate patch | <b>Approved for children<br/>age 6 and older</b>  | ADHD   |   |   |  |
| Demadex /<br>Torsemide             | <b>Table I<br/>Cardiac Medication</b>   | diuretic   |   |   |  |
| Demerol/<br>Meperidine             | <b>Table I F329<br/>Analgesic Medication</b>  | Not drug of choice in<br>chronic pain, short term<br>only.   | Oral med is<br>usually not<br>effective           |   | Respiratory depression, orthostatic<br>hypotension<br>Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, constipation,<br>confusion |
| Desoxyn/Metham<br>phetamine        | <b>Approved in children 6<br/>and older</b>   | ADHD   |   | ❖   |  |
| Desyrel/<br>Trazadone              | <b>Table I<br/>Antidepressant<br/>Sedative Hypnotic</b>   | Depression or sleep  | Up to 300 mg<br>over 65; up to<br>600 mg under 65 | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>❖ <b>Sedative Hypnotic Protocol</b><br>50 mg for sleep is common. Sleep<br>protocol does not apply. Above 50<br>mg please review | Pulse problems, low BP, dizziness,<br>sedation   |
| Detrol /<br>Tolterodine            | <b>Table I<br/>Urinary Incontinence<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> |  |   | Effects of medication on urinary<br>incontinence and lower urinary tract<br>symptoms.   |  |
| Dexedrine/dextro<br>amphetamine    | <b>Approved for children 3<br/>and older</b>  | ADHD   |   |   |  |
| Dexone/<br>Dexamethasone           | <b>Table I<br/>Glucocorticoid</b>   | Inflammatory disease<br>(COPD, arthritis, skin<br>allergies)<br>Avoid use in resident with<br>active or recurrent<br>gastritis, ulcer or GERD. | Up to 16 mg                                       | Wt. gain, BP monthly  | Behavior changes, edema, infections,<br>worsen diabetic control  |
| Dextrostat/dextro<br>amphetamine   | <b>Approved in children age<br/>3 and older</b>   | ADHD   |   |   |  |

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|-------------------------------|--|--|---|--|--|
| Diabinese/<br>Chlorpropamide  | <b>Table I<br/>Antidiabetic Medication</b>   | Not drug of choice in elderly<br>Diabetes                          |   | Hypoglycemia   | Prolonged and serious low blood sugars: sweating, rapid heart rate, tremor. Low sodium   |
| Diabeta/<br>Glyburide         | <b>Table I<br/>Antidiabetic Medication</b>   | Diabetes   | Up to 20 mg   | Blood sugar or Hemoglobin A1C every 60 days, every 3 mo. normal (70-110)   | See above  |
| Diflucan /<br>fluconazole     | <b>Table I<br/>Antifungal Medication</b>   |  |   | When given with warfarin, phenytoin, theophylline, sulfonyleureas  |  |
| Digitec / Digoxin             | <b>Table I<br/>Cardiac Medications</b>   | CHF, AFib, paroxysmal supraventricular tachycardia, atrial flutter |   | Kidney function, electrolytes, serum digoxin levels  |  |
| Dilantin/<br>Phenytoin        | <b>Table I<br/>Anticonvulsants</b>   | Seizure disorder, cardiac problems, pain                           | Up to 600 mg<br>Liquid- SHAKE WELL.                     | ❖ <b>Other Psychopharmacologic Protocol</b><br>CBC, liver, every 12 mos. drug level within 2 weeks of dose change, seizure, ADR, med that can affect level (10-20) | Lethargy, gum problems   |
| Dilaudid/<br>Hydromorphone    | <b>Table I F329<br/>Analgesic Medication</b>   | Pain   |   |  | Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, card. Arrhythmia's, constipation, confusion       |
| Diovan /<br>Valsartan         | <b>Table I<br/>Cardiac Medication</b>  | Hypertension   |   | Blood pressure, K levels   |  |
| Ditropan/<br>Oxybutynin       | <b>Table II<br/>ANTICHOLINERGIC</b>  | Bladder/urinary tract Antispasmodic                                | Up to 20 mg daily                                       | Urgency, frequent incontinence, nocturia   | Drowsiness, blurred vision, weakness, constipation, urinary retention, delirium, confusion, hallucinations, and dry mouth, nose, and throat, reflux, incontinence, hydronephrosis. |
| Divalproex/<br>Valproic Acid  | <b>Table I<br/>Anticonvulsant</b><br><br><b>Approved fro children 2 and older for seizures</b> | Seizures, behaviors  | Up to 2000 mg. Some forms enteric coated, do not crush. | ❖ <b>Other Psychopharmacologic Protocol</b><br>CBC, liver, every 12 mo. drug level within 2 weeks of dose change, seizure, ADR, med that can affect level (50-100) | GI upset, behavior or ADL changes, jaundice, tremor  |
| Docusate (DSS)                |  | Constipation   | Up to 1000 mg   | None   | Diarrhea   |
| Dolobid/<br>Diflunisal        | <b>Table I F329<br/>Analgesic Medication</b>   | Pain, Anti-inflammatory, arthritis                                 | Up to 1500mg.   | GI Bleed and BP<br>Bleeding especially if >325mg/day   | GI distress, stool for blood, flank pain, increased BP   |

| <b>DRUG<br/>Brand/Generic</b>        | <b>SPECIAL NOTES</b>   | <b>DIAGNOSIS</b>   | <b>DOSING</b>   | <b>MONITORING</b>  | <b>SIDE EFFECTS/ADR</b>  |
|--------------------------------------|--|--|---|--|--|
|                                      |  | Avoid use in residents with active or recurrent gastritis, ulcer or GERD; blood clotting disorders                     |   | ASA used with another NSAID, or NSAIDs are used with an antiplatelet or anticoagulant.                 |  |
| Donnatal/<br>Belladonna<br>alkaloids | <b>Table II<br/>ANTICHOLINERGIC</b>  | Not drug of choice.  |   |  | Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, urinary retention, constipation, confusion    |
| Doral/<br>Quazepam                   | <b>Table I<br/>Anxiolytic</b>  | Gen. anxiety, panic, OMS, sleep<br><b>Avoid use in COPD</b>  | <b>Short acting first.</b><br><br>➤ <b>7.5 mg</b>                             | ❖ <b>Other Psychopharmacologic Protocol</b>  | Unexplained change in cognitive or ADL function or behavior, confusion. Falls, Sedation, Slurred speech, difficulty swallowing. Breathing problems                             |
| Dulcolax/<br>Bisacodyl               |  | Stimulant Laxative   | Up to 10 mg   | See side effects   | Diarrhea   |
| Duragesic<br>/FENTANYL               | <b>Table I F329<br/>Analgesic Medication</b>                                 | Pain   | None  | Pain Control   | Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, constipation, confusion                       |
| Dymelor/<br>acetohexamide            | <b>Table I F329<br/>Antidiabetic Medication</b>                              | Type II Diabetes   |   | Blood glucose levels   | Hypoglycemia with symptoms including tachycardia, palpitations, irritability, headache, confusion, seizures  |
| DynaCirc /<br>Isradipine             | <b>Table I<br/>Cardiovascular Medication</b>                                 |  |   |  |  |
| Dyrenium /<br>Triamterene            | <b>Table I<br/>Cardiac Medication</b>  | diuretic   |   |  |  |
| Effexor/<br>Venlafaxine              | <b>Table I<br/>Antidepressant</b>  | Depression   | Under 65 to 375 mg., over 65 to 225 mg., 100 mg., if liver or kidney concerns | ❖ <b>Other Psychopharmacologic Protocol</b><br>Behaviors   | Nausea, lethargy, dizziness, sweating, decrease appetite, tremor, constipation   |
| Elavil/<br>Amitriptyline             | <b>Table I<br/>Antidepressant</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> | Depression, pain – Not drug of choice in elderly for depression.<br>Neurogenic pain may be appropriate if risk benefit | Under 64 up to 300 mg<br>Over 65 up to 150 mg                                 | ❖ <b>Other Psychopharmacologic Protocol</b><br>Blood pressure the 1st week,<br>Behaviors, constipation | Seizures, fecal impaction, dry mouth, blurred vision, tachycardia, orthostatic hypotension, urinary retention, sedation, constipation, confusion, delirium, or hallucinations, |

| DRUG<br>Brand/Generic         | SPECIAL NOTES  | DIAGNOSIS   | DOSING                                 | MONITORING   | SIDE EFFECTS/ADR  |
|-------------------------------|--|---|--|--|---|
|                               |  | done.   |  |  | falls   |
| Eldepryl /<br>Selegiline      | <b>Table I<br/>Parkinsons Agent</b>                    |   |  |  |   |
| Enablex /<br>Darifenacin      | <b>Table I<br/>Urinary Incontinence<br/>Medication</b> | Urge in continenece   |  | Effects of medication on urinary<br>incontinence and lower urinary tract<br>symptoms.  |   |
| Eskalith/lithium<br>carbonate | <b>Approved in children age<br/>12 and older</b>       |   |  |  |   |
| Ethycrinic acid               | <b>Table I<br/>Cardiovascular<br/>Medication</b>       | Diuretic  |  | Electrolytes, blood pressure, urinary<br>incontinance  |   |
| Evista/<br>Raloxifene         | <b>Table I<br/>Osteoporosis Medication</b>             | Osteoporosis  | 60 mg/day                              |  | INR if on warfarin, thrombotic events   |
| Evoxac/<br>Cevimeline         |  | For Sjogren   |  | Side Effects and hydration   | Sweating, urinary frequency,<br>Hydration,  |
| Exelon/<br>Rivastigmine       | <b>Table I<br/>Cognitive Enhancers</b>                 | Alzheimer   | 6 mg bid max                           |  | Nausea, Vomiting, diarrhea, anorexia  |
| Fanapt/Iloperidon<br>e        |  | Antipsychotic   |  | ❖ <b>Antipsychotic Protocol</b>  |   |
| Felbatol/<br>Felbamate        | <b>Table I<br/>Anticonvulsant<br/>Medication</b>       | Partial seizures with or<br>without secondary<br>generalization                     | Up to 3600 mg<br>Liquid -SHAKE<br>WELL | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>CBC, liver, every 3-12 mos.drug<br>level within 2 weeks of dose change,<br>seizure, ADR, med that can affect<br>level (10-20) | Liver toxicity, headache, insomnia,<br>anorexia, fatigue, nausea, vomiting,<br>dyspepsia, weight loss, constipation,<br>diarrhea, aplastic anemia |
| Feldene/<br>Piroxicam         | <b>Table I F329<br/>Analgesic Medication</b>           | Arthritis, pain,<br>inflammatory disease<br>Not drug of choice in<br>elderly female | Up to 20 mg                            | B. P. dark stools<br>Bleeding especially if >325mg/day<br>ASA used with another NSAID, or<br>NSAIDs are used with an antiplatelet<br>or anticoagulant.                           | GI distress, flank pain, BP, behaviors  |
| Ferrous Sulfate               | <b>Table I<br/>Iron</b>                                | Iron deficiency Anemia  | Up to 1200 mg<br>(usually 300<br>mg/d) | Hemoglobin } 1st month<br>Hematocrit } then qyr.   | Black stools, abdominal pain,<br>constipation   |
| Flexeril/<br>Cyclobenzaprine  | <b>Table II<br/>ANTICHOLINERGIC</b>                    | Not drug of choice in<br>elderly  |  |  | Sedation, weakness, dry mouth,<br>blurred vision, urinary retention,<br>constipation, confusion, delirium,<br>hallucinations                      |
| Flomax /<br>Tamsulosin        | <b>Table II<br/>ANTICHOLINERGIC</b>                    | Antihypertensive, BPH   |  | Titrate slowly to prevent<br>hypotension and syncope and<br>administer qhs, urodynamic studies;  |   |

| DRUG<br>Brand/Generic          | SPECIAL NOTES  | DIAGNOSIS             | DOSING   | MONITORING  | SIDE EFFECTS/ADR   |
|--------------------------------|--|-----------------------|--|---|--|
|                                |  |                       |  | CBC with differential, and LFT's, blood pressure, heart rate  |  |
| Flovent /<br>Fluticasone       | <b>Table I<br/>Respiratory Agent</b>   |                       |  |   |  |
| Floxin/ Ofloxacin              | <b>Table I<br/>Antibiotic</b>  |                       |  |   |  |
| Focalin/dexmethy<br>lphenidate | <b>Approved for 6 and older</b>  | ADHD                  |  |   |  |
| Folic Acid                     |  | Folic acid deficiency | Up to 1 mg   | Hemoglobin and Hematocrit within first 30 days of initiation  | Rash or allergic reaction  |
| Foradil /<br>Formoterol        | <b>Table I<br/>Respiratory Medication</b>  |                       |  |   |  |
| Fosamax/<br>Alendronate        | <b>Table I<br/>Osteoporosis Medication</b><br><br><b>Take on empty stomach,<br/>with glass of water, 30-60<br/>minutes before a meal</b> | Osteoporosis          | 5 mg/day or 70<br>mg/week  | GI complications, bone density, jaw<br>necrosis   | GI/Esophageal irritation   |
| Gentamicin                     | <b>Table I<br/>Antibiotic</b>  |                       |  | Baseline and regular renal function<br>tests; serum medication<br>concentrations<br>(not necessary if given as a single<br>one time dose) |  |
| Geodon/<br>Ziprasidone         | <b>Table I<br/>Antipsychotic</b>   | Antipsychotic         | Injectable now<br>available  | ❖ <b>Antipsychotic Protocol</b>   | Antipsychotic monitoring including<br>risk for heart arrhythmia.   |
| Glucophage/<br>Metformin       | <b>Table I<br/>Antidiabetic Medication</b>   | Diabetes              | 1500-2000mg a<br>day   | Blood Sugars, FBS q 2 mo.(70-110)<br>HBA1c q 3 mo. up to 7-8 Watch<br>Renal Function Hepatic Function                                     | GI distress, taste alteration, lactic<br>acidosis.   |
| Glucotrol/<br>Glipizide        | <b>Table I<br/>Antidiabetic Medication</b>   | Diabetes              | Up to 40 mg. XL<br>form is osmotic<br>time release, do<br>not crush. | Blood sugar or Hemoglobin A1C<br>every 60 days, every 3 mo. normal<br>(70-110)  | Poor blood sugar control, fast heart<br>rate, thirst, sweating, frequent<br>urination  |
| Halcion/<br>Triazolam          | <b>Table I<br/>Sedative Hypnotic</b>   | Sleep                 | 0.125 mg   | ❖ <b>Sedative Hypnotic Protocol</b>   | Unexplained change in cognitive or<br>ADL function or behavior, confusion.<br>Falls, Sedation, Slurred speech,<br>difficulty swallowing. Breathing<br>problems |
| Haldol/<br>Haloperidol         | <b>Table I<br/>Antipsychotic<br/>Medication</b>  | Antipsychotic         | 4mg  | ❖ <b>Antipsychotic Protocol</b>   | Abnormal movements, constant leg<br>movements, tremor, drooling, mask<br>like face, sedation   |

| <b>DRUG<br/>Brand/Generic</b>       | <b>SPECIAL NOTES</b>                             | <b>DIAGNOSIS</b>   | <b>DOSING</b>  | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>  |
|-------------------------------------|--|--|--|---|--|
|                                     | <b>Approved for children<br/>age 3 and up</b>    |  |  |   |  |
| Hydergine/<br>Ergyloid<br>mesylates |  | Cerebral decline in aging.<br><b>Not shown effective for<br/>dementia</b>  | 10 mg  | Mental Status   | Nausea and GI disturbances   |
| Hydrochlorthiazid<br>e (HCTZ)       | <b>Table I<br/>Cardiovascular<br/>Medication</b> | Edema, HTN   | Up to 100 mg   | Potassium within 30 days of start;<br>every 6 mo. if on digoxin, BP<br>weekly   | Dehydration low BP, leg cramps   |
| Hydrocortisone                      | <b>Table I<br/>Glucocorticoid</b>                | Inflammatory disease<br>(COPD, arthritis, skin<br>allergies)<br>Avoid use in resident with<br>active or recurrent<br>gastritis, ulcer or GERD.             | Up to 200 mg   | Wt. gain, BP monthly  | Behavior changes, edema, infections,<br>worsen diabetic control                                |
| Hytrin / Terazosin                  | <b>Table I<br/>Cardiovascular<br/>Medication</b> | Antihypertensive, BPH  |  |   |  |
| Inderal/<br>Propranolol             | <b>Table I<br/>Cardiovascular<br/>Medication</b> | HTN, angina, tremors,<br>cardiac arrhythmia's, HA,<br>prevent second MI,<br>aggressive behavior  | To 300 mg for<br>medical, 200mg<br>adults/150mg<br>child for<br>behaviors.<br>Capsule form is<br>time release, do<br>not crush.                      | Pulse and BP weekly, or as<br>determined by MD if used for<br>behaviors.  | Slow pulse and ↓ BP, sleep problems,<br>breathing problems, weakness,<br>lethargy, depression, |
| Indocin/<br>Indomethacin            | <b>Table I F329<br/>Analgesic Medication</b>     | Not drug of choice in<br>elderly, Gout, pain<br>if used in a resident with<br>active or recurrent<br>gastritis, ulcer or GERD;<br>blood clotting disorders |  | Bleeding especially if >325mg/day<br>ASA used with another NSAID, or<br>NSAIDs are used with an antiplatelet<br>or anticoagulant. | Headache, dizziness, vertigo,<br>depression, somnolence, fatigue,<br>confusion                 |
| Insulin                             | <b>Table I<br/>Antidiabetic medication</b>       | Diabetes   | Lispro within 15<br>minutes of eating.<br><br>Please check the<br>tyoe of insulin<br>someone is<br>receiving. There<br>are many new<br>products each | Blood sugar, q 60 days (70-110)<br>Hemoglobin A1c, q 3 months up to<br>7-8  | Poor glucose control, fast heart rate,<br>sweating, thirst, urinary frequency                  |

| DRUG<br>Brand/Generic               | SPECIAL NOTES                                    | DIAGNOSIS  | DOSING   | MONITORING  | SIDE EFFECTS/ADR   |
|-------------------------------------|--|--|--|---|--|
|                                     |  |  | requiring different timing for administration that are extremely important |   |  |
| Intal / cromolyn                    | <b>Table I<br/>Respiratory Medication</b>        |  |  |   |  |
| Iron                                | <b>Table I<br/>Iron</b>                          |  |  | Baseline serum Fe/ferritin, periodic CBC/HCT/Hbg  |  |
| Isordil/<br>Isosorbide<br>Dinitrate | <b>Table I<br/>Cardiovascular<br/>Medication</b> | Angina, CHF  | Up to 80 mg.<br>40mg is time<br>release, do not<br>crush.                  | Tolerance can develop; watch for<br>pain control, BP monthly  | Chest pain, headache, dizziness,<br>blurred vision   |
| Isosorbide<br>mononitrate           | <b>Table I<br/>Cardiovascular<br/>Medication</b> |  |  |   |  |
| Invega/paliperidone                 |  | Antipsychotic  |  | Antipsychotic Protocol  |  |
| Kemadrin/<br>Procyclidine           | <b>Anticholinergic</b>                           | Parkinson's  | Up to 7.5mg  | None  | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain.Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion |
| Keppra/<br>Levetiracetam            | <b>Table I<br/>Anticonvulsant<br/>Medication</b> |  |  | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>No blood levels monitor for effect.<br>Kidney function- reduce dose if<br>Cr.Cl is under 80. |  |
| Ketoconazole                        | <b>Table I<br/>Antifungal Medication</b>         |  |  | When given with warfarin,<br>phenytoin, theophylline, or<br>sulfonyleureas.   |  |
| Klonopin/<br>Clonazepam             | <b>Table I<br/>Anxiolytic Medication</b>         | Gen. anxiety, OMS, panic,<br>seizure, T.D., noct.<br>Myoclonus | <b>Short acting first</b><br>➤ <b>1.5 mg</b>                               | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>   | Unexplained change in cognitive or<br>ADL function or behavior, confusion.<br>Falls, Sedation, Slurred speech,<br>difficulty swallowing. Breathing<br>problems                         |
| Lamictal/<br>Lamotragine            | <b>Table I<br/>Anticonvulsant<br/>Medication</b> | Seizures, pain, behaviors                                      | Up to 500mg  | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>   | Life Threatening rashes, report<br>immediately. Headache, Nausea, GI<br>upset, dizzy, fatigue, ↓muscle coord.  |

| DRUG<br>Brand/Generic        | SPECIAL NOTES  | DIAGNOSIS  | DOSING  | MONITORING   | SIDE EFFECTS/ADR  |
|------------------------------|--|--|---|--|---|
|                              |  |  |   | Many drug interactions. Monitor drug levels when changing doses.                                     | Runny nose, vision concerns.  |
| Lanoxin/Digoxin              | <b>Table I<br/>Cardiovascular<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b>  | CHF, Atrial fib, <b>flutter</b> , or tachycardia                         | If not for atrial arrhythmia:<br><b>At. Fib. up to 0.25mg</b> | Pulse daily for 1 week then weekly (50-100) drug level only if problem (0.8-2.0)                     | Wt. loss(anorexia), diarrhea, nausea, vomiting, pulse out of range, visual problems, headache, fatigue, drowsiness, generalized muscle weakness                             |
| Lantus/<br>Insulin Gargine   | <b>Table I<br/>Antidiabetic Medication</b>   | Diabetes   |   | Do not dilute.   | Blood sugar. This is long acting insulin given once per day.  |
| Lasix/<br>Furosemide         | <b>Table I<br/>Cardiovascular<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b>  | Edema, HTN, CHF, CDPD  | Up to 200 mg  | Potassium 30 days after start and every 6 months if on digoxin, blood pressure weekly                | Dehydration, low BP, muscle cramps  |
| Lescol /<br>Fluvastatin      | <b>Table I<br/>Cholesterol Lowering<br/>Medication</b>   | High cholesterol   |   | LFT's: baseline, 12 weeks after starting or dose increases, and periodically thereafter (semiannual) |   |
| Levaquin/<br>levofloxacin    | <b>Table I<br/>Antibiotics</b>   |  |   |  |   |
| Levsin/<br>Hyoscyamine       | <b>Table II<br/>ANTICHOLINERGIC</b>  | Not drug of choice in elderly  |   |  | Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, urinary retention, constipation, confusion |
| Lexapro/<br>Escitalopram     | <b>Table I<br/>Antidepressant<br/>Medication</b><br><br><b>Approved for children<br/>with major depressive<br/>disorder 12 and older</b> | Antidepressant   | 10 mg/day   | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>  | Hyponatremia, serotonin syndrome, withdrawal syndrome   |
| Librax/<br>Clidinium         | <b>Table II<br/>ANTICHOLINERGIC</b>  | Not drug of choice in elderly  |   |  | Dry mouth, blurred vision, urinary retention, constipation, confusion   |
| Librium/<br>Chlordiazepoxide | <b>Table II<br/>ANTICHOLINERGIC</b>  | Gen. anxiety, OMS, panic, alcohol withdrawal<br><b>Avoid use in COPD</b> | <b>Attempt short acting first.</b><br><br>➤ <b>20 mg/day</b>  | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>  | Unexplained change in cognitive or ADL function or behavior, confusion, weakness, dizziness, fainting, trouble walking, increased risks of falls/                           |

| <b>DRUG<br/>Brand/Generic</b>                    | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>  | <b>DOSING</b>   | <b>MONITORING</b>  | <b>SIDE EFFECTS/ADR</b>  |
|--|---|---|---|--|--|
|  |   |   |   |  | fractures, drowsiness, slurred speech, difficulty swallowing. breathing problems   |
| Limbitrol/<br>Chlordiazepoxide<br>-amitriptyline | <b>Table II<br/>ANTICHOLINERGIC</b>   |   |   |  |  |
| Lipitor /<br>Atorvastatin                        | <b>Table I<br/>Cholesterol Lowering<br/>Medication</b>                                      | High cholesterol  |   | LFT's: baseline, 12 weeks after starting or dose increases, and periodically thereafter (semiannual)   |  |
| Lithium  | <b>Table I<br/>Antimanic Medication</b><br><br><b>Approved in children 12<br/>and older</b> | Bipolar, manic psychosis,<br>cancer and AIDS              | Up to 1800 mg,<br>one form of tablet<br>is time release, do<br>not crush. | Li level q 3 mo. (0.5-1.5) (Crea.<br>CBC UA EE FBS q 1 yr.)  | Tremor, nausea, lethargy, muscle<br>weakness, slurred speech   |
| Lodine/<br>Etodolac                              | <b>Table I<br/>Analgesic</b>  | Pain, Anti-inflammatory,<br>arthritis                     | 1200mg  | GI Bleed and BP  | GI distress, stool for blood, flank<br>pain, increased BP  |
| Lopid/<br>Gemfibrozil                            | <b>Table I<br/>Cholesterol Lowering<br/>Medication</b>                                      | Hyperlipidemia  | 1200 mg   | Serum triglyceride concentrations<br>Serum cholesterol conc.<br>(prior to initiation and periodically) | Anemia, stomach pain, gas or<br>heartburn, sedation  |
| Lopressor/<br>Metoprolol                         | <b>Table I<br/>Cardiovascular<br/>Medication</b>  | Angina, HTN, cardiac<br>arrhythmia's, tremor,<br>headache | Up to 200 mg.<br>One form time<br>release, do not<br>crush.               | Blood pressure weekly<br>Pulse weekly  | Sedation, depression, nightmares   |
| Lotensin /<br>Benazepril                         | <b>Table I<br/>Cardiovascular<br/>Medication</b>  | Antihypertensive  |   | Blood pressure, K levels   |  |
| Loxitane/<br>Loxapine                            | <b>Table I<br/>Antipsychotic<br/>Medication</b>   | Antipsychotic   | 10 mg   | ❖ <b>Antipsychotic Protocol</b>  | Abnormal movements, restlessness,<br>mask like face, drooling, EPS, tremor,<br>lethargy, falls, cognitive or ADL<br>changes, sedation  |
| Ludiomil/<br>Maprotiline                         |   | Depression  | Up to 150mg.  | None   | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, cardiac<br>Arrhythmia's, constipation, confusion |
| Lunesta /<br>Eszopiclone                         | <b>Table I<br/>Sedative Hypnotic</b>  |   |   | ❖ <b>Sedative Hypnotic Protocol</b>  |  |
| Luvox/<br>Fluvoxamine                            | <b>Table I<br/>Antidepressant</b>   | Obsessive compulsive<br>disorder, depression              | Under 65 to 300<br>mg., over 65 to<br>150 mg.                             | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>  | Drowsiness, nausea, weakness,<br>insomnia, GI discomfort   |

| <b>DRUG<br/>Brand/Generic</b>    | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>          | <b>DOSING</b>                                       | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>   |
|----------------------------------|---|---------------------------|---|---|---|
|                                  | <b>Approved for children with OCD 8 and older</b>                           |                           |   | behaviors   |   |
| Macrochantin/<br>Nitrofurantoin  |   | UTI                       | Up to 400 mg.<br>With food<br>Liquid -SHAKE<br>WELL | Culture and sensitivity<br>UA, BUN or Creatinine  | Breathing problems  |
| Marinol /<br>dronabinol          | <b>Table I<br/>Orexigenics (appetite<br/>stimulants)</b>                    | Appetite stimulant        |   | Appetite and weight. Discontinue if<br>not effective.   |   |
| Marplan/<br>Isocarboxazid        | <b>Table I<br/>Antidepressant</b>   |                           |   | <b>❖ Other Psychopharmacologic<br/>Protocol</b>   | MAOI  |
| Maxair Autohaler<br>/ pirbuterol | <b>Table I<br/>Respiratory Medications</b>                                  |                           |   |   |   |
| Meclizine                        | <b>Table II<br/>ANTICHOLINERGIC</b>   | Antihistamine H-1 blocker |   |   |   |
| Meclofenamate                    | <b>Table I F329<br/>Analgesic Medication</b>                                |                           |   | Bleeding especially if >325mg/day<br>ASA used with another NSAID, or<br>NSAIDs are used with an antiplatelet<br>or anticoagulant. |   |
| Megesterol<br>acetate            | <b>Table I<br/>Orexigenics (appetite<br/>stimulants)</b>                    | Appetite stimulant        |   | Weight and appetite. Discontinue if<br>not effective.   |   |
| Mellaril/<br>Thioridazine        | <b>Table I<br/>Antipsychotic</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> | Antipsychotic             | 2 mg  | <b>❖ Antipsychotic Protocol</b>   | Abnormal movements, lethargy,<br>drooling, cognitive or ADL change,<br>tremor, mask like face, sedation |
| Metadate/methylp<br>henidate     | <b>Age 6 and older</b>  | ADHD                      |   |   |   |
| Methadone                        | <b>Table I F329<br/>Analgesic Medication</b>                                |                           |   | Variable half life so toxicity may<br>happen later even when there is<br>thought to be a stable dose                              |   |
| Methocarbamol                    | <b>Table I<br/>Muscle Relaxant</b>  |                           |   |   |   |
| Methylin/methylp<br>henidate     | <b>Age 6 and older</b>  | ADHD                      |   |   |   |
| methylprednisolo<br>ne           | <b>Table I<br/>Glucocorticoid</b>   |                           |   |   |   |
| Miltown/<br>                     | <b>Table I</b>  | Not drug of choice in     |   | <b>Sedative Hypnotic Protocol</b>   | Drowsiness, difficulty walking,   |

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Updated June 1, 2011

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| <b>DRUG<br/>Brand/Generic</b> | <b>SPECIAL NOTES</b>                      | <b>DIAGNOSIS</b>  | <b>DOSING</b>   | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>   |
|-------------------------------|---|---|---|---|---|
| Meprobamate                   | <b>Sedative Hypnotic</b>                  | elderly-very addictive  |   | <b>Do not withdraw rapidly...must use gradual dose reduction.</b>   | highly addictive and sedating.  |
| Minipress / Prazosin          | <b>Table I Cardiovascular Medication</b>  | Antihypertensive, BPH<br>Generally avoided in older individuals due to CNS side effects |   | Titrate slowly to prevent hypotension and syncope and administer qhs  | Hypotension, weakness, light-headedness, dizziness, diarrhea, palpitations, tachycardia   |
| Mirapex/<br>Pramipexole       | <b>Table I Antiparkinson's Medication</b> | Parkinson's   | Start at 0.125mg adjusted for renal function  | Blood pressure, mental status   | Drowsiness, hypotension, nausea   |
| Moban/<br>Molindone           | <b>Table I Antipsychotic Medication</b>   | Antipsychotic   | 10 mg   | ❖ <b>Antipsychotic Protocol</b>   | Abnormal movements, EPS, restlessness, drooling, tremor, mask like face, cognitive or ADL changes, sedation, Falls  |
| Monopril / Fosinopril         | <b>Table I Cardiovascular Medication</b>  | Antihypertensive  |   | Blood pressure, K levels  |   |
| Morphine                      | <b>Table I F329 Analgesic Medication</b>  | Pain  | No upper limit; titrate to pain relief. Some tablet forms are time release, do not crush. May give these rectally, watch for expulsion. | Breathing and mental status   | Respiration's below 12 a minute, major drop in cognitive status, constipation<br>Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, confusion |
| Namenda/<br>Memantine         | <b>Table I Cognitive Enhancers</b>        | Moderate to Severe Alzheimer's  | 20 mg/day   |   | anorexia, frequent urination, dizziness, and syncope  |
| Naprosyn/<br>Naproxen         | <b>Table I F329 Analgesic Medication</b>  | Arthritis, pain, inflammation   | Up to 1375 mg. One form controlled release-Do not crush. Liquid -SHAKE WELL   | Blood pressure monthly<br>Bleeding especially if >325mg/day<br>ASA used with another NSAID, or NSAIDs are used with an antiplatelet or anticoagulant. | GI distress, flank pain, increase BP, cognitive change  |
| Nardil/<br>Phenelzine         | <b>Table I Antidepressant Medication</b>  | Depression  |   | ❖ <b>Other Psychopharmacologic Protocol</b><br>Diet and supplements   | High Blood Pressure   |

| <b>DRUG<br/>Brand/Generic</b> | <b>SPECIAL NOTES</b>   | <b>DIAGNOSIS</b>  | <b>DOSING</b>  | <b>MONITORING</b>  | <b>SIDE EFFECTS/ADR</b>   |
|-------------------------------|--|---|--|--|---|
| Navane/<br>Thiothixene        | <b>Table I<br/>Antipsychotic<br/>Medication</b>                              | Antipsychotic   | 2 mg   | ❖ <b>Antipsychotic Protocol</b>  | Abnormal movements, EPS, restlessness, drooling, tremor, mask like face, cognitive or ADL changes, falls, sedation  |
| Nembutal/<br>Pentobarbital    | <b>Table I<br/>Sedative Hypnotic</b>   | Not drug of choice in elderly for sleep<br><b>Avoid use in COPD</b> |  | ❖ <b>Sedative Hypnotic Protocol</b><br><br><b>Do not withdraw rapidly...must use gradual dose reduction.</b>                             | Drowsiness, lethargy, dizziness, headache, mental depression, nausea, vomiting, diarrhea, constipation  |
| Neurontin/<br>Gabapentin      | <b>Table I<br/>Anticonvulsant<br/>Medication</b>                             | Seizures, pain, behavior  | Seizures- to 1800mg<br>Pain - to 2400 to 3600mg<br>Behaviors - 2400mg  | ❖ <b>Other Psychopharmacologic Protocol</b><br>No blood levels monitor for effect.<br>Kidney function- reduce dose if Cr.Cl is under 60. | ↓ muscle coordination, fatigue, dizzy,  |
| Nexium /<br>Esomeprazole      | <b>Table I<br/>Gastrointestinal<br/>Medication</b>                           | PPI   |  |  |   |
| Nitrodur/<br>Nitroglycerin    | <b>Table I<br/>Cardiovascular<br/>Medication</b>                             | Angina, CHF   | 0.4 5-6X under the tongue only;<br>oral 13 mg; Patch up to 15 mg;<br>ointment 2 inches<br>Patch Rotate Sites | Tolerance can develop to this med.<br>Watch for effect   | Poor control, headache, dizziness, blurred vision   |
| Noludar/<br>Methylprylon      | <b>Table I<br/>Sedative Hypnotic</b>   |   |  | <b>Sedative Hypnotic Protocol</b>  |   |
| Nolvadex/<br>Tamoxifen        |  | Cancer  | Up to 40 mg  | None   | Weakness, GI distress, vision or cognitive change   |
| Norpace/<br>Disopyramide      | <b>Table II<br/>ANTICHOLINERGIC</b>  | Not drug of choice in elderly,<br>May cause CHF                     |  |  | Decreases contraction of the heart, water retention/swelling, wt. gain, chest pain, difficulty breathing, fainting, low blood pressure, dry mouth, blurred vision, urinary retention, constipation, confusion |
| Norpramin/<br>Desipramine     | <b>Table I<br/>Antidepressant</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> | Depression, pain  | 150 mg this is second line drug  | ❖ <b>Other Psychopharmacologic Protocol</b><br>Blood pressure and pulse once a week, behaviors   | Seizures, fecal impact, tachycardia, Orth. Hypo., sedation, urinary retention, incontinence, reflux, pyelonephritis, nephritis, low-grade temp, low back pain.  |
| Norvasc /                     | <b>Table I</b>   |   |  |  |   |

| <b>DRUG<br/>Brand/Generic</b> | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>                   | <b>DOSING</b>   | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>   |
|-------------------------------|---|------------------------------------|---|---|---|
| Amlodipine                    | <b>Cardiovascular Medication</b>  |                                    |   |   |   |
| Orap/pimozide                 | <b>Approved for children with tourettes age 12 and older</b>                            |                                    |   |   |   |
| Orphenadrine                  | <b>Table II<br/>ANTICHOLINERGIC</b>   |                                    |   |   |   |
| Orudis/<br>Ketoprofen         | <b>Table I<br/>Analgesic</b>  | Pain, Anti-inflammatory, arthritis | Up to 300mg   | GI Bleed and BP   | GI distress, stool for blood, flank pain, increased BP  |
| Oxandrin /<br>oxandrolone     | <b>Table I<br/>Orexigenics (appetite stimulants)</b>                                    | Appetite stimulant                 |   | Weight and appetite. Discontinue if not effective.                        |   |
| Oxycontin/Oxyco done          | <b>Table I F329<br/>Analgesic Medication</b>  | Pain                               | No upper limit; titrate to pain relief. Some tablet forms are time release, do not crush. May give these rectally, watch for expulsion. | Breathing and mental status   | Respiration's below 12 a minute, major drop in cognitive status, constipation<br>Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, confusion |
| Pamelor/<br>Nortriptyline     | <b>Table I<br/>Antidepressant Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> | Depression, pain                   | Up to 100 mg  | ❖ <b>Other Psychopharmacologic Protocol</b><br>Behaviors, BP the 1st week | Seizures, Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, urinary retention, constipation, confusion, card. Arrhythmia's.                  |
| Paraflex/<br>Chlorzoxazone    | <b>Table I<br/>Muscle Relaxant</b>  | Not drug of choice in elderly.     |   |   | Sedation, weakness, dry mouth, blurred vision, urinary retention, constipation, confusion, delirium, hallucinations   |
| Parlodel/<br>Bromocriptine    | <b>Table I<br/>Parkinson's Medication</b>   | Parkinson's                        | Up to 10 mg   | Blood pressure  | Low BP tremors, behavior changes  |
| Parnate/<br>Tranlycypromine   | <b>Table I<br/>Antidepressant</b>   | Depression                         |   | ❖ <b>Other Psychopharmacologic Protocol</b><br>Diet and supplements       | High blood pressure   |
| Paxil/<br>Paroxetine          | <b>Table I<br/>Antidepressant</b><br><br><b>Table II</b>                                | Depression                         | Up to 40 mg<br><br>New long acting form..do not   | ❖ <b>Other Psychopharmacologic Protocol</b><br>Monitor behaviors          | Weight loss, nausea, diarrhea, fatigue<br><br>Drug interactions high for elderly population   |

| DRUG<br>Brand/Generic        | SPECIAL NOTES   | DIAGNOSIS   | DOSING  | MONITORING  | SIDE EFFECTS/ADR  |
|------------------------------|---|---|---|---|---|
|                              | <b>ANTICHOLINERGIC</b>  |   | crush   |   |   |
| Paxipam/<br>Halazepam        | <b>Table I<br/>Sedative Hypnotic</b>  | Gen. anxiety, OMS, panic,<br>sleep                                  | <b>Attempt short<br/>acting first;</b><br><br>➤ 40 mg | ❖ <b>Sedative Hypnotic Protocol</b>   | Unexplained change in cognitive or<br>ADL function or behavior, confusion.<br>Falls, Sedation, Slurred speech,<br>difficulty swallowing. Breathing<br>problems                          |
| PBZ/<br>Tripelemamine        |   | Antihistamine –Not drug<br>of choice in elderly                     |   |   | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion |
| Pepcid /<br>famotidine       | <b>Table I<br/>Gastrointestinal<br/>Medication</b>  | H-2 antagonist  |   |   |   |
| Periactin/<br>Cyproheptadine | <b>Table I<br/>Cough, Cold and Allergy<br/>Medications</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> | Not drug of choice in<br>elderly                                    |   |   | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion |
| Persantine/<br>Dipyridamole  |   | Not drug of choice in<br>elderly unless artificial<br>heart valves. | Up to 400mg a<br>day                                  | Blood clotting  | Orthostatic hypotension   |
| Phenergan/<br>promethazine   | <b>Table II<br/>ANTICHOLINERGIC</b>   | Nausea -Not drug of<br>choice in elderly                            |   |   | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion |
| Phenobarbital                | <b>Table I<br/>Anticonvulsant<br/>Medication</b>  | Seizure disorders<br><b>Avoid use in COPD</b>                       | Up to 100 mg  | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>CBC, liver, every 12 mos. drug level<br>within 2 weeks of dose change,<br>seizure, ADR, med that can affect<br>level (15-40) | Respiratory depression, lethargy, ↓<br>cognitive and ADL functioning,<br>aggressive and psych behaviors,<br>hyperactivity, SIB.   |
| Piroxicam/<br>Fenoprofen     | <b>Table I<br/>Analgesic</b>  | Pain, Anti-inflammatory,<br>arthritis                               | Up to 3200mg  | GI Bleed and BP   | GI distress, stool for blood, flank<br>pain, increased BP   |
| Placidyl/<br>Ethylchlorvynol | <b>Table I<br/>Sedative Hypnotic</b>  |   | 1 x doses for<br>procedures may                       | <b>Sedative Hypnotic Protocol</b>   |   |

| DRUG<br>Brand/Generic              | SPECIAL NOTES                                      | DIAGNOSIS  | DOSING  | MONITORING   | SIDE EFFECTS/ADR   |
|------------------------------------|--|--|---|--|--|
|                                    |  |  | be ok.  | <b>Do not withdraw rapidly...must use gradual dose reduction.</b>                                    |  |
| Plavix/<br>Clopidogrel             | <b>Table I<br/>Platelet Inhibitor</b>              | Blood thinner (like aspirin)   | 75 mg/day   | Side effects   | Bleeding & bruising, neutropenia   |
| Polaramine/<br>Dexchlorpheniramine |  | Not drug of choice in elderly<br><b>Avoid use in BPH<br/>Use with caution in residents with Constipation</b>                       |   |  | Dry mouth, blurred vision, urinary retention, constipation, confusion                          |
| Potassium                          |  | Hypokalemia, Diuretic use  | Up to 100 meq. Must dilute most forms or give in 4 ounces of juice. Do not crush solid forms. | Drug level (3.5-5) within 1 mo. of change or dose or diuretic.                                       | Nausea, dyspepsia, vomiting, abdominal pain, heartburn, epigastric pain, diarrhea, flatulence. |
| Prandin /<br>Repaglinide           | <b>Table I<br/>Antidiabetic Medication</b>         |  |   | Blood glucose levels   |  |
| Pravachol /<br>Pravastatin         | <b>Table I<br/>Cholesterol Lowering Medication</b> | High cholesterol   |   | LFT's: baseline, 12 weeks after starting or dose increases, and periodically thereafter (semiannual) |  |
| Precose/ acarbose                  | <b>Table I<br/>Antidiabetic Medication</b>         |  |   | Blood glucose levels   |  |
| Prednisolone                       |  | Inflammatory disease (COPD, arthritis, skin allergies)<br>Avoid use in resident with active or recurrent gastritis, ulcer or GERD. | Up to 40 mg   | Wt. gain, BP monthly   | Behavior changes, edema, infections, worsen diabetic control                                   |
| Prednisone                         | <b>Table I<br/>Glucocorticoids</b>                 | Inflammatory disease (COPD, arthritis, skin allergies)<br>Avoid use in resident with active or recurrent gastritis, ulcer or GERD. | Up to 40 mg   | Wt. gain, BP monthly   | Behavior changes, edema, infections, worsen diabetic control                                   |
| Prevacid/<br>Lanoprazole           | <b>Table I<br/>Gastrointestinal</b>                | Gastroparesis, ulcer, GERD   | 15-30mg Do not chew or crush  | None   | Diarrhea, Nausea, abdominal pain, bloating.  |

| DRUG<br>Brand/Generic                                      | SPECIAL NOTES   | DIAGNOSIS  | DOSING  | MONITORING   | SIDE EFFECTS/ADR   |
|--|---|--|---|--|--|
|  | <b>Medication</b>   |  | contents of capsule   |  |  |
| Prilosec/<br>Omeprazole                                    | <b>Table I<br/>Gastrointestinal<br/>Medication</b>  | Gastric reflux,<br>hypersecretory conditions                           | Up to 60 mg.<br>Swallow whole<br>before meals.<br>Don't crush or<br>chew. | Therapeutic doses beyond 90 days.  | Headache, diarrhea   |
| Primidone  | <b>Table I<br/>Anticonvulant<br/>Medication</b>   |  |   | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>Periodic serum medication<br>concentrations; therapeutic range 5-<br>12 mcg/mL; CBC and sequential<br>multiple analysis-12 test every 6<br>months |  |
| Probanthine/<br>Propantheline                              |   | Not drug of choice in<br>elderly<br><b>Avoid use in BPH</b>            |   |  | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion            |
| Procardia XL,<br>Adalat CC /<br>Nifedipine long-<br>acting | <b>Table I<br/>Cardiovascular<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> |  |   |  |  |
| Procrit /<br>erythropoetin                                 | <b>Table I<br/>Hemantics</b>  |  |   | Blood pressure, baseline serum Fe,<br>ferritin, frequent CBC   |  |
| Prolixin/<br>Fluphenazine                                  | <b>Table I<br/>Antipsychotic<br/>Medications</b>  | Antipsychotic  | 4 mg  | ❖ <b>Antipsychotic Protocol</b>  | Abnormal movements, restlessness,<br>tremor, mask like face, drooling,<br>cognitive and ADL changes, orth.<br>hypotension, sedation  |
| Promethazine   | <b>Table I<br/>Cough, Cold and Allergy<br/>Medications</b>                                  |  |   |  |  |
| Propantheline  | <b>Table II<br/>ANTICHOLINERGIC</b>   |  |   |  |  |
| Propoxyphene   | <b>Table I<br/>Analgesic Medication</b>   | Pain<br><b>Use with caution in<br/>residents with<br/>Constipation</b> | Plain up to 260<br>mg; nap. up to<br>400 mg                               | None   | Behavior changes, lethargy, seizures,<br>constipation, cognitive loss (impaired<br>memory, decision making, and ability<br>to speak, understand, recognize what<br>is seen, and coordinate learned |

| DRUG<br>Brand/Generic                 | SPECIAL NOTES  | DIAGNOSIS  | DOSING                                       | MONITORING  | SIDE EFFECTS/ADR   |
|---------------------------------------|--|--|--|---|--|
|                                       |  |  |  |   | movements)<br>Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, confusion |
| Prosom/<br>Estazolam                  | <b>Table I<br/>Sedative Hypnotic</b>   | Insomnia<br><br>*general anxiety disorder<br>*panic disorder *OMS<br>*symptomatic anxiety<br>with another psych<br>diagnosis | 0.5 mg                                       | ❖ <b>Other Psychopharmacologic Protocol</b><br>❖ <b>Sedative Hypnotic Protocol</b>    | Unexplained change in cognitive or ADL function or behavior, confusion. Falls, Sedation, Slurred speech, difficulty swallowing. Breathing problems       |
| Protonix /<br>rabeprazole             | <b>Table I<br/>Gastrointestinal Medication</b>   | PPI  |  |   |  |
| Proventil<br>(Ventolin)/<br>Albuterol | <b>Table I<br/>Respiratory Medication</b>  | COPD, Asthma,<br>Bronchitis, Emphysema,  | 2 inhalations<br>every 4 hours to 6<br>hours | Typically an as needed medication. Extensive use may be a sign of uncontrolled asthma | Restlessness, tremor, high blood pressure  |
| Prozac/<br>Fluoxetine                 | <b>Table I<br/>Antidepressant Medication</b><br><br><b>Approved for children 8 and older</b> | Depression, weight loss,<br>obsessive compulsive<br>disorder   | Up to 20 mg                                  | ❖ <b>Other Psychopharmacologic Protocol</b><br>Behaviors                              | Rash, change in mental functioning, seizures   |
| Pulmicort /<br>Budesonide             | <b>Table I<br/>Respiratory Medication</b>  |  |  |   |  |
| Questran /<br>Cholestyramine          | <b>Table I<br/>Cholesterol Lowering Medication</b>   | High cholesterol   |  |   |  |
| QVAR /<br>Beclomethasone              | <b>Table I<br/>Glucocorticoids</b>   |  |  |   |  |
| Razadyne<br>(Reminyl)/<br>Galantamine | <b>Table I<br/>Cognitive Enhancers</b>   | Alzheimer's  | Up to 12mg twice<br>per day                  | For effect with standardized scale or functional assessment. Cholinergic effect.      | Nausea, diarrhea, insomnia, fatigue, muscle cramps.  |
| Reglan/<br>Metoclopramide             | <b>Table I<br/>Gastrointestinal Medication</b>   | GI distress, Gastroparesis,<br>reflux, nausea, vomiting<br>-   | Up to 40 mg                                  | Tardive Dyskinesia  | Constipation, abnormal movements, tremor, leg motion, depression   |
| Relafen/<br>Nabumetone                | <b>Table I<br/>Analgesic Medication</b>  | Pain, Anti-inflammatory,<br>arthritis  | Up to 2000mg.                                | GI Bleed and BP   | GI distress, stool for blood, flank pain, increased BP   |

| <b>DRUG<br/>Brand/Generic</b> | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>   | <b>DOSING</b>                                    | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>  |
|-------------------------------|---|--|--|---|--|
| Remeron/<br>Mirtazapine       | <b>Table I<br/>Antidepressant<br/>Medication</b>  | Depression/Sleep   | 7.5 mg/day-15<br>mg/day                          | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>Depression, weightloss, sleep      | Anticholinergic, Highly sedating   |
| Requip/<br>Ropinirole         | <b>Table I<br/>Antiparkinson's<br/>Medication</b>   | Parkinson's  | Start at 0.25 mg<br>adjust for renal<br>function | Clinical effect   | Hallucination, hypotension, CNS<br>depression  |
| Restoril/<br>Temazepam        | <b>Table I<br/>Sedative Hypnotic</b>  | Sleep  | 7.5 mg   | ❖ <b>Sedative Hypnotic Protocol</b>   | Unexplained change in cognitive or<br>ADL function or behavior, confusion.<br>Falls, Sedation, Slurred speech,<br>difficulty swallowing. Breathing<br>problems |
| Risperdal/<br>Risperidone     | <b>Table I<br/>Antipsychotic<br/>Medication</b><br><br><b>Approved for children 13<br/>and older for<br/>schizophrenia, 10 and<br/>older for bipolar and 5<br/>and older for autism<br/>behaviors</b> | Antipsychotic  | 2 mg   | ❖ <b>Antipsychotic Protocol</b>   | Abnormal movements, EPS,<br>insomnia, leg movements, agitation   |
| Ritalin/<br>Methylphenidate   | <b>Approved in children 6<br/>and older</b>   | Depression, narcolepsy,<br>ADHD  |  |   |  |
| Robaxin/<br>Methocarbamol     | <b>Table I<br/>Muscle Relaxant</b>  | Muscle Relaxant - Not<br>drug of choice in elderly                     |  |   | Sedation, weakness, dry mouth,<br>blurred vision, urinary retention,<br>constipation, confusion, delirium,<br>hallucinations                                   |
| Rozerem /<br>Ramelteon        | <b>Table I<br/>Sedative Hypnotic</b>  |  |  | <b>Sedative Hypnotic Protocol</b>   |  |
| Salsalate                     |   | Pain   | Up to 2000 mg                                    | Hematocrit (periodically during<br>prolonged high dose therapy)                       | GI upset   |
| Sanctura /<br>Trospium        | <b>Table I<br/>Urinary Incontinence<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b>   | Urge incontinence  |  | Effects of medication on urinary<br>incontinence and lower urinary tract<br>symptoms. |  |
| Seconal/<br>Secobarbital      | <b>Table I<br/>Sedative Hypnotic</b>  | Not drug of choice in<br>elderly for sleep<br><b>Avoid use in COPD</b> |  | <b>Sedative Hypnotic Protocol</b><br><br><b>Do not withdraw rapidly...must</b>        | Drowsiness, lethargy, dizziness,<br>headache, mental depression, nausea,<br>vomiting, diarrhea, constipation   |

| DRUG<br>Brand/Generic              | SPECIAL NOTES  | DIAGNOSIS  | DOSING   | MONITORING   | SIDE EFFECTS/ADR   |
|------------------------------------|--|--|--|--|--|
|                                    |  |  |  | use gradual dose reduction.  |  |
| Serax/<br>Oxazepam                 | <b>Table I<br/>Anxiolytic</b>  | *general anxiety disorder<br>*panic disorder *OMS<br>*symptomatic anxiety<br>with another psych<br>diagnosis | 15 mg insomnia<br>30 mg for other                                  | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>❖ <b>Sedative Hypnotic Protocol</b> | Unexplained change in cognitive or<br>ADL function or behavior, confusion.<br>Falls, Sedation, Slurred speech,<br>difficulty swallowing. Breathing<br>problems   |
| Serentil/<br>Mesoridazine          | <b>Table I<br/>Antipsychotic<br/>Medication</b>  | Antipsychotic  | 25 mg  | ❖ <b>Antipsychotic Protocol</b>  | Abnormal movements, lethargy, falls,<br>tremor, EPS, mask like face, urinary<br>retention, constipation, drooling,<br>cognitive or ADL changes, sedation   |
| Serevent /<br>Salmeterol           | <b>Table I<br/>Respiratory Medication</b>  |  |  |  |  |
| Seroquel/<br>Quetiapine            | <b>Table I<br/>Antipsychotic</b>   | Antipsychotic  | 200 mg<br>Dosages may go<br>higher than this                       | ❖ <b>Antipsychotic Protocol</b>  | Changes in cognitive or ADL<br>behavior, abnormal movements,<br>lethargy, Falls.   |
| Serpasil/<br>Reserpine             |  | Not drug of choice in<br>elderly   |  |  | Depression, impotence, sedation,<br>orthostatic hypotension  |
| Serzone/<br>Nefazodone             | <b>Table I<br/>Antidepressant</b>  | Depression   | Under 65 to 600<br>mg., over 65 to<br>300 mg.                      | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>Behaviors                           | Lethargy, dry mouth, constipation,<br>nausea, dizziness, insomnia, weakness<br>Hepatotoxicity caution in elderly   |
| Sinemet/<br>Carbidopa/levodo<br>pa | <b>Table I<br/>Antiparkinson's</b>   | Parkinson's  | Up to 200/2000<br>mg .One extended<br>release form-Do<br>not crush | Tremor   | Behavior changes, low BP Watch for<br>high protein meals and Vit.B6 as can<br>cause decrease effect.   |
| Sinequan/<br>Doxepin               | <b>Table I<br/>Antidepressant</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b><br><br>Approved for children<br>ager 12 and older | Depression, anxiety, ulcer<br>Not drug of choice in<br>elderly   | Under 65 up to<br>300 mg<br>Over 65 up to 150<br>mg                | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>Behaviors                           | Changes in cognitive ADL function,<br>taste, fecal impact, increased heart<br>rate, sedation, dry mouth, blurred<br>vision, urinary retention, constipation,<br>confusion, delirium, or hallucinations |
| Skelaxin/<br>Metaxalone            | <b>Table I<br/>Muscle Relaxant</b>   | Muscle relaxant – Not<br>drug of choice in elderly   |  |  | Sedation, weakness, dry mouth,<br>blurred vision, urinary retention,<br>constipation, confusion, delirium,<br>hallucinations   |
| Solumedrol/                        | <b>Table I</b>   | Inflammatory disease   | Up to 40 mg  | Wt. gain, BP monthly   | Behavior changes, edema, infections,   |

| <b>DRUG<br/>Brand/Generic</b>                        | <b>SPECIAL NOTES</b>   | <b>DIAGNOSIS</b>  | <b>DOSING</b> | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>   |
|--|--|---|---------------|---|---|
| Methyl prednisone                                    | <b>Glucocorticoid</b>  | (COPD, arthritis, skin allergies)<br>Avoid use in resident with active or recurrent gastritis, ulcer or GERD. |               |   | worsen diabetic control   |
| Soma/<br>Carisoprodol                                | <b>Table I<br/>Muscle Relaxant</b><br><br><b>ANTICHOLINERGIC</b> | Muscle relaxant – Not drug of choice in elderly.  |               | See side effects  | Sedation, weakness, dry mouth, blurred vision, urinary retention, constipation, confusion, delirium, hallucinations |
| Sonata / Zaleplon                                    | <b>Table I<br/>Sedative Hypnotic</b>                             |   |               | <b>Sedative Hypnotic Protocol</b>   |   |
| Sparine/<br>Promazine                                | <b>Table I<br/>Antipsychotic</b>                                 | Antipsychotic   | 150 mg        | ❖ <b>Antipsychotic Protocol</b>   | Abnormal movements, EPS, restlessness, mask like face, tremor, drooling, cognitive or ADL changes, falls, sedation  |
| Spiriva /<br>Tiotropium                              | <b>Table I<br/>Respiratory Medication</b>                        |   |               |   |   |
| Spironolactone<br>(HCTZ)                             | <b>Table I<br/>Cardiovascular<br/>Medication</b>                 | HTN, edema  | Up to 100 mg. | BP weekly, Potassium within 1 mo. of dose change  | GI distress, breast tenderness, depression  |
| Sporanox /<br>Itraconazole                           | <b>Table I<br/>Antifungal Medication</b>                         |   |               | When given with warfain, phenytoin, theophylline, or sulfonyleureas   |   |
| Stalevo /<br>carbidopa /<br>levodopa /<br>entacapone | <b>Table I<br/>Antiparkinson's<br/>Medication</b>                | Anti-parkinson  |               | Time in "on" and "off" states and parkinsonian symptoms; CBC, Chem 7, uric acid, heartrate, blood pressure, ECG |   |
| Stelazine/<br>Trifluoperazine                        | <b>Table I<br/>Antipsychotic<br/>Medication</b>                  | Antipsychotic   | 8 mg          | ❖ <b>Antipsychotic Protocol</b>   | Abnormal movements, EPS, restlessness, drooling, tremor, mask like face, cognitive or ADL changes, falls, sedation  |
| Strattera/atomoxe<br>tine                            | <b>Approved in children 6<br/>and older</b>                      | ADHD  |               |   |   |
| Sudafed/<br>Psuedoephedrine                          | <b>Table I<br/>Cough, cold and Allergy<br/>Medication</b>        | Decongestant  |               |   |   |
| Sular /<br>Nisoldipine                               | <b>Table I<br/>Cardiovascular<br/>Medication</b>                 |   |               |   |   |
| Symbyax/   | <b>Table I</b>   | Antipsychotic and   |               |   | See Fluoxetine and Olanzapine   |

| <b>DRUG<br/>Brand/Generic</b> | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>   | <b>DOSING</b>  | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>   |
|-------------------------------|---|--|--|---|---|
| (fluoxetine/olanzapine)       | Antipsychotic Medication  | Antidepressant   |  |   |   |
| Symmetrel / Amantadine        | <b>Table II<br/>ANTICHOLINERGIC</b>   |  |  |   |   |
| Synthroid/<br>Levothyroxine   | <b>Table I<br/>Thyroid Medication</b>   | Hypothyroidism, cancer   | Up to 1 mg   | T3 or T4 or TSH or FTI after dose change  | Wt. loss, rapid pulse, insomnia, tremor, nervousness  |
| Tagamet/<br>Cimetidine        | <b>Table I<br/>Gastrointestinal Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> | Ulcer, hypersecretory disease, Gas.Eso.Reflux Disease(GERD)    | Up to 1600 mg  | Length of active treatment beyond 90 days. Check dx   | Behavior changes or cognitive changes   |
| Talwin/<br>Pentazocine        |   | Not drug of choice in elderly                                  |  |   | Confusion, hallucinations, dizziness, lightheadedness, euphoria, sedation   |
| Taractan/<br>Chlorprothixene  | <b>Table I<br/>Antipsychotic Medication</b>   | <b>Antipsychotic</b>   | OMS to 75 mg.  | ❖ <b>Antipsychotic Protocol</b>   | Abnormal movements, EPS, restlessness, mask like face, drooling, orth. Hypotension, sedation, cognitive and ADL changes |
| Tegretol/<br>Carbamazepine    | <b>Table I<br/>Anticonvulsant Medication</b><br><br><b>Approved for children any age</b>  | Seizures, pain, affective behaviors                            | Up to 1600 mg.                                       | ❖ <b>Other Psychopharmacologic Protocol</b><br>CBC, liver, electrolyte every 12 mos.drug level within 2 weeks of dose change, seizure, ADR,   | Fever, sore throat, mouth ulcer, rash, bruising, sedation   |
| Tenormin/<br>Atenolol         | <b>Table I<br/>Cardiovascular Medication</b>  | HTN, Angina, cardiac arrhythmia, tremors, headache, behaviors  | Up to 100 mg   | Pulse and blood pressure weekly   | Low BP, pulse or breathing problems   |
| Tevetan / Eprosartan          | <b>Table I<br/>Cardiovascular Medication</b>  | Hypertension   |  | Blood pressure, K levels  |   |
| Theophylline                  | <b>Table I<br/>Respiratory Medication</b>   | Asthma, COPD, emphysema<br><b>Can cause or worsen insomnia</b> | Up to 900 mg many time-released forms, do not crush. | Theophylline level 2 weeks after dose change (10-20). Monitor for symptoms of toxicity:arrhythmia, seizure, GI upset, diarrhea, nausea, vomiting, abdominal pain, nervousness, headache, insomnia, distress, dizziness, muscle cramps, tremor | Restlessness, agitation, behavior change  |
| Thioridazine                  | <b>Approved for children 2 and older</b>  | <b>Antipsychotic</b>   |  |   |   |

| <b>DRUG<br/>Brand/Generic</b>   | <b>SPECIAL NOTES</b>   | <b>DIAGNOSIS</b>  | <b>DOSING</b>        | <b>MONITORING</b>  | <b>SIDE EFFECTS/ADR</b>  |
|---------------------------------|--|---|----------------------|--|--|
| Thorazine/<br>Chlorpromazine    | <b>Table I<br/>Antipsychotic<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b>   | <b>Antipsychotic</b><br>Nausea, hiccoughs   | <b>OMS to 75 mg.</b> | Postural hypotension,<br>cognitive/behavior impairment,<br>akathisia, parkinsonism, tardive<br>dyskinesia. dose reduction unless<br><i>contraindicated</i> | Abnormal movements, EPS,<br>restlessness, mask like face, drooling,<br>orth. Hypotension, sedation, cognitive<br>and ADL changes   |
| Ticlid/<br>Ticlopidine          | <b>Table I<br/>Platelet Inhibitor</b>  | Not drug of choice in<br>elderly, FOR Aspirin<br>intolerant persons who<br>need antiplatelet therapy. |                      | CBC q 2weeks for 1 <sup>st</sup> 3 months  | Nausea, vomiting, diarrhea, GI pain,<br>rash, decreased neutrophils  |
| Tigan/<br>Trimethobenzami<br>de |  | Nausea – Not drug of<br>choice in elderly   |                      |  | EPS: tremors, postural unsteadiness,<br>lack of or slowness of movement,<br>cogwheel rigidity, expressionless<br>face, drooling, infrequent blinking,<br>shuffling gate, decreased arm swing,<br>and rigidity of muscles in the limbs,<br>neck, and trunk. |
| Tilade /<br>nedocromil          | <b>Table I<br/>Respiratory Medication</b>  |   |                      |  |  |
| Timoptic/<br>Timolol            |  | Glaucoma  | 1-2 drops 2 x day    | Pulse and BP weekly  | Low BP or pulse breathing problems   |
| Tindal/<br>Acetophenazine       | <b>Table I<br/>Antipsychotic<br/>Medication</b>  | Antipsychotic.  | <b>OMS 20 mg.</b>    | ❖ <b>Antipsychotic Protocol</b>  | Abnormal movements, restless legs,<br>tremor, drooling, mask like face   |
| Tobramycin                      | <b>Table I<br/>Antibiotic Medication</b>   |   |                      | Baseline and regular renal function<br>tests; serum medication<br>concentrations<br>(not necessary if given as a single<br>one time dose)                  |  |
| Tofranil/<br>Imipramine         | <b>Table I<br/>Antidepressant</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b><br><br><b>Approved for bedwetting<br/>in children 6 and older</b> | Depression, not drug of<br>choice in elderly.   | Up to 150mg a<br>day | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>None  | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain. Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion  |
| Tolazamide                      | <b>Table I<br/>Antidiabetic Medication</b>   |   |                      | Blood glucose levels   |  |
| Tolbutamide                     | <b>Table I<br/>Antidiabetic Medication</b>   |   |                      | Blood glucose levels   |  |

| <b>DRUG<br/>Brand/Generic</b>              | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>   | <b>DOSING</b>   | <b>MONITORING</b>   | <b>SIDE EFFECTS/ADR</b>  |
|--|---|--|---|---|--|
| Tolectin/<br>Tolmetin                      | <b>Table I<br/>Analgesic Medication</b>   | Pain, Anti-inflammatory,<br>arthritis                            | UP TO 2000MG.   | GI bleed and BP<br>Bleeding especially if >325mg/day<br>ASA used with another NSAID, or<br>NSAIDs are used with an antiplatelet<br>or anticoagulant.                              | GI distress, stool for blood, flank<br>pain, increased BP  |
| Toradol/<br>Ketorolac                      | <b>Table I F329<br/>Analgesic Medication<br/>5 days use maximum</b>                       | Pain   | 40 mg   | Renal function test<br>(Bun creatinine etc.)<br>Bleeding especially if >325mg/day<br>ASA used with another NSAID, or<br>NSAIDs are used with an antiplatelet<br>or anticoagulant. | GI upset, ulcer irritation, drowsiness,<br>dizziness   |
| Transderm<br>Scop/Scopolamin<br>e          | <b>Table II<br/>ANTICHOLINERGIC</b>   |  |   | ❖   |  |
| Tranxene/<br>Clorazepate                   | <b>Table I<br/>Anxiolytic</b>   | Gen. anxiety, OMS, panic,<br>seizure<br><b>Avoid use in COPD</b> | <b>Short acting<br/>first.</b><br><br>➤ 15 mg                       | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>   | Unexplained change in cognitive or<br>ADL function or behavior, confusion.<br>Falls, Sedation, Slurred speech,<br>difficulty swallowing. Breathing<br>problems                         |
| Trental/<br>Pentoxifyllin                  |   | Peripheral vascular<br>diseases (Claudication)                   | Up to 1200 mg.<br>Controlled<br>release-Do not<br>crush.            | See side effects.   | GI distress  |
| Triavil/<br>perphenazine-<br>amitriptyline | <b>Table I<br/>Antidepressant</b>   |  |   | ❖ <b>Other Psychopharmacologic<br/>Protocol</b>   |  |
| Trihexyphenidyl                            | <b>Table II<br/>ANTICHOLINERGIC</b>   | Parkinson's  | Up to 12 mg<br>Some forms are<br>extended release,<br>do not crush. | None  | Urinary retention, incontinence,<br>reflux, pyelonephritis, nephritis, low<br>grade temp and low back pain.Dry<br>mouth, blurred vision, urinary<br>retention, constipation, confusion |
| Trilafon/<br>Perphenazine                  | <b>Table I<br/>Antipsychotic</b>  | Antipsychotic  | 8mg   | ❖ <b>Antipsychotic Protocol</b>   | Abnormal movements, EPS,<br>restlessness, drooling, tremor, mask<br>like face, cognitive or ADL changes,<br>falls  |
| Trileptal/<br>Oxycarbazepine               | <b>Table I<br/>Anticonvulsant</b><br><br><b>Approved for children<br/>age 4 and older</b> | Seizures, panic disorder,<br>other mood disorders                | 300mg twice a<br>day  | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>CNS effects, renal function<br>adjustment  | CNS effects  |
| Tylenol/                                   | <b>Table I F329</b>   | Pain or fever  | Up to 4000mg  | When exceeding recommended  | Liver toxicity at higher doses or with   |

| <b>DRUG<br/>Brand/Generic</b> | <b>SPECIAL NOTES</b>  | <b>DIAGNOSIS</b>   | <b>DOSING</b>   | <b>MONITORING</b>  | <b>SIDE EFFECTS/ADR</b>   |
|-------------------------------|---|--|---|--|---|
| Acetaminophen                 | <b>Analgesic</b>  |  | max for adults  | maximum daily dose: periodic LFT's and documentation that benefits outweigh risks      | alcohol.  |
| Ultram/Tramadol               | <b>Table I<br/>Analgesic</b>  | Pain   | Up to 300 mg/day  | Pain, confusion, dizziness   | Confusion, dizziness  |
| Urecholine/<br>Bethenechol    | <b>Table I<br/>Urinary Incontinence<br/>Medication</b>  | Bladder relaxant for neurogenic bladder  | 10-50 mg 2-4 times per day                                  | See side effects   | Urinary retention, incontinence, hesitancy, reflux, hydronephrosis  |
| Urispas/<br>Flavoxate         |   | Bladder relaxant<br><b>Avoid use in BPH</b>  |   |  | Urinary retention, incontinence, hesitancy, reflux, hydronephrosis  |
| Uroxatrol /<br>Alfuzosin      | <b>Table I<br/>Cardiovascular<br/>Medication</b>  |  |   | Blood pressure, LFT's  |   |
| Valium/<br>Diazepam           | <b>Table I<br/>Anxiolytic</b><br><br><b>Muscle Relaxant</b>                                       | Generalized anxiety disorder, organic mental syndrome, panic disorder, anxiety, seizure, muscle spasms<br><b>Avoid use in COPD</b> | <b>Short acting<br/>tried first.</b><br><br>➤ <b>5 mg</b>   | ❖ <b>Other Psychopharmacologic Protocol</b><br><br>❖ <b>Sedative Hypnotic Protocol</b> | Unexplained change in cognitive or ADL function or behavior, confusion, weakness, dizziness, fainting, trouble walking, increased risks of falls/fractures, drowsiness, slurred speech, difficulty swallowing. breathing problems |
| Vasotec /<br>Enalapril        | <b>Table I<br/>Cardiovascular<br/>Medication</b>  | Antihypertensive   |   | Blood pressure, K levels, cough  |   |
| Vesicare/Solifenacin          | <b>Table I<br/>Urinary Incontinence<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> |  |   |  |   |
| Vesprin/<br>Triflupromazine   | <b>Table I<br/>Antipsychotic</b>  | Antipsychotic  | 20 mg   | ❖ <b>Antipsychotic Protocol</b>  | Abnormal movements, EPS, restlessness, drooling, tremor, mask like face, constipation, urine retention, cognitive or ADL changes, falls, sedation   |
| Visken/<br>Pindolol           |   | HTN, angina, prevent second MI, aggressive behaviors   | To 60 mg for medical, 60mg adults/45mg child for behaviors. | Pulse and BP weekly, or as determined by MD if used for behaviors.                     | Slow pulse and ↓ BP, sleep problems, breathing problems, weakness, lethargy, depression,  |

| DRUG<br>Brand/Generic             | SPECIAL NOTES   | DIAGNOSIS                                     | DOSING  | MONITORING   | SIDE EFFECTS/ADR   |
|-----------------------------------|---|---|---|--|--|
|                                   |   |   | Capsule form is time release, do not crush.                                   |  |  |
| Vivactil/<br>Protriptyline        | <b>Table II<br/>ANTICHOLINERGIC</b>   | Depression,                                   | Up to 60mg a day  | None   | Urinary retention, incontinence, reflux, pyelonephritis, nephritis, low grade temp and low back pain. Dry mouth, blurred vision, card. Arrhythmia's, constipation, confusion |
| Voltaren/<br>Diclofenac           | <b>Table I F329<br/>Analgesic Medication</b>  | Pain, Anti-inflammatory, arthritis            | Up to 200mg. Some forms are extended release or enteric coated, do not crush. | GI Bleed and BP  | GI distress, stool for blood, flank pain, increased BP<br><b>Avoid use in residents with active or recurrent gastritis, ulcer or GERD; blood clotting disorders</b>          |
| Vyvanse/lisdexa<br>mefetamine     | <b>Approved in children 6<br/>and older</b>   | ADHD  |   | ❖  |  |
| Wellbutrin/<br>Bupropion          | <b>F329 Antidepressant</b>  | Depression                                    | Under 65 to 450 mg., over 65 to 300 mg., no single doses over 150 mg.         | ❖ <b>Other Psychopharmacologic Protocol</b><br>Behaviors do not need daily counts.                   | Agitation, dry mouth, fecal impaction, insomnia, tremor, seizures  |
| Xanax/<br>Alprazolam              | <b>F329 Short Acting<br/>Benzodiazepine</b><br><br><b>F329 Sleep Induction</b>                | Anxiety                                       | <b>0.75mg per day<br/>for everything</b><br><br><b>0.25 mg for sleep</b>      | ❖ <b>Other Psychopharmacologic Protocol</b><br><br>❖ <b>Sedative Hypnotic Protocol</b>               | Unexplained change in cognitive or ADL function or behavior, confusion. Falls, Sedation, Slurred speech, difficulty swallowing. Breathing problems                           |
| Zantac/<br>Ranitidine             | <b>Table I<br/>Gastrointestinal<br/>Medication</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b> | Ulcer, gastric hypersecretory, gastro. reflux | Up to 300 mg<br>Up to 900mg   | Treatment doses beyond 90 days.  | Behavior changes<br>GI distress, Eating, Functioning CNS   |
| Zaroxolyn /<br>Metolazone         | <b>Table I<br/>Cardiovascular<br/>Medication</b>  | Diuretic                                      |   | Electrolytes, blood pressure   |  |
| Zestril (Prinivil)/<br>Lisinopril | <b>Table I<br/>Cardiovascular<br/>Medication</b>  | Hypertension                                  | Up to 40 mg   | Blood pressure weekly  | Chest pain, hypotension, headache, dizziness, fatigue, cough, rash, taste disturbance  |
| Zocor /<br>Simvastatin            | <b>Table I<br/>Cholesterol Lowering<br/>Medication</b>  | High cholesterol                              |   | LFT's: baseline, 12 weeks after starting or dose increases, and periodically thereafter (semiannual) |  |

| <b>DRUG<br/>Brand/Generic</b> | <b>SPECIAL NOTES</b>   | <b>DIAGNOSIS</b>                                      | <b>DOSING</b> | <b>MONITORING</b>  | <b>SIDE EFFECTS/ADR</b>   |
|-------------------------------|--|---|---------------|--|---|
| Zoloft/<br>Sertraline         | <b>Table I<br/>Antidepressant<br/>Medication</b><br><br><b>Approved for children<br/>age 6 and older for OCD</b> | Depression<br><b>Can cause or worsen<br/>insomnia</b> | Up to 200 mg  | ❖ <b>Other Psychopharmacologic<br/>Protocol</b><br>Behaviors | Weight loss, nausea, diarrhea   |
| Zyloprim/<br>Allopurinol      |  | Gout, malignancies                                    | Up to 300 mg. | Uric acid, Renal fx (may require<br>dose reduction)          | Skin Rash   |
| Zyprexa/<br>Olanzapine        | <b>Table I<br/>Antipsychotic</b><br><br><b>Table II<br/>ANTICHOLINERGIC</b>                                      | Antipsychotic   | 10 mg         | ❖ <b>Antipsychotic Protocol</b>                              | abnormal movements, lethargy,<br>cognitive or ADL changes, falls,<br>Postural hypotension, weight gain. |

# Antipsychotic Protocol

## ✓ **Check Indications**

1. What is diagnosis for antipsychotic?
2. Are symptoms identified as mania or psychosis OR are symptoms a danger to resident or others OR are symptoms significant causing inconsolable distress, decline in function, difficulties in receiving necessary care?
3. Is use Acute or Chronic?
4. Acute: Evaluation conducted in 7 days to identify and address contributing or underlying causes and need for ongoing medication. Implement any nonpharm interventions.
5. Chronic: 1) Were other medical causes of behaviors ruled out? (pneumonia, adverse effect from detrol (anticholinergic...refer group to table II)) 2) Were behaviors persistent? (How frequent?) 3) Were nonpharm interventions ineffective? 4) Were environmental causes ruled out? 5) Were other psychological stressors ruled out or addressed?

## ✓ **Check monitoring.**

Facility should consider monitor for the following: tardive dyskinesia, postural hypotension, cognitive behavior impairment, akathisia and Parkonsinism.

## ✓ **Check Doses.**

If resident is 65 or older and dosages are over maximums on the list there must be justification for the high dose.

## ✓ **Dose reduction**

Within the first year in which a resident is admitted on an antipsychotic medication or after the facility has initiated an antipsychotic medication, the facility must attempt a GDR in two separate quarters (with at least one month between the attempts), unless clinically contraindicated. After the first year, a GDR must be attempted annually, unless clinically contraindicated.

For any individual who is receiving an antipsychotic medication to treat behavioral symptoms related to dementia, the GDR may be considered clinically contraindicated if:

- The resident's target symptoms returned or worsened after the most recent attempt at a GDR within the facility; and
- The physician has documented the clinical rationale for why any additional attempted dose reduction at that time would be likely to impair the resident's function or increase distressed behavior.

For any individual who is receiving an antipsychotic medication to treat a psychiatric disorder other than behavioral symptoms related to dementia (for example, schizophrenia, bipolar mania, or depression with psychotic features), the GDR may be considered contraindicated, if:

- The continued use is in accordance with relevant current standards of practice and the physician has documented the clinical rationale for why any attempted dose reduction would be likely to impair the resident's function or cause psychiatric instability by exacerbating an underlying psychiatric disorder; or
- The resident's target symptoms returned or worsened after the most recent attempt at a GDR within the facility and the physician has documented the clinical rationale for why any additional attempted dose reduction at that time would be likely to impair the resident's function or cause psychiatric instability by exacerbating an underlying medical or psychiatric disorder.

## ✓ **Behavior Modification**

Were behavior interventions attempted to eliminate the medication, unless clinically contraindicated.

## Other Psychopharmacologic Protocol

**(This includes Long Acting Benzodiazepines, Short Acting Benzodiazepines and other Anxiolytics.)**

- ✓ **Check Indications.** Anxiolytic medications should only be used when:
  - Use is for one of the following indications as defined in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Training Revision (DSM-IV TR) or subsequent editions:
    - a. Generalized anxiety disorder
    - b. Panic disorder
    - c. Symptomatic anxiety that occurs in residents with another diagnosed psychiatric disorder
    - d. Sleep disorders (See Sedatives/Hypnotics)
    - e. Acute alcohol or benzodiazepine withdrawal
    - f. Significant anxiety in response to a situational trigger
    - g. Delirium, dementia, and other cognitive disorders with associated behaviors that:
      - Are quantitatively and objectively documented;
      - Are persistent;
      - Are not due to preventable or correctable reasons; and
      - Constitute clinically significant distress or dysfunction to the resident or represent a danger to the resident or others
  - Evidence exists that other possible reasons for the individual's distress have been considered; and
  - Use results in maintenance or improvement in the individual's mental, physical or psychosocial well-being (e.g., as reflected on the MDS or other assessment tools); or
  - There are clinical situations that warrant the use of these medications such as:
    - a long-acting benzodiazepine is being used to withdraw a resident from a short-acting benzodiazepine
    - used for neuromuscular syndromes (e.g., cerebral palsy, tardive dyskinesia, restless leg syndrome or seizure disorders)
    - symptom relief in end of life situations
  
- ✓ **Check doses.** If high dose is used it must be justified.
  
- ✓ **Check for dose reduction.** During the first year in which a resident is admitted on a psychopharmacological medication (other than an antipsychotic or a sedative/hypnotic), or after the facility has initiated such medication, the facility should attempt to taper the medication during at least two separate quarters (with at least one month between the attempts), unless clinically contraindicated. After the first year, a tapering should be attempted annually, unless clinically contraindicated. The tapering may be considered clinically contraindicated, if:
  - The continued use is in accordance with relevant current standards of practice and the physician has documented the clinical rationale for why any attempted dose reduction would be likely to impair the resident's function or cause psychiatric instability by exacerbating an underlying medical or psychiatric disorder; or
  - The resident's target symptoms returned or worsened after the most recent attempt at tapering the dose within the facility and the physician has documented the clinical rationale for why any additional attempted dose reduction at that time would be likely to impair the resident's function or cause psychiatric instability by exacerbating an underlying medical or psychiatric disorder.

## Sedative Hypnotic Protocol

- ✓ **Check Indications.** Most cases of insomnia are associated with underlying conditions (secondary or co-morbid insomnia) such as psychiatric disorders (e.g., depression), cardiopulmonary disorders (e.g., COPD, CHF), urinary frequency, pain, obstructive sleep apnea, and restless leg syndrome. Insomnia may be further described by the duration of symptoms
- Before initiating medications to treat insomnia, other factors potentially causing insomnia should be evaluated, including, for example:
    - environment, such as excessive heat, cold, or noise; lighting
    - inadequate physical activity
    - facility routines that may not accommodate residents' individual needs (e.g., time for sleep, awakening, toileting, medication treatments)
    - provision of care in a manner that disrupts sleep
    - caffeine or medications known to disrupt sleep
    - pain and discomfort
    - underlying conditions (secondary or co-morbid insomnia) such as psychiatric disorders (e.g., depression), cardiopulmonary disorders (e.g., COPD, CHF), urinary frequency, pain, obstructive sleep apnea, and restless leg syndrome
  - It is expected that interventions (such as sleep hygiene approaches, individualizing the sleep and wake times to accommodate the person's wishes and prior customary routine, and maximizing treatment of any underlying conditions) are implemented to address the causative factor(s)
  - These guidelines apply to any medication that is being used to treat insomnia. Initiation of medications to induce or maintain sleep should be preceded or accompanied by other interventions to try to improve sleep. All sleep medications should be used in accordance with approved product labeling; for example, timing and frequency of administration relative to anticipated waking time
  - The use of sedating medications for individuals with diagnosed sleep apnea requires careful assessment, documented clinical rationale, and close monitoring.
- ✓ **Check Dose.**
- ✓ **Check Gradual Dose Reduction.** For as long as a resident remains on a sedative/hypnotic that is used routinely and beyond the manufacturer's recommendations for duration of use the facility should attempt to taper the medication quarterly unless clinically contraindicated. Clinically contraindicated means:
- The continued use is in accordance with relevant current standards of practice and is beyond the manufacturer's recommendations and the physician has documented the clinical rationale for why any attempted dose reduction would be likely to impair the resident's function or cause psychiatric instability by exacerbating an underlying medical or psychiatric disorder; or
  - The resident's target symptoms returned or worsened after the most recent attempt at tapering the dose within the facility and the physician has documented the clinical rationale for why any additional attempted dose reduction at that time would be likely to impair the resident's function or cause psychiatric instability by exacerbating an underlying medical or psychiatric disorder

## Brand/Generic Cross Reference

| Brand           | Generic                              |
|-----------------|--------------------------------------|
| Precose         | acarbose                             |
| acetoexamide    | acetoexamide                         |
| Uroxatrol       | Alfuzosin                            |
| Symmetrel       | Amantadine                           |
| Amikacin        | Amikacin                             |
| Amiodarone      | Amiodarone                           |
| Norvasc         | Amlodipine                           |
| Lipitor         | Atorvastatin                         |
| Baclofen        | Baclofen                             |
| QVAR            | Beclomethasone                       |
| Lotensin        | Benazepril                           |
| Pulmicort       | Budesonide                           |
| Atacand         | Candesartan                          |
| Stalevo         | carbidopa / levodopa /<br>entacapone |
| Paraflex        | Chlorzoxazone                        |
| Questran        | Cholestyramine                       |
| Atromid         | Clofibrate                           |
| Intal           | cromolyn                             |
| Cyproheptadine  | Cyproheptadine                       |
| Dantrium        | dantrolene                           |
| Aranesp         | darbepoetin                          |
| Enablex         | Darifenacin                          |
| Digitec         | Digoxin                              |
| Cardura         | Doxazosin                            |
| Marinol         | dronabinol                           |
| Cymbalta        | Duoxetine                            |
| Vasotec         | Enalapril                            |
| Tevetan         | Eprosartan                           |
| Procrit         | erythropoetin                        |
| Brevibloc       | Esmolol                              |
| Nexium          | Esomeprazole                         |
| Lunesta         | Eszopiclone                          |
| Ethycrinic acid | Ethycrinic acid                      |
| Pepcid          | famotidine                           |

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| <b>Brand</b>           | <b>Generic</b>         |
|------------------------|------------------------|
| Antara                 | Fenofibrate            |
| Diflucan               | fluconazole            |
| AeroBid                | Flunisolide            |
| Flovent                | Fluticasone            |
| Lescol                 | Fluvastatin            |
| Foradil                | Formoterol             |
| Monopril               | Fosinopril             |
| Lasix                  | Furosemide             |
| Razadyne               | Galantamine            |
| Gentamicin             | Gentamicin             |
| Amaryl                 | Glimepiride            |
| Boniva                 | ibandronate            |
| Avapro                 | Irbesartan             |
| Iron                   | Iron                   |
| Marplan                | Isocarboxazid          |
| Isosorbide mononitrate | Isosorbide mononitrate |
| DynaCirc               | Isradipine             |
| Sporanox               | Itraconazole           |
| Ketoconazole           | Ketoconazole           |
| Keppra                 | Levetiracetam          |
| Levaquin               | levofloxacin           |
| Synthroid              | Levothyroxine          |
| Ativan                 | Lorazepam              |
| Cozaar                 | Losartan               |
| Advicor                | Lovastatin             |
| Loxitane               | Loxapine               |
| Ludiomil               | Maprotiline            |
| Meclizine              | Meclizine              |
| Meclofenamate          | Meclofenamate          |
| Megesterol acetate     | Megesterol acetate     |
| Namenda                | Memantine              |
| Demerol                | Meperidine             |
| Miltown                | Meproamate             |
| Serentil               | Mesoridazine           |
| <b>Skelaxin</b>        | <b>Metaxalone</b>      |
| Skelaxin               | Metaxolone             |
| Glucophage             | Metformin              |
| Methocarbamol          | Methocarbamol          |

| <b>Brand</b>       | <b>Generic</b>             |
|--------------------|----------------------------|
| Robaxin            | Methocarbamol              |
| Solumedrol         | Methyl prednisone          |
| Aldomet            | Methyldopa                 |
| Ritalin            | Methylphenidate            |
| methylprednisolone | methylprednisolone         |
| Noludar            | Methylprylon               |
| Reglan             | Metoclopramide             |
| Zaroxolyn          | Metolazone                 |
| Lopressor          | Metoprolol                 |
| Remeron            | Mirtazapine                |
| Cytotec            | Misoprostol                |
| Moban              | Molindone                  |
| Avelox             | Moxifloxacin               |
| Relafen            | Nabumetone                 |
| Corgard            | Nadolol                    |
| Naprosyn           | Naproxen                   |
| Tilade             | nedocromil                 |
| Serzone            | Nefazodone                 |
| Procardia XL       | Nifedipine                 |
| Sular              | Nisoldipine                |
| Macrodantin        | Nitrofurantoin             |
| Nitrodur           | Nitroglycerin              |
| Pamelor            | Nortriptyline              |
| Floxin             | Ofloxacin                  |
| Zyprexa            | Olanzapine                 |
| Benicar            | Olmesartan                 |
| Prilosec           | Omeprazole                 |
| Orphenadrine       | Orphenadrine               |
| Oxandrin           | oxandrolone                |
| Daypro             | Oxaprozin                  |
| Serax              | Oxazepam                   |
| Ditropan           | Oxybutynin                 |
| Trileptal          | Oxycarbazepine             |
| Paxil              | Paroxetine                 |
| Talwin             | Pentazocine                |
| Nembutal           | Pentobarbital              |
| Trental            | Pentoxifyllin              |
| Trilafon           | Perphenazine               |
| Triavil            | perphenazine-amitriptyline |

| <b>Brand</b>     | <b>Generic</b>             |
|------------------|----------------------------|
| Nardil           | Phenelzine                 |
| Butazolidin      | Phenylbutazone             |
| Dilantin         | Phenytoin                  |
| Visken           | Pindolol                   |
| Actos            | Pioglitazone               |
| Actoplus Met     | Pioglitazone and metformin |
| Maxair Autohaler | pirbuterol                 |
| Feldene          | Piroxicam                  |
| Mirapex          | Pramipexole                |
| Pravachol        | Pravastatin                |
| Centrax          | Prazepam                   |
| Minipress        | Prazosin                   |
| Primidone        | Primidone                  |
| Compazine        | Prochlorperazine           |
| Kemadrin         | Procyclidine               |
| Sparine          | Promazine                  |
| Promethazine     | Promethazine               |
| Phenergan        | promethazine               |
| Probanthine      | Propantheline              |
| Inderal          | Propranolol                |
| Vivactil         | Protriptyline              |
| Sudafed          | Psuedoephedrine            |
| Doral            | Quazepam                   |
| Seroquel         | Quetiapine                 |
| Protonix         | rabeprazole                |
| Evista           | Raloxifene                 |
| Rozerem          | Ramelteon                  |
| Altace           | Ramipril                   |
| Zantac           | Ranitidine                 |
| Prandin          | Repaglinide                |
| Serpasil         | Reserpine                  |
| Actonel          | Risedronate                |
| Risperdal        | Risperidone                |
| Exelon           | Rivastigmine               |
| Exelon           | Rivastigmine               |
| Requip           | Ropinirole                 |
| Avandia          | Rosiglitazone              |
| Avandia          | Rosiglitazone              |
| Avandamet        | Rosiglitazone and          |

| <b>Brand</b> | <b>Generic</b>          |
|--------------|-------------------------|
|              | Metformin               |
| Crestor      | Rosuvastatin            |
| Serevent     | Salmeterol              |
| Seconal      | Secobarbital            |
| Eldepryl     | Selegiline              |
| Zoloft       | Sertraline              |
| Zocor        | Simvastatin             |
| Aldactone    | Spirolactone            |
| Carafate     | Sucralfate              |
| Clinoril     | Sulindac                |
| Cognex       | Tacrine                 |
| Nolvadex     | Tamoxifen               |
| Flomax       | Tamsulosin              |
| Restoril     | Temazepam               |
| Hytrin       | Terazosin               |
| Theophylline | Theophylline            |
| Mellaril     | Thioridazine            |
| Navane       | Thiothixene             |
| Ticlid       | Ticlopidine             |
| Blocadren    | Timolol                 |
| Timoptic     | Timolol                 |
| Spiriva      | Tiotropium              |
| Tobramycin   | Tobramycin              |
| Tolazanamide | Tolazanamide            |
| Tolbutamide  | Tolbutamide             |
| Tolectin     | Tolmetin                |
| Detrol       | Tolterodine             |
| Demadex      | Torseamide              |
| Ultram       | Tramadol                |
| Parnate      | Tranlycypromine         |
| Desyrel      | Trazadone               |
| Azamacort    | triamcinolone acetonide |
| Dyrenium     | Triamterene             |
| Halcion      | Triazolam               |
| Stelazine    | Trifluoperazine         |
| Vesprin      | Triflupromazine         |
| Artane       | Trihexyphenidyl         |
| Tigan        | Trimethobenzamide       |
| PBZ          | Tripelanamine           |
| Sanctura     | Trospium                |

| <b>Brand</b> | <b>Generic</b> |
|--------------|----------------|
| Divalproex   | Valproic Acid  |
| Diovan       | Valsartan      |
| Effexor      | Venlafaxine    |
| Calan        | Verapamil      |
| Coumadin     | Warfarin       |
| Sonata       | Zaleplon       |
| Geodon       | Ziprasidone    |
| Ambien       | Zolpidem       |

## Guide for Storage of Insulin

### Insulin Storage:

Insulin comes from drug manufacturers in three basic packages; vials, pens and cartridges. In addition to these prepackaged forms of insulins pharmacists, physicians and patients may mix insulin themselves in vials or syringes and/or predraw insulin for later use by the patient.

General insulin storage requirements are as follows:

1. Never freeze. (Frozen insulin should be thrown away)
2. Never use insulin beyond the expiration date stamped on the vial, pen or cartridge that is supplied from the drug manufacturer.
3. Never expose insulin to direct heat or light.
4. Inspect insulin prior to each use. Any insulin that has clumps or solid white particles should not be used. Insulin that is supposed to be clear should not have any cloudy appearance.
5. Check storage guidelines specific to the insulin formulation. This is usually in the product package insert.
6. Unopened, not in use insulin should be stored in a refrigerator at a temperature of 36-46°F.
7. Opened, in use insulin should be stored at room temperature below 86°F.
8. If receiving insulin through the mail always confirm that the insulin is going to be stored under proper requirements.
9. When storing prefilled insulin syringes they should be stored with the needle pointing up.

Mixing insulin in vials or in predrawn syringes is an acceptable approach to customize insulin treatment and minimize injections. It is recommended that the same technique or procedure to mix and store these customized preparations be utilized. Some insulin like regular mixed with lente may react with each other up to 24 hours. During this 24 hour period the insulin mixture when injected may react differently based on the amount of time they have had to react with each other. Therefore it is recommended to have all mixtures stored for 24 hours before using or to use them immediately.

The following tables address specific expiration or beyond use dating that applies to insulin products that have been opened, mixed or predrawn.

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Updated June 1, 2011

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## Maximum Storage Conditions for Insulin Vials

| Product Name  | Refrigerated<br>36-46°F |                             | Room Temperature<br>59-86°F |
|---------------|-------------------------|-----------------------------|-----------------------------|
|               | Opened                  | Unopened                    | Opened/Unopened             |
| Humulin R     | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humulin N     | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humulin L     | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humulin U     | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humulin 70/30 | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humalog       | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humalog 75/25 | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humulin 50/50 | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Novolin R     | 30 days                 | Until Expiration Date Stamp | 30 days                     |
| Novolin N     | 30 days                 | Until Expiration Date Stamp | 30 days                     |
| Novolin L     | 30 days                 | Until Expiration Date Stamp | 30 days                     |
| Novolin 70/30 | 30 days                 | Until Expiration Date Stamp | 30 days                     |
| Novolog       | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Lantus        | 28 days                 | Until Expiration Date Stamp | 28 days                     |

## Maximum Storage Conditions for Insulin Pens

| Product Name            | Refrigerated<br>36-46°F |                             | Room Temperature<br>59-86°F |
|-------------------------|-------------------------|-----------------------------|-----------------------------|
|                         | Opened                  | Unopened                    | Opened/Unopened             |
| Humulin N               | Do not Refrigerate      | Until Expiration Date Stamp | 14 days                     |
| Humulin 70/30           | Do not Refrigerate      | Until Expiration Date Stamp | 10 days                     |
| Humalog                 | Do not Refrigerate      | Until Expiration Date Stamp | 28 days                     |
| Humalog 75/25           | Do not Refrigerate      | Until Expiration Date Stamp | 10 days                     |
| Novolin R 1.5 ml        | Do not Refrigerate      | Until Expiration Date Stamp | 30 days                     |
| Novolin R 3 ml          | Do not Refrigerate      | Until Expiration Date Stamp | 28 days                     |
| Novolin N 1.5 ml        | Do not Refrigerate      | Until Expiration Date Stamp | 7 days                      |
| Novolin N 3 ml          | Do not Refrigerate      | Until Expiration Date Stamp | 14 days                     |
| Novolin 70/30 1.5 ml    | Do not Refrigerate      | Until Expiration Date Stamp | 7 days                      |
| Novolin 70/30 3 ml      | Do not Refrigerate      | Until Expiration Date Stamp | 10 days                     |
| Novolog 3 ml            | Do not Refrigerate      | Until Expiration Date Stamp | 28 days                     |
| Novolin R Prefilled     | Do not Refrigerate      | Until Expiration Date Stamp | 30 days                     |
| Novolin N Prefilled     | Do not Refrigerate      | Until Expiration Date Stamp | 7 days                      |
| Novolin 70/30 Prefilled | Do not Refrigerate      | Until Expiration Date Stamp | 7 days                      |

## Storage Conditions for Insulin Cartridges

| Lilly<br>Product Name | Refrigerated<br>36-46°F |                             | Room Temperature<br>59-86°F |
|-----------------------|-------------------------|-----------------------------|-----------------------------|
|                       | Opened                  | Unopened                    | Opened/Unopened             |
| Humalog 1.5 ml        | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Humalog 3 ml          | 28 days                 | Until Expiration Date Stamp | 28 days                     |
| Novolin R 1.5 ml      | Do not Refrigerate      | Until Expiration Date Stamp | 30 days                     |
| Novolin R 3 ml        | Do not Refrigerate      | Until Expiration Date Stamp | 28 days                     |
| Novolin N 1.5 ml      | Do not Refrigerate      | Until Expiration Date Stamp | 7 days                      |
| Novolin N 3 ml        | Do not Refrigerate      | Until Expiration Date Stamp | 14 days                     |
| Novolin 70/30 1.5 ml  | Do not Refrigerate      | Until Expiration Date Stamp | 7 days                      |
| Novolin 70/30 3 ml    | Do not Refrigerate      | Until Expiration Date Stamp | 14 days                     |
| Novolog 3 ml          | Do not Refrigerate      | Until Expiration Date Stamp | 28 days                     |

## Maximum Storage Conditions for Syringes Predrawn or Vials Premixed\*

\*(post drug manufacturer by pharmacist, patient and/or other health care professional)

| Product  | Refrigerated   | Room Temperature   | Source/Comments                                   |
|--|--|--|---|
| All Insulin Types<br>(single formulation)<br>Syringe         | 30 days  | No Information   | American Diabetes Association                     |
| All Insulin Types<br>(single formulation)<br>Syringe or Vial | 21 days  | No Information   | Eli Lilly U.S.M.D. Medical Information Services   |
| All Insulin Types<br>(single formulation)<br>Syringe         | 30 days  | No Information   | Novo Nordisk                                      |
| Novolin R &N   | 30 days  | No Information   |   |
| Novolin R & L  | 30 days  | No Information   | Standardize intervals of drawing up and injection |
| Novolog and Novolin N  | Use Immediately  | No information   | Draw up Novolog first                             |
| Humulin R & N  | 30 days  |  |   |
| Humulin R & L or U   | 21 days  |  | Standardize time interval                         |
| Humalog & N,L or U   | Use immediately  |  | Draw up Humalog First                             |
| Lantus   | Manufacturer recommends immediate use. Study information provided by manufacturer suggest two days ok. | Manufacturer recommends immediate use. Study information provided by manufacturer suggest two days ok. | NEVER MIX   |

| <b>Brand</b>             | <b>Action</b>                    | <b>Onset</b>     | <b>Peak</b>          | <b>Duration</b> | <b>Compatibility</b>                       | <b>Appearance</b> | <b>General Comments</b>                                     |
|--------------------------|----------------------------------|------------------|----------------------|-----------------|--|-------------------|---|
| <b>Apidra</b>            | <b>Rapid</b>                     | 20 min           | <b>30-60 min</b>     | 3-5 hrs         | NPH  | <b>Clear</b>      | <b>Give 15 min before or within 20 minutes after meals.</b> |
| <b>Humalog</b>           | <b>Rapid</b>                     | <b>15-30 min</b> | <b>30-90 min</b>     | 3-5 hrs         | NPH<br>Ultralente                          | <b>Clear</b>      | <b>Give 15 min before or immediately after meals</b>        |
| <b>Humalog 75/25 mix</b> | <b>Mixed Rapid/ Intermediate</b> | <b>15-30 min</b> | <b>1 hr- 6.5 hrs</b> | Up to 24 hrs    | None                                       | <b>Cloudy</b>     | <b>Give within 15 minutes of meals</b>                      |
| <b>Humulin L</b>         | <b>Intermediate</b>              | 1-4 hrs          | 4-14 hrs             | 12-24 hrs       | Ultralente                                 | <b>Cloudy</b>     | <b>30-60 minutes before meal or at bed time</b>             |
| <b>Humulin N</b>         | <b>Intermediate</b>              | 1-4 hrs          | 4-14 hrs             | 10-24 hrs       | Regular,<br>Humalog,<br>Novolog,<br>Apidra | <b>Cloudy</b>     |   |
| <b>Humulin R</b>         | <b>Short</b>                     | <b>0.5-1 hr</b>  | <b>2.5-5 hrs</b>     | 8-12 hrs        | NPH  | <b>Clear</b>      | <b>30-60 minutes before a meal.</b>                         |
| <b>Humulin U</b>         | <b>Long</b>                      | 4-6 hrs          | 8-20 hrs             | 18-36 hrs       | Humulin L,<br>Humalog                      | <b>Cloudy</b>     | <b>30-60 minutes before a meal or at bedtime</b>            |
| <b>Humulin 70/30</b>     | <b>Mixed</b>                     | <b>0.5-1 hr</b>  | <b>1.5-16 hrs</b>    | 10-24 hrs       | None                                       | <b>Cloudy</b>     | <b>30 minutes before a meal</b>                             |
| <b>Humulin 50/50</b>     | <b>Mixed</b>                     | <b>0.5-1 hr</b>  | <b>2.5-5 hrs</b>     | 10-24 hrs       | None                                       | <b>Cloudy</b>     | <b>30 minutes before a meal</b>                             |
| <b>Lantus</b>            | <b>Long</b>                      | 1.5 hrs          | Constant             | 24 hrs          | None                                       | <b>Clear</b>      |   |
| <b>Levemir</b>           | <b>Long</b>                      | ?                | 6-8 hrs              | 12-24 hrs       | None                                       | <b>Clear</b>      |   |
| <b>Novolin N</b>         | <b>Intermediate</b>              | 1-4 hrs          | 4-14 hrs             | 10-24 hrs       | Regular,<br>Humalog,<br>Novolog,<br>Apidra | <b>Cloudy</b>     |   |

|                      |              |                 |                   |                  |             |               |                                     |
|----------------------|--------------|-----------------|-------------------|------------------|-------------|---------------|-------------------------------------|
| <b>Novolin R</b>     | <b>Short</b> | <b>0.5-1 hr</b> | <b>2.5-5 hrs</b>  | <b>8-12 hrs</b>  | <b>NPH</b>  | <b>Clear</b>  | <b>30-60 minutes before a meal.</b> |
| <b>Novolin 70/30</b> | <b>Mixed</b> | <b>0.5-1 hr</b> | <b>1.5-16 hrs</b> | <b>10-24 hrs</b> | <b>None</b> | <b>Cloudy</b> | <b>30 minutes before a meal</b>     |
| <b>Novolog</b>       | <b>Rapid</b> | <b>15 min</b>   | <b>1-2 hrs</b>    | <b>3-5 hrs</b>   | <b>NPH</b>  | <b>Clear</b>  | <b>5-10 minutes before a meal</b>   |
| <b>Novolog 70/30</b> | <b>Mixed</b> |                 | <b>1-4 hrs</b>    | <b>15-24 hrs</b> | <b>None</b> | <b>Clear</b>  | <b>Within 15 minutes of meals</b>   |

## Medication Errors for Nursing Home Med Pass Task

- Inhaler Technique: 1) Most must be shaken. If facility does not shake when manufacturer indicates it should be than it is a medication error for med pass purposes.
- 2) Multiple puffs of the **same or different** inhalers usually require 60 seconds between puffs. If staff do not wait 60 seconds you must check if the time they waited is appropriate for the inhaler used. If they waited longer than the time required than it is not a medication error. If they waited less than the required time it is a medication error. Exceptions: Resident characteristics may require less time. Facility should provide information supporting rationale why the resident benefits with the shorter time frame.
- 3) Residents who are handed the inhaler and actuate the device themselves are considered self-administration. We do not count not shaking or not waiting the appropriate time between puffs as a medication error in the med pass. We do investigated under self admin F176.
- Eye Drop Technique: 1) Orders for two types of eye medications scheduled at same time. The drops need to be separated by 3-5 minutes otherwise it is an error.
- Physician Orders: MD order must be followed. If a facility does not agree with order or cannot fill the order they should have the order changed. Sometimes a MD may order a drug to be given with food. It may not be required to be given with food but the physician wishes that to occur. If the facility cannot give it with food they should have the order changed. In some cases MDs may have a policy with a facility and pharmacist to automatically change orders. Therefore if a facility did not follow a physician order check if the facility has this type of policy. So if a MD orders EC aspirin and regular aspirin is given it is an error unless the facility has a medication policy that allows this.
- Insulin: Medication error guidance for insulin is documented in BQA Memo 03-014.

## Multi Dose Vial Expiration Dating Policy Medications for Injection

This clarification aligns with guidelines from the Association for Professionals in Infection Control and Epidemiology (APIC) and the United States Pharmacopeia (USP).

Once a multi dose vial cap is removed or the multi-dose vial is punctured, the manufacturer stamped expiration date is no longer valid and a revised expiration date (also called the “beyond-use date” in pharmaceutical terminology) needs to be identified.

- USP and APIC standards indicate that opened or punctured multi-dose vials be used for no more than 28 days unless the manufacturer specifies otherwise.
- The Food and Drug Administration allows manufacturers to provide extended dating in the package insert if they have conducted testing beyond the minimum 28 days so there are some products where manufacturer guidelines allow longer expiration dates.
- If the manufacturer original stamped expiration date is less than the 28 days then the earlier date must be used.
- If sterility is questioned or compromised, the multi-dose vial should be immediately discarded even if prior to the 28 days.
- This dating expectation does not apply to vaccines in the Centers for Disease Control and Prevention and state immunization programs, which have separate requirements for when multi-dose vials must be discarded. For immunizations the CDC guidelines are to allow use up to the original stamped expiration date. However many of the immunization manufacturer requirements now indicate the vaccine is expired at 28 days once opened.

### POLICY:

- 1 Opened multi dose vials have a 28-day expiration, except immunizations.
- 2 For immunizations start with 28 day but realize that many may allow to stamped expiration date. If you cannot obtain information on site contact Doug Englebert to verify.
- 3 Document the specific product in question and verify manufacturer guidelines to ensure a violation.
- 4 Facilities must have a policy/procedure to ensure opened multi-dose vials will be destroyed upon expiration.

### References:

- 1) APIC position paper: Safe injection, infusion, and medication vial practices in health care  
Susan A. Dolan, RN, MS, CIC,<sup>a</sup> Gwenda Felizardo, RN, BSN, CIC,<sup>b</sup> Sue Barnes, RN, BSN, CIC,<sup>c</sup> Tracy R. Cox, RN, CIC,<sup>d</sup> Marcia Patrick, RN, MSN, CIC,<sup>e</sup> Katherine S. Ward, RN, BSN, MPH, CIC,<sup>f</sup> and Kathleen Meehan Arias, MS, CIC<sup>g</sup> Washington, DC  
[http://www.apic.org/Content/NavigationMenu/PracticeGuidance/PositionStatements/AJIC\\_Safe\\_Injection0310.pdf](http://www.apic.org/Content/NavigationMenu/PracticeGuidance/PositionStatements/AJIC_Safe_Injection0310.pdf)
- 2) USP <797> Guidebook to Pharmaceutical Compounding— Sterile Preparations Copyright 2008. <http://www.usp.org/products/797Guidebook/>
- 3) CDC Vaccine Storage and Handling Toolkit <http://www2a.cdc.gov/vaccines/ed/shtoolkit/pages/introduction.htm>

## Pharmacy References

**National Coordinating Council for Medication Error Reporting and Prevention: A list of interventions necessary for safety.**

<http://www.nccmerp.org/councilRecs.html>

<http://www.nccmerp.org/council/council1999-06-29.html>

<http://www.nccmerp.org/council/council2003-06-20.html>

**Safe Medication: Resources including detailed resources for the right way to administer medications for specific routes:**

<http://www.safemedication.com/>

**Institute for Safe Medication Practices: Resources like the high alert medications, risky abbreviations.**

<http://www.ismp.org/>

**Pharmacy Newscapsule**

[http://dhfs.wisconsin.gov/rl\\_DSL/Publications/PharmCapsule.htm](http://dhfs.wisconsin.gov/rl_DSL/Publications/PharmCapsule.htm)

**DQA Library**

<http://dhfsweb/oqa/library/library.htm>

**Online Free Drug References**

[www.drugs.com](http://www.drugs.com)

[www.rxlist.com](http://www.rxlist.com)

[www.medicinenet.com](http://www.medicinenet.com)

[www.safemedication.com](http://www.safemedication.com)

[www.pdrhealth.com/](http://www.pdrhealth.com/)

## Proton Pump Inhibitors-Nursing Home Medication Error Policy

There are many proton pump inhibitors on the market: Aciphex, Protonix, Nexium, Prevacid and Prilosec are some of them. Each of these medications has different recommendations in regards to administering the medication with meals, within certain time frames before or after a meal or administering on an empty stomach.

When observing these medications being administered during medication pass task to determine a medication errors please consider the following:

1. Physician order. If the physician order specifies administering the medication a certain way that order must be followed by the facility.
2. Manufacture requirements. None of the proton pump inhibitors have specific requirements for administration. The manufacturers do have recommendations but those recommendations are not required.
3. Standards of practice. All of the proton pump inhibitors have recommendations. Prevacid and Nexium have specific information that absorption of a single dose is decreased when taken with food. For those reasons Nexium, Prevacid and Prilosec are recommended to be given on an empty stomach, preferably before a meal. If a resident is not responding to the proton pump inhibitor it may be beneficial to make sure the medication is taken on an empty stomach.

A medication error may be considered if the proton pump inhibitor is administered with food and: 1) The physician order indicated the medication should be administered without food or 2) If the pharmacist has identified that the resident needs to have the proton pump administered without food and the facility did not follow the recommendation. If a surveyor observes the medication being given with food and the medication does not seem to be working then investigate if the facility is monitoring the medication and that the pharmacist is identifying medication problems. If monitoring is not occurring, then F329 or F428 can be considered.

At this time Region V communicated the following information from Central Office after a question about a medication error came up in the Region: If the physician orders Nexium or Prilosec once a day and the facility policy is to administer the once a day medications at 9am, giving these medications at 9am would not be considered a medication error unless they were newly initiated or prn. Although the manufacturer's recommendation may be that these medications be given before meals, this recommendation is based on a patient newly starting the Proton Pump Inhibitor (PPI). If a patient has been taking a PPI as a maintenance medication, the drug levels reach a steady state concentration in the body and this administration "best practice" is no longer therapeutically relevant. Surveyors need to step back, look at the entire picture and if the person has been stable on the PPI, then giving it before/after meals is not an issue. Although surveyors often look at manufacturers recommendation, the SOM guidance in Appendix PP, F332, reads, "Count a wrong time error if the drug is administered 60 minutes earlier or later than its scheduled time of administration, BUT ONLY IF THAT WRONG TIME ERROR CAN CAUSE THE RESIDENT DISCOMFORT OR JEOPARDIZE THE RESIDENT'S HEALTH AND SAFETY."

## Acting on Drug Regimen Review F428

Nursing homes must have a pharmacist review the medication residents are taking on a monthly basis (often called the drug regimen review). If any problems with those medications are identified those problems (irregularities e.g. drug interactions, side effects, monitoring problems etc.) must be reported to the director of nursing and the attending physician and those reports must be acted upon.

The regulation does not indicate what “acted upon” means. Action could be signing the report the pharmacist submits. Action could be writing orders to address the medication issue, making a note in the progress notes, and discussing in a behavioral meeting or other meeting with nursing staff or others. In some cases the pharmacist may identify an irregularity and make a telephone call to the attending physician. The attending physician may disagree on the phone and the pharmacist may document the conversation. The regulation also does not specify how soon the report should be acted upon.

The following components should be considered if F428 is being cited:

- Surveyor should have evidence in the citation that would indicate the attending MD or DON has not acted on the pharmacist report. That means the surveyor must assure that the “action” is not hidden. For example, many pharmacists set up a system for MD and DON to just sign the report. However, often attending physicians and DON’s may “act” by a note in the record, through verbal meetings, rounds, telephone calls, and through orders. Surveyors should ask what the facility/pharmacist expects to show the report was acted upon. Also ask if there is any other methods that may be used for the DON and attending physician to indicate the pharmacist report has been acted upon.
- Surveyor should also include evidence that the specific irregularities identified should have been acted upon by the survey date. For example, if a pharmacist identifies changing a medication from a twice a day medication to a once a day medication. This irregularity may not need to be acted upon for months. An irregularity that is harming a resident, however, needs a more immediate action. The citation should reflect specific irregularity examples and evidence that indicates that the action on the report should have been taken prior to the date of the surveyor’s investigation.

**In most situations at citation at F 428 needs to include both of these components. If the citation does not address these areas the citation usually will not be upheld.**

## Investigation of Self-Administration F176

Residents residing in a nursing home have the right to self-administer medications if the interdisciplinary team has determined that this practice is safe. Surveyors who observe medication errors occurring in residents self-administering medications should not count those errors as part of the facility medication error rate. However if medication errors are occurring in residents who self-administer medications, surveyors should investigate the interdisciplinary teams evaluation of self-administration and if appropriate cite F176.

The following factors should be considered when investigating F 176:

- Does the care plan reflect self-administration of medications?
- Does the interdisciplinary team assessment address medication administration components? For example, does the assessment address how the medication will be stored, who will document the medication administration record, is observation by staff required, can resident select the dose, can the resident manipulate devices, etc.
- Does the interdisciplinary team assessment consider resident outcomes? For example, often residents who request to self-administer medications are trying to maintain at least a little control of their medications. Often they may only want to administer one or two medications like only their inhalers, eye drops or only oral medications. In many cases if these residents are not allowed to self-administer these medications they refuse to take them at all. In these cases, the interdisciplinary assessment may determine that the resident does not use appropriate technique in administering the inhaler for example. However if the residents condition is being controlled and they are not suffering side effects, the interdisciplinary team may appropriately decide to allow the resident to self-administer the medication and continue to work with training and guidance. The interdisciplinary team may determine that this is a better option than having the resident refuse the medication. The interdisciplinary team must evaluate what is the safest process for the resident. In some situations the resident self-administering the medication even without perfect technique may be better than the resident refusing the medication entirely.

Surveyors who do observe concerns with medication errors occurring during self-administration should investigate the interdisciplinary team assessment under F 176. It is important to consider the big picture and look at the resident's outcome, on-going training and interventions the facility is implementing and alternatives the interdisciplinary team has considered.

If the facility fails to consider the residents request to self-administer medications or fails to assess the resident and provide the safest environment for self-administration than the survey team may decide to cite F176.

## High Alert Medications

Medications that should be on **high alert** include:

- **Warfarin and other anticoagulants:** Blood thinners. Getting too much of these can lead to bleeding problems including ulcers or cranial bleeding both which can lead to death. Not getting enough of the blood thinner medications can lead to clots including a stroke. [ Coumadin®, Heparin, Aspirin, Plavix®, Lovenox®, Ticlid®, Fragmin®, Danaparoid®)
- **Insulin and other antidiabetic agents:** Getting too much can lead to hypoglycemia (low blood sugar) and death. Not getting enough can lead to hyperglycemia (high blood sugar) and death. [Insulin, glyburide, glipizide, metformin, pioglitazone]
- **Opioids (controlled substances, narcotics):** Getting too much can lead to respiratory depression (shallow or decreased breathing) and death. Not getting enough can allow residents to suffer needlessly in severe pain.
- **Methotrexate Tablets:** (other oral chemotherapy agents): Methotrexate is commonly used for arthritis. It may not be given each day so errors in dosage commonly occur. Getting too much leads to significant side effects and death. There are a lot of new oral chemotherapy medications that have similar concerns.
- **Chloral hydrate** (other long acting sleep medications i.e. Valium®): These medications can put elderly at risk for falls.
- **Antipsychotics:** In long term care typically responsible for the most adverse drug events typically falls, tardive dyskinesia and other movement symptoms.
- **Antibiotics:** Many of these reactions may be minimal and go away on there own ie rash. However if therapy is stopped because resident refuses or developed a rash etc. that needs to be communicated for possible changes.

**Notes:**

## The TOP TEN DANGEROUS drug interactions in the elderly:

1. Warfarin and Nonsteroidal Antiinflammatory Drugs

**NSAIDS:** Aleve, Anaprox, Ansaide, Arthrotec, Cataflam, Clinoril, Daypro, diclofenac, diflunisal, Dolobid, etodolac, Feldene, fenoprofen, flurbiprofen, ibuprofen, Indocin, indomethacin, ketoprofen, ketorolac, Lodine, meclofenamate, meclomen, meloxicam, Mobic, Morin, nabumetone, Nalfon, Naprelan, Naprosyn, naproxen, Orudis, Oruvail, oxaprozin, piroxicam, Ponstel, Relafen, sulindac, Tolectin, tolmetin, Toradol, Voltaren

2. Warfarin and Sulfa medications

**SULFA:** Bactrim, Cotrim, Eryzole, Gantanol, Gantrisin, Microsulfon, Pediazole, Septra, sulfadiazine, Sulfatrim, sulfamethizole, sulfamethoxazole

3. Warfarin and Macrolides

**MACROLIDES:** Azithromycin, Biaxin, Clarithromycin, Dynabac, Dirithromycin, E-Mycin, erythromycin, EES, Ery-Tab, Eryped, Zithromax

4. Warfarin and Quinolones

**QUINOLONES:** Alatrofloxacin, Avelox, Cipro, ciprofloxacin, enoxacin, Floxin, gatifloxacin, Levaquin, levofloxacin, lomefloxacin, Maxaquin, moxifloxacin, Noroxin, norfloxacin, ofloxacin, sparfloxacin, Tequin, trovofloxacin.

5. Warfarin and Phenytoin (Dilantin)

6. Ace Inhibitors and Potassium Supplements

**POTASSIUM:** K-Dur, Klor-con, Micro-K

7. Ace Inhibitors and Spironolactone

**ACE INHIBITORS:** Accupril, Aceon, Altace, benazepril, Capoten, captopril, enalapril, fosinopril, lisinopril, Lotensin, Mavik, noxipril, Monopril, perindopril, Prinivil, quinapril, ramipril,trandolapril, Univasc, Vasotec, Zestril.

8. Digoxin and Amiodarone (Cordarone, Pacerone)

9. Digoxin and Verapamil

10. Theophylline and Quinolones

Adapted from the American Medical Directors Association and American Society of Consultant Pharmacists.

Created by Englebert

Updated June 1, 2011

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## Short-Acting Bronchodilators

- Known as **RELIEVER** medications. Opens airways to let oxygen and other inhaled medications into the lungs. Causes Bronchial muscle relaxation by stimulating B2 receptors causing bronchodilation.
- Provide immediate relief of asthma symptoms.
- **WAIT AT LEAST 1 MINUTE IN BETWEEN PUFFS**

| <i>Generic Name<br/>(Brand Name)</i>                 | <i>Type of<br/>Inhaler<br/>Device</i> | <i>Usual<br/>Dose</i>                                | <i>Number of<br/>Inhalations<br/>in Inhaler</i>           | <i>Onset and<br/>Duration</i>                                     | <i>Adverse<br/>Effects</i>   | <i>Special<br/>Directions/Other</i>  |
|--|---------------------------------------|--|---|---|--|--|
| Albuterol<br>(Proventil®,<br>Ventolin®,<br>Accuneb®) | MDI,<br>Nebulizers                    | 2 puffs<br>every 4-6<br>hours,<br>nebs: TID<br>- QID | 200<br>inhalations  | Onset: 5-15<br>min<br>Peak: 30-<br>120 min<br>Duration:<br>4-6 hr | Palpitations,<br>nervousness,<br>nausea,<br>tremor,<br>tachycardia,<br>hypokalemia | Prime with 4 test<br>sprays prior to use<br>and if unused in 4<br>days. Shake well.    |
| Pirbuterol<br>(Maxair®)                              | Autohaler                             | 1-2 puffs<br>q4-6 hr,<br>max of<br>12/day            | 400<br>inhalations  | Onset: 5<br>min<br>Peak: 30<br>min<br>Duration:<br>3-4 hr         | Tremor,<br>nervousness   | Use test spray<br>before initial use<br>and if unused in a<br>long time.               |
| Terbutaline<br>(Brethair®,<br>Brethine®)             | Nebulizers,<br>MDI                    | 2 puffs<br>q4-6 hr                                   |   | Onset: 30-<br>40 min<br>Duration:<br>4-8 hr                       | Palpitations,<br>tachycardia,<br>headache,<br>seizure,<br>tremor,<br>nervousness   |  |
| Metaproterenol<br>(Alupent®)                         | Nebulizers,<br>MDI                    | 1-3 puffs<br>q3-4 hr<br>(max 12)                     | 100<br>inhalations<br>(7g)<br>200<br>inhalations<br>(14g) | Onset: 5<br>min<br>Peak: 30<br>min<br>Duration:<br>1-5 hr         | Hypertension<br>, palpitations,<br>flushing,<br>nausea,<br>tremor,<br>nervousness  | Don't use in<br>patients with<br>cardiac arrhythmias<br>associated with<br>tachycardia |
| Levalbuterol<br>(Xopenex®)                           | Nebulizers,<br>MDI                    | 2 puffs<br>q4-6 hr                                   | 200<br>inhalations  |   | Dizziness,<br>bronchitis,<br>pharyngitis,<br>rhinitis, pain,<br>asthma             | Prime with 4 test<br>sprays and then one<br>spray in not used in<br>3 days             |

## Long-Acting Bronchodilators

- Known as **CONTROLLER** medications. They relieve asthma symptoms by stimulating B2 receptors causing bronchodilation. They act to prevent asthma symptoms, not treat current symptoms. They have a longer duration of action than reliever medications.
- **NOT FOR ACUTE ASTHMA SYMPTOMS OR ATTACKS.**

| <i>Generic Name (Brand Name)</i> | <i>Type of Inhaler Device</i> | <i>Usual Dose</i>               | <i>Number of Inhalations in Inhaler</i> | <i>Onset and Duration</i>                           | <i>Adverse Effects</i>   | <i>Special Directions/Other</i>  |
|----------------------------------|-------------------------------|---------------------------------|---|---|--|--|
| Salmeterol (Serevent®)           | Diskus                        | 1 puff<br>BID                   | 60 doses                                | Onset: 10-20 min<br>Peak: 2-3 hr<br>Duration: 12 hr | Tachycardia, palpitations, headache, hypersensitivity, nervousness, bronchospasm                 | Warning: salmeterol may be associated with rare serious asthma episodes or asthma-related deaths. Risk might be greater in African American patients. SMART study findings. Discard after 60 days after opening or when empty. |
| Formoterol (Foradil®)            | Aerolizer (capsules)          | 1 cap<br>q12 hr<br>(max 2 caps) |   | Onset: 1-3 min<br>Peak: 1-3 hr<br>Duration: 8-12 hr | Tachycardia, nervousness, headache, tremor, dry mouth, palpitations, nausea, dizziness, insomnia | Only remove capsules immediately before use. Do not store in Aerolizer.  |

# Inhaled Corticosteroids

- Known as **CONTROLLER** medications. They act to prevent asthma symptoms, not treat current symptoms. They have a longer duration of action than reliever medications.
- They decrease inflammation and edema in the lungs and respiratory tract. Take continuously for best results. Discontinue cautiously to reduce withdrawal effects.
- Give 5 minutes after short-acting bronchodilator only if symptomatic.
- **NOT FOR ACUTE ASTHMA SYMPTOMS OR ATTACKS.**
- **RINSE MOUTH AND SPIT AFTER USE TO DECREASE RISK OF DEVELOPING ORAL THRUSH.**

| <i>Generic Name (Brand Name)</i>   | <i>Type of Inhaler Device</i> | <i>Usual Dose</i>               | <i>Number of Inhalations in Inhaler</i>    | <i>Onset and Duration</i>           | <i>Adverse Effects</i>  | <i>Special Directions/Other</i>                      |
|------------------------------------|-------------------------------|---------------------------------|--|-------------------------------------|---|--|
| Flunisolide (Aerobid®)             | MDI                           | 2 puffs BID, max 4 puffs BID    | 100 inhalations                            | 1-2 weeks                           | Diarrhea, nausea, vomiting, sore throat, headache, cold symptoms, bad taste, congestion     |  |
| Triamcinolone (Azmacort®)          | MDI w/spacer                  | 2 puffs TID-QID or 4 puffs BID  | 240 inhalations                            | 1-2 weeks                           | Sinusitis, pharyngitis, headache, flu syndrome, back pain                                   |  |
| Beclomethasone (Beclivent®, QVAR®) | MDI                           | 1-2 puffs BID (max 320 mcg BID) | 100 inhalations                            | 1-4 weeks                           | Headache, pharyngitis, upper respiratory infection, rhinitis, asthma                        |  |
| Fluticasone (Flovent®)             | Diskus, MDI                   | Max 880 mcg BID                 | Diskus – 60 doses<br>MDI – 120 inhalations | 1-2 weeks                           | Upper respiratory infection, throat irritation, sinusitis, hoarseness, cough, headache      |  |
| Budesonide (Pulmicort®)            | Nebs, Turbuhaler              | 1-4 puffs BID, max 4 BID        | 200 actuations                             | Initial – 24 hr<br>Peak – 1-2 weeks | Diarrhea, dyspepsia, nausea, headache, arthralgias, respiratory tract infection, sinusitis, | When red indicator shows in window, 20 doses remain. |

|  |  |  |  |  |                   |  |
|--|--|--|--|--|-------------------|--|
|  |  |  |  |  | throat irritation |  |
|--|--|--|--|--|-------------------|--|

## **Inhaled Anticholinergic Medications**

- Known as **RELIEVER** medications. They work to relieve bronchoconstriction and secretions. Used for maintenance treatment of bronchospasm.
- **DO NOT USE DURING AN ACUTE ASTHMA ATTACK.**
- **Caution using these medications in patients with narrow angle glaucoma.**

| <i>Generic Name<br/>(Brand Name)</i> | <i>Type of<br/>Inhaler<br/>Device</i> | <i>Usual<br/>Dose</i>       | <i>Number of<br/>Inhalations<br/>in Inhaler</i> | <i>Onset and<br/>Duration</i>   | <i>Adverse<br/>Effects</i>  | <i>Special<br/>Directions/Other</i>  |
|--------------------------------------|---------------------------------------|-----------------------------|---|---|---|--|
| Ipratropium<br>(Atrovent®)           | MDI<br>Nebulizer                      | 2 puffs<br>4 times<br>daily | 200<br>inhalations                              | Onset: 3-30<br>min<br>Peak: 90-180<br>min<br>Duration:<br>240-480 min | Headache,<br>dizziness, dry<br>mouth,<br>nausea,<br>bronchitis,<br>dyspepsia                            | Do not use if<br>allergic to peanuts<br>or soybeans.<br>Shaking not<br>required. Prime<br>with 2 test sprays<br>initially and if<br>unused in 3 days.                          |
| Tiotropium<br>(Spiriva®)             | Capsules,<br>HandiHaler               | 1<br>capsule<br>daily       |   | Onset: 30<br>min<br>Peak: 1.5 – 3<br>hr<br>Duration: 24<br>hr         | Tachycardia,<br>constipation,<br>dry mouth,<br>blurred<br>vision,<br>urinary<br>retention,<br>sinusitis | Only remove<br>capsules directly<br>before use. Do not<br>store them in the<br>device. Do not use<br>if you have an<br>allergy to lactose.<br>(not the same as<br>intolerance) |

## Combination Inhaled Medications

- Known as **CONTROLLER** medications. They are combinations of medications that have different mechanisms of action to help prevent symptoms.
- If the combination medication contains a corticosteroid, make sure to rinse your mouth and spit after use. Do not swallow.

| <i>Generic Name (Brand Name)</i>             | <i>Type of Inhaler Device</i> | <i>Usual Dose</i>              | <i>Number of Inhalations in Inhaler</i> | <i>Onset and Duration</i>                         | <i>Adverse Effects</i>  | <i>Special Directions/Other</i>                 |
|--|-------------------------------|--------------------------------|---|---|---|---|
| Ipratropium/ Albuterol (Combivent®, Duoneb®) | MDI, Nebulizers               | 2 puffs QID (max 12 puffs/day) | 200                                     | Onset: 15 min<br>Peak: 60 min<br>Duration: 4-5 hr | Hypertension, tachycardia, diarrhea, nausea, vomiting, dry mouth, dyspepsia, headache, bronchitis, cough, change in voice | Do not use if allergic to peanuts or soybeans.  |
| Salmeterol/ Fluticasone (Advair®)            | Diskus                        | 1 puff BID                     | 60 doses                                | 1-2 weeks   | Tachycardia, hypercortisolism, thrush, headache, hoarseness, throat irritation  | Discard after opened for 60 days or when empty. |
| Formoterol/ Budesonide (Symbicort®)          | Turbuhaler                    |                                | 200 inhalations                         | 2-4 weeks   |   |   |

## Inhaled Anti-inflammatory Medications

- Known as **CONTROLLER** medications. They work by preventing the release of inflammatory mediators from mast cells. They are long-term prevention of airway inflammation. Used for **PREVENTION** of asthma symptoms only, not for current attacks.
- **NOT FOR ACUTE ASTHMA SYMPTOMS OR ATTACKS.**

| <i>Generic Name (Brand Name)</i> | <i>Type of Inhaler Device</i> | <i>Usual Dose</i> | <i>Number of Inhalations in Inhaler</i> | <i>Onset and Duration</i> | <i>Adverse Effects</i>   | <i>Special Directions/Other</i>   |
|----------------------------------|-------------------------------|-------------------|---|---------------------------|--|---|
| Cromolyn Sodium (Intal®)         | MDI, Nebs                     | 2 puffs QID       |   | 4 weeks                   | Bad taste, cough, throat irritation  |   |
| Nedocromil Sodium (Tilade®)      | MDI                           | 2 puffs QID       | 104 inhalations                         | 1 week                    | Bad taste, nausea, vomiting, dizziness, headache, cough, congestion, throat pain, rhinitis | Prime with three test sprays before initial use, Discontinue cautiously |

### **Using Inhalers In Combination:**

1. If patient is currently experiencing acute asthma symptoms, they should use their short-acting bronchodilator inhaler. This is a relief medication. If more than one puff is prescribed for acute symptoms, 1 minute should be waited in between puffs of short-acting inhalers. This allows the airways to open up and the second puff can get deeper into the lungs to improve symptoms.
2. If the patient is experiencing acute asthma symptoms at the scheduled time for their controller medication (inhaled corticosteroids, anticholinergics, combinations, or anti-inflammatory) then they should use their short-acting bronchodilator medication first. Wait a minute in between puffs of the reliever medication, and then wait approximately 5 minutes before their scheduled dose of controller medication. This allows for the airways to be open so that the controller medication can get deeper in the lungs to work.

### **Helpful Websites:**

Maxair Autohaler:

[www.3m.com/us/healthcare/pharma/maxair/instructions\\_english.pdf](http://www.3m.com/us/healthcare/pharma/maxair/instructions_english.pdf)

[www.3m.com/us/healthcare/pharma/maxair/hcp\\_overview.jhtml](http://www.3m.com/us/healthcare/pharma/maxair/hcp_overview.jhtml)

- Website contains video and written instructions

Foradil Aerolizer:

[www.foradil.us/frdl/application?namespace=main&origin=all\\_nav\\_left.jsp&event=content\\_display&event\\_input=how\\_to\\_use\\_foradil\\_flash&category=foradil](http://www.foradil.us/frdl/application?namespace=main&origin=all_nav_left.jsp&event=content_display&event_input=how_to_use_foradil_flash&category=foradil)

- Website contains an interactive slide show on using the Foradil Aerolizer device.

Spiriva HandiHaler:

[www.spiriva.com/consumer/las-take-takingspiriva.jsp](http://www.spiriva.com/consumer/las-take-takingspiriva.jsp)

- Written instructions with illustrations.

Advair and Salmeterol Diskus:

[http://www.advair.com/asthma\\_inhaler\\_instructions.html](http://www.advair.com/asthma_inhaler_instructions.html)

- Written instructions

Turbuhaler:

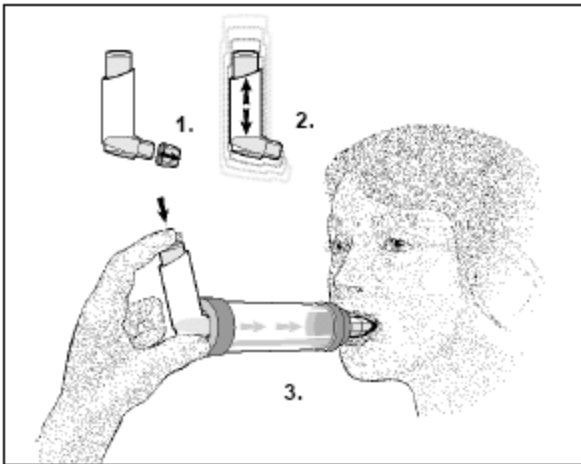
<http://www.twistclickinhale.com/instructions/index.asp#howto>

- Written instructions with illustrations.

## To Use an MDI with a Spacer:

1. Remove the caps from the MDI and spacer device. Shake the MDI well.
2. Insert the MDI into the open end of the spacer, which is opposite the mouthpiece.
3. Place the mouthpiece of the spacer between your teeth and seal your lips tightly around it.
4. Breathe out completely.
5. Press the canister once to release the medicine. The medicine will be trapped in the spacer.
6. Breathe in slowly and completely through your mouth. With some spacers, you will hear a hornlike sound if you are breathing too quickly. This means you need to slow down on your next breath.
7. Hold your breath for at least 10 seconds to allow the medication to deposit in your lungs.
8. Wait for about one minute and then repeat Steps 1-7 for every puff of medication ordered.
9. Replace the caps on your MDI and spacer when finished.
10. If you are using an MDI that contains a steroid, gargle and rinse your mouth with water or mouthwash after each use.





**Fig. 1. MDI with spacer. (1) Uncap and (2) shake well. Place the mouthpiece between the teeth (3) and seal the lips tightly around it.**

## To Use an MDI Without a Spacer:

1. Remove the cap from the MDI and shake it well.
2. Hold the MDI by placing your index finger on top of the metal canister and thumb on the bottom of the plastic mouthpiece.
3. Tilt your head back slightly and breathe out.
4. Open your mouth wide, and place the MDI about two inches in front of your mouth.
5. Breathe in and out one time.
6. As you begin to inhale on your next breath, press the metal canister down. Breathe in slowly and as deeply as you can. You should breathe in for about 3 to 5 seconds
7. Hold your breath for at least 10 seconds to allow the medication to deposit in your lungs.
8. After waiting at least one minute, repeat Steps 1-7 for each puff of medication ordered.
9. Replace the cap on your MDI when you are finished. If you are using an MDI that contains a steroid, gargle and rinse your mouth with water or mouthwash after each use.



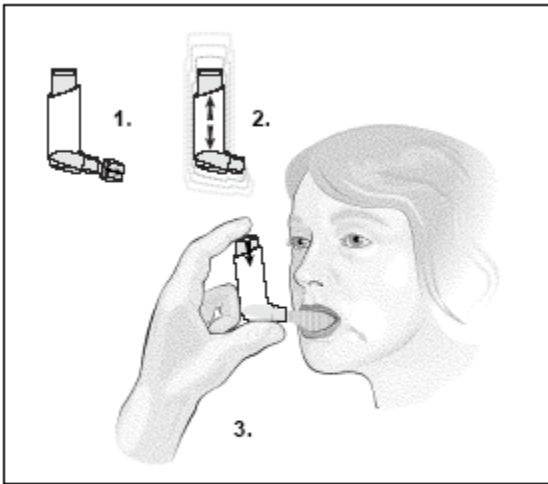


Fig. 2. Metered dose inhaler (MDI). (1) Uncap and (2) shake well. Hold the MDI about 2 inches away from the mouth (3).

## Autohaler

To prime the autohaler:

1. Remove mouthpiece cover by pulling down lip on back of cover.
2. Point the mouthpiece away from yourself and other people so that the priming sprays will go into the air. Push the lever up so that it stays up.
3. To release a priming spray: Push the white test fire slide on the bottom of the mouthpiece in the direction indicated by the arrow on the test fire slide.
4. To release the second priming spray: Return the lever to its down position. Repeat steps 2 and 3. Return the lever to its down position.

Using the autohaler:

1. Remove mouthpiece cover by pulling down lip on back of cover. Inspect the mouthpiece for foreign objects. Locate “up” arrows on autohaler. Locate air vents at bottom of autohaler.
2. Hold autohaler upright. The arrows should point up. Autohaler must be held upright while raising the lever. Raise lever so that it stays up. It will “snap” into place. Do not lower lever until step 6.
3. Hold autohaler around the middle and shake gently several times.
4. Continue to hold autohaler upright. Do not block air vents at bottom of autohaler. Exhale normally before use.
5. Seal your lips tightly around the mouthpiece. Inhale deeply through the mouthpiece with steady, moderate force. You will hear a “click” and feel a soft puff when your inhaling triggers the release of medicine. Do not stop when you hear and feel the puff. Continue to take a full, deep breath. Take the autohaler away from your mouth when you are done inhaling. Hold your breath for 10 seconds, and then exhale slowly.
6. Continue to hold the autohaler upright while lowering the lever. Lower lever after each inhalation. Wait one minute in between inhalations if prescribed more than one at a time. Following use, make sure the lever is down and replace mouthpiece cover.



**General guidelines for use and care of dry powder inhalers:**

- Inhaling through the dry powder inhaler should be done with more force than when you use with a metered dose inhaler because there is no propellant. When you inhale you are pulling the medication out of the device. Your health care provider should instruct you on how fast you should breathe in for your particular DPI.
- Keep your dry powder inhaler in a dry place at room temperature.
- Never place the DPI in water.
- Never shake or breathe into the DPI.
- Unlike other inhaled medications, you may not taste, smell or feel the dry powder. This experience may be different from what you are used to. As long as you are following the directions, you will get your full dose of medication.
- If you are using a corticosteroid medication, rinse your mouth and gargle after using the DPI. Do not swallow.

## Diskus

### 1. OPEN

Hold the DISKUS® in one hand and put the thumb of the other hand on the **thumbgrip**. Push the thumbgrip away, as far as it will go, until the mouthpiece appears and snaps into position.

### 2. CLICK

Hold the DISKUS in a level, horizontal position with the mouthpiece toward you. Slide the **lever** away from you as far as it will go, until it **clicks**. The DISKUS is now ready to use. Every time the **lever** is pushed back, a dose is ready to be inhaled. This is shown by a decrease in numbers on the dose counter.

**To avoid releasing or wasting doses do not:**

- **Close the DISKUS at this time.**
- **Tilt the DISKUS when a dose is loaded.**
- **Play with the lever.**
- **Advance the lever more than once.**

### 3. INHALE

Breathe out as far as is comfortable, holding the DISKUS level and away from the mouth. Remember; never breathe out into the DISKUS mouthpiece.

Put the mouthpiece to your lips, and then breathe in quickly and deeply through the DISKUS, not through the nose.

Remove the DISKUS from the mouth. Hold your breath for about 10 seconds, or for as long as is comfortable, and breathe out slowly.

**\*CLOSE the DISKUS when finished taking a dose so that the DISKUS will be ready to take the next dose.** Put your thumb on the thumbgrip and slide the thumbgrip back toward you as far as it will go. The DISKUS will click shut. The lever will automatically return to its original position. The DISKUS is now ready to take the next scheduled dose, due in approximately 12 hours.

After inhaling the dose, rinse your mouth with water, without swallowing. And remember:

#### **REMEMBER:**

- Never take the DISKUS apart.
- Always keep the DISKUS in a dry place.
- Never wash the mouthpiece or any part of the DISKUS.
- Never breathe out into the DISKUS mouthpiece.
- Never take an extra dose, even if you feel you did not receive a dose.
- Always use the DISKUS in a level, horizontal position



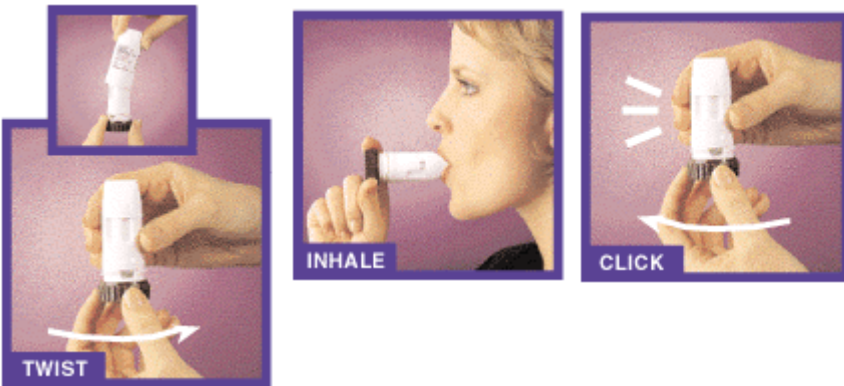
## Turbuhaler

### Loading a dose

- Twist the cover and lift off.
- In order to provide the correct dose, the turbuhaler must be held in the upright position (mouthpiece up) whenever a dose of medication is being loaded.
- Twist the brown grip fully to the right as far as it will go. Twist it back again fully to the left.
- You will hear a click.

### Inhaling the dose

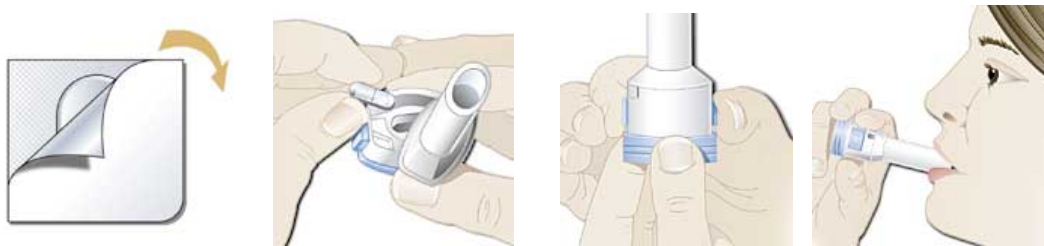
- When you are inhaling, the turbuhaler must be held in the upright (mouthpiece up) or horizontal position.
- Turn your head away from the inhaler and breathe out. Do not shake the inhaler after loading it.
- Place the mouthpiece between your lips and inhale deeply and forcefully for about 3-5 seconds. Hold your breath for about 10 seconds or as long as is comfortable. You may not taste or feel the medication.
- Remove the inhaler from your mouth and exhale. Do not blow or exhale into the mouthpiece.
- Do not chew or bite on the mouthpiece.
- If more than one dose is required, just repeat the steps above.
- **When you are finished, place the cover back on the inhaler and twist shut. Rinse your mouth with water. Do not swallow.**
- **Keep your turbuhaler clean and dry at all times.**
- Do not use the turbuhaler if it has been damaged or if the mouthpiece has become detached.



Created by Englebert  
Updated June 1, 2011

## Aerolizer

1. Peel paper backing from blister card. Push capsule through remaining foil. **IMMEDIATELY** before use. Pull off inhaler cover and twist open mouthpiece.
2. Put capsule in Aerolizer chamber and twist mouthpiece closed. Never place capsule directly into mouthpiece.
3. Press both side buttons **ONCE** only and release, with aerolizer held upright. You'll hear a click as the capsule is punctured. Release the buttons, or capsule will not spin.
4. Place mouth on mouthpiece and tilt head back slightly. Hold aerolizer with blue buttons pointing sideways and inhale.
5. Breathe in fast, steadily and deeply. As the medicine is released, you'll experience a sweet taste and hear a whirring noise. (If you don't, the capsule may be stuck; just tap on the side of the aerolizer to loosen the capsule. Do not press the side buttons again.)
6. Remove the aerolizer from your mouth and hold your breath for as long as you comfortably can.
7. Exhale gently.
8. Open the aerolizer to see if any powder remains in the capsule. If it does repeat the steps above.
9. Discard the empty capsule.



## HandiHaler

1. Open the dust cap by pulling it upwards. Then open the mouthpiece.
2. Place the capsule in the center chamber. It does not matter which end of the capsule is placed in the chamber.
3. Close the mouthpiece firmly until you hear a click, leaving the dust cap open.
4. Hold the HandiHaler device with the mouthpiece upwards and press the piercing button completely in once, and release. This makes holes in the capsule and allows the medication to be released when you breathe in.
5. Breathe out completely before using. DO NOT breathe into the HandiHaler mouthpiece at any time.
6. Raise the HandiHaler device to your mouth and close your lips tightly around the mouthpiece.
7. Keep your head in an upright position and breathe in slowly and deeply but at a rate sufficient to hear the capsule vibrate. Breathe in till your lungs are full; then hold your breath as long as is comfortable and at the same time take the HandiHaler device out of your mouth.
8. Resume normal breathing.
9. Repeat steps 6 and 7 to ensure you get the full dose of medicine.
10. After finishing your dose, open the mouthpiece again. Tip out the used capsule and discard.
11. Close the mouthpiece and dust cap for storage of your HandiHaler device.



# Informed Consent Requirement in NH WI Stats. 50.08 Decision Guide

