Table 5. Matching Antidepressants to Patients: Selection Dosing & Cost (page 1 of 4) [UMHS Preferred Agents in **Bold**]

Mechanisms of action	Serotonin Selective Reuptake Inhibitors			
Generic name *(Brand Name)*	**citalopram** *(Celexa)*	escitalopram *(Lexapro)*	**fluoxetine** (generic available) *(Prozac & Sarafem)*	fluoxetine weekly *(Prozac Weekly)*
Side effects and other attributes used in patient selection	May be initially sedating or initially increase alertness. Mild initial sedation is dose-dependent. May be least stimulating SSRI. Negligible drug-drug interactions.	Negligible drug-drug interactions.	Tends to produce more initial nervousness and arousal than other SSRIs. Very long half-life (7-15 days), so less likely to cause withdrawal on abrupt discontinuation.	Tends to produce more initial nervousness and arousal than other SSRIs. Very long half-life: 7-15 days.
Sexual dysfunction	Common	Common	Common	Common
Pregnancy [b] /Lactation [c]	C, L3	C, L3	C, L2 (older) L3(infant)	C, L2 (older) L3(infant)
Selected important drug-drug interactions [d, e]	Minimal inhibitor of CYP 2D6 isoenzymes. Good choice for medical /surgical patients *without* renal impairment.	Comparable to citalopram.	Potent inhibitor of CYP 2D6 isoenzymes; increases risk of phenytoin (Dilantin) toxicity.	Potent inhibitor of CYP 2D6 isoenzymes; increases risk of phenytoin (Dilantin) toxicity.
Patient profile most likely to benefit	Elderly patient, patient with an agitated depression, or patient with GI distress / sensitivity.	Elderly patient, patient with an agitated depression, or patient with GI distress / sensitivity. Claims of more rapid efficacy may be exaggerated.	Noncompliant or "forgetful" patient (i.e., used as a "depot" oral antidepressant); excessive fatigue.	Identical to fluoxetine; also, once weekly may reduce personnel costs in institutional settings.
Patient profile least likely to benefit	Elderly patient with excessive sleep and apathy. Note: 20% excreted by kidney.	Elderly patient with excessive sleep and apathy. Note: 20% excreted by kidney.	Patient on several medications and/or frequent medication changes anticipated.	Identical to fluoxetine.
Available preparations & doses	20, 40 mg scored, coated tablets.	5 (unscored), 10, 20 mg scored tablets.	10,20,40 mg capsules; 10 mg scored tabs; 20 mg/5ml concentrate	90 mg capsule containing enteric-coated pellets
Usual dose, cost/mo. [f]; Max dose, cost/mo [f]	20-40 mg/d $71-$73 60 mg/d $144	15-20mg/d $93-$65 40 mg/d $130	20-40 mg/d $9-$83 generic 80 mg/d $163 generic	90 mg/week $85 90 mg 2x wk $170
Dosing for youthful, reasonable health	20 mg P.O. Qam (or QHS if sedating.) Titrate upward if no response after 6 weeks.	10-20 mg/d P.O. Qam (or QHS if sedating);15-20 mg/d thereafter. Titrate upward if no response in 6 weeks.	20 mg P.O. Qam; increased doses may be given a.m. and noon, if excessive arousal. Titrate upward if no response in 6 weeks.	20 mg/d fluoxetine x 7d; thereafter, 90 mg/wk. Titrate upward if no response in 6 weeks.
Dosing for frail, elderly, medically ill	5-10 mg P.O. Qam x 3 d, 10-20 mg P.O. Qam x 3 d, etc. until desired initial dose.	5 mg/d P.O. Qam (or Qpm if sedating); titrate upward weekly to 15 mg/d initial dose.	5-10 mg P.O. Q every other a.m. For 3-4 days (i.e., two doses) then similarly titrate upward to 20 mg P.O. Qam initial dose.	Identical to fluoxetine; slowly titrate upward to 40-60 mg/d before switching to 90 mg/ weekly.

Adapted from tables developed by David J. Knesper, M.D., University of Michigan, Department of Psychiatry.
Note: It is the responsibility of the treating physician to stay current with the psychopharmacology of antidepressants and to determine dosages and drug interactions. Patients treated with antidepressants should be closely observed for possible worsening of depression of suicidality, especially at the beginning of therapy or when the dose increases or decreases.

(Footnotes continue)

Table 5. Matching Antidepressants to Patients: Selection Dosing and Cost (page 2 of 4)

Mechanisms of action	Serotonin Selective Reuptake Inhibitors		
Generic name *(Brand Name)*	paroxetine (generic available) *(Paxil)*	paroxetine controlled release *(Paxil CR)*	sertraline *(Zoloft)*
Side effects and other attributes used in patient selection	Tends to cause fewer arousal and insomnia effects common with SSRIs; possesses some anti-cholinergic effects.	Initial nausea rate is 14% vs 23% for immediate release; otherwise side-effect profiles nearly identical.	Tends to initially increase alertness; patients with psychomotor retardation may benefit.
Sexual dysfunction	Common	Common	Common
Pregnancy [b] /Lactation [c]	B, L2	B, L2	B, L2
Selected important drug-drug interactions [d, e]	Potent inhibitor of CYP 2D6 isoenzymes.	Potent inhibitor of CYP 2D6 isoenzymes.	Weak inhibitor of CYP 2D6 isoenzymes. Good choice for medical /surgical patients. Contraindicated with pimozide (Orap).
Patient profile most likely to benefit	Less likely to produce initial anxiety and/or insomnia.	Less likely to produce initial nausea. Nausea rate at 25 mg/d comparable to escitalopram at 20 mg/d.	The medical/surgical patient on one or more medical drugs. Initial activation and increased alertness desired.
Patient profile least likely to benefit	Patients who may require high doses or elderly (who are more susceptible) are more prone to anticholinergic effects (e.g. delirium). Half-life increased by 170% in elderly.	Patients who may require high doses or elderly (who are more susceptible) are more prone to anticholinergic effects (e.g. delirium). Half-life increased by 170% in elderly.	Patient sensitive to any of the typical SSRI side-effects (e.g. increased arousal).
Available preparations & doses	10,20,30,40 mg tabs; 10mg/5ml concentrate	12.5 and 25 mg enteric-coated tabs.	25, 50, 100 mg scored, coated tabs, 20 mg/ml concentrate
Usual dose, cost/mo. [f]; Max dose, cost/mo [f]	20-40 mg/d $59-$64[g] generic 60 mg/d $118[g] generic	25-50 mg/d $82-$164 62.5 mg/d $252	75-150 mg/d $110-$220 200 mg/d $147
Dosing for youthful, reasonable health	20 mg P.O. Qam; increased doses may be given a.m. and noon; if excessive arousal. Give QHS if sedating.	25 mg/d P.O. Qam x 7d; 50 mg/d thereafter; increase to 62.5 mg/d if no response in 6 weeks.	50 mg P.O. Qam x 1 week; 75 mg P.O Qam thereafter; increased doses may be given a.m & noon, if excessive arousal.
Dosing for frail, elderly, medically ill	5-10 mg P.O. Qam x 3-4 d, 10-20 mg P.O. Qam x 3-4 d, etc. until desired initial dose.	12.5 mg/d P.O. Qam x 7d; 25 mg/d P.O. Qam, etc., until desired initial dose.	12.5-25 mg P.O. Qam x 3 d; 25-50 mg P.O. Qam x 3 d, etc., until desired initial dose.

[a] If a patient fails one SSRI class of antidepressants, another SSRI may tried (don't try a third SSRI). During the initial phase of treatment all SSRI's may produce one or all of the following: Increased arousal (agitation), insomnia, nausea, diarrhea (due to increased GI motility), initial weight loss and subsequent weight gain after about 6 months, sexual dysfunction. Uncommon adverse events include: akathisia (restlessness), psychomotor slowing, mild parkinsonism; apathy. Dosage should be decreased 50% in patients with hepatic impairment as a 3-fold increase in plasma levels is possible.

[b] Pregnancy Risk Category:
A: Controlled studies show that the possibility of fetal harm is remote
B: No controlled studies in pregnant women, but no fetal risk has been shown
C. Drugs should be given only if the patient benefit justifies the potential risk to the fetus
D. Positive evidence of human fetal risk, but benefits may be acceptable sometimes
X. Contraindicated in women who are or may become pregnant.

[c] Lactation Risk Category:
L1: Safest L4: Possibly Hazardous
L2: Safer L5: Contraindicated
L3: Moderately Safe
From Hale, T. Medications and mothers' milk. Amarillo, TX. : Pharmasoft Medical Publishing, 2000

[d] Do not combine any of the listed antidepressants with monoamine oxidase inhibitors (MAOIs).

[e] The following drug interaction data bases are recommended: drug-interaction.com, hanstenandhorn.com, medicine.iupui.edu/flockhart/

[f] Cost = Average wholesale price based -10% for brand products and Maximum Allowable Cost (MAC) + $3 for generics on 30-day supply, *Amerisource Bergen item Catalog 1/04 & Blue Cross Blue Shield of Michigan Mac List, 2/15/04.*

[g] Generic version recently available. Cost expected to drop appreciably below this amount.

Table 5. Matching Antidepressants to Patients: Selection Dosing and Cost (page 3 of 4)

Mechanisms of Action **Generic name** ***(Brand Name)***	Serotonin-2 Antagonist/ Reuptake Inhibitor nefazodone (Serzone)	Serotonin/Norepinephrine Reuptake Inhibitor venlafaxine extended release *(Effexor XR)*	Serotonin/Norepinephrine Reuptake Inhibitor duloxetine [h] *(Cymbalta)*
Side effects and other attributes used in patient selection	**BLACK-BOX WARNING:** Liver damage and/or liver failure in 1/250,000 patients. Corrects sleep disturbances and reduces anxiety in about a week. Side effects somewhat opposite to SSRIs. Fatigue and dizziness common complaints.	Identical to those common to all SSRIs with more nausea. Sustained hypertension risk is 3% at ≥ 300 mg. BP increases are dose-dependent, with a linear dose-response. Constipation is unusual but may cause discontinuation.	Similar to SSRIs but more exaggerated. Mild, blood pressure elevations ≤ 4% of patients. Nausea, dry mouth, somnolence and constipation may lead to discontinuation.
Sexual dysfunction	Unlikely	Less common	Less common
Pregnancy [b] /Lactation [c]	C, L4	C, L3	Pending
Selected important drug-drug interactions [d, e]	Moderate inhibitor of CYP3A3/4 and p-glycoprotein. Causes 15% reduction in oral clearance of digoxin. Contraindicated with cyclosporine, simvastatin (Zocor).and many other statins, pimozide (Orap), and sildenafil (Viagra).	Usually clinically insignificant due to low protein binding and weak inhibition of P450 enzymes.	Insufficient information.
Patient profile most likely to benefit	The depressed, over-anxious patient with marked difficulty sleeping.	Patients with menopausal symptoms or failing an SSRI trial. At higher doses (e.g., 225 mg or higher), patients with chronic pain.	Patient with depression and chronic pain (effects on pain are dose-dependent). Patient failing an SSRI trial.
Patient profile least likely to benefit	Patients who sleep excessively with life-long underachievement and excessive contentment. Patients with severe depression tend to require maximum dose.	Patients with unstable BP and perhaps, those who are GI sensitive. A clinically significant withdrawal syndrome requires slow downtaper.	Patient with significant anorexia, constipation, or other GI symptoms.
Available preparations & doses	100, 150 mg scored; 50, 200, 250 mg unscored tablets.	37.5, 75, 150 mg capsules (immediate release tablets available)	Insufficient information.
Usual dose, cost/mo. [f]; Max dose, cost/mo [f]	300-400 mg/d $31-31 generic 600 mg/d $46 generic	150-225 mg/d $96 -$184 375-450 mg/d $280 -$288	60 mg QHS; TBA in final release 60 mg BID
Dosing for youthful, reasonable health	Use 150 mg tablets: ½ tab at HS x 4 nights; 1 tab x 4 nights; ½ tab in am and 1 tab at HS x 4 nights; ½ tab in am and 1½ tabs HS x 4 nights; ½ tab in am and 2 tabs HS x 4 nights; 1 tab am and 2 tabs HS thereafter.	Every 3-7 day titrate upward, starting at 37.5 mg reduces risk of nausea; initial trial at 225 mg/d. Reduce dose 50% for hepatic impairment; 25% for renal.	Slowly titrate up from smallest dose.
Dosing for frail, elderly, medically ill	Every 3-4 days titrate upward, starting at 25-50 mg BID; 150 mg BID initial trial.	Every 7 day titrate upward, starting at 37.5 mg; initial trial at 150 mg/d. Reduce dose 50% for hepatic impairment; 25% for renal.	Not recommended until further information is available.

[h] Duloxetine should be available in mid-2004; *all information is preliminary.*

Table 5. Matching Antidepressants to Patients: Selection Dosing and Cost (page 4 of 4)

Mechanisms of action	Serotonin & alpha-2 receptor blocker; (increases release of serotonin & norepinephrine)	Norepinephrine/Dopamine Reuptake Inhibitor
Generic name ***(Brand Name)***	mirtazapine *(Remeron)*	bupropion sustained-release *(Wellbutrin SR, Wellbutrin XL, Wellbutrin IR)*
Side effects and other attributes used in patient selection	Produces sleep; *lower* doses produce more sleep than do higher doses. Weight gain may be ≥ 10 lbs. Has antiemetic properties (blocks 5HT3 receptor as does ondansetron/ Zofran). Risk of neutropenia = 1.5%; risk agranulocytosis = 0.1%.	Least likely to switch patient to mania. Most activating antidepressant available. DO NOT USE if history of seizure, head trauma, substance abuse, bulimia, anorexia or electrolyte disturbance.
Sexual dysfunction	Unlikely	Rare
Pregnancy [b] /Lactation [c]	C, L3	B, L3
Selected important drug-drug interactions [d, e]	Usually clinically insignificant due to extensive metabolism via CYP1A2, 2D6, 3A4. Does not appear to interfere with the metabolism of other drugs.	Metabolized primarily by CYP2B6. Drugs inhibiting CYP2B6 are not currently identified. Recent report finds that bupropion may cause clinically significant inhibition of CYP2D6.
Patient profile most likely to benefit	The medically ill patient with weight loss, insomnia and nausea.	The now depressed, actually or potentially, bipolar patient. The apathetic, low energy patient. Patients motivated to stop smoking. Helpful for ADHD [i].
Patient profile least likely to benefit	The obese patient with fatigue and hypersomnia. Patients with neutropenia.	Patients who are agitated, very anxious and/or panicky. Patients at risk for seizures and/or with history of head trauma, substance abuse, eating disorder, or electrolyte disturbance.
Available preparations & doses	15, 30 mg scored tablets; 45 mg unscored tablet; 15, 30, 45 mg unscored orally disintegrating (*not* orally dissolving) tablet *(Remeron SolTab).*	For SR: 100, 150, 200 mg coated tablet For XL: 150, 300 mg coated tablet For IR: 75, 100 mg tablets
Usual dose, cost/mo. [f]; Max dose, cost/mo [f]	30-45 mg/d $37-$37 generic 60 mg/d $74 generic	For SR: 300-400 mg/d (max 450 mg/d) $116-$216 For XL: 300-450 mg/d (max dose 450 mg/d) $109-192 For IR: 200-450 mg/d (max dose 450 mg/d) $26-55 generic
Dosing for youthful, reasonable health	7.5 (more sleep) to 15 mg (less sleep) night one; 30 mg night two; increase to 45 mg if no improvement in two weeks. Reduce dose by 50% for hepatic impairment; 25% for renal.	For SR: 100-150 mg with breakfast and before 7 pm; increase to minimum dose: 150 mg BID. For XL: 150 mg with breakfast, increase as tolerated to 300-400 mg/d. For IR: 100 mg BID, increase to TID after 3 days, max dose 450 mg/d. DO NOT DOUBLE-UP MISSED DOSES.
Dosing for frail, elderly, medically ill	15 mg at night x 3; 30 mg thereafter; increase to 45 mg if no improvement in two weeks. Reduce dose by 50% for hepatic impairment; 25% for renal.	For SR: Every 3-4 day titrate upward, starting at 100 mg; initial trial at 150 mg BID; last dose before 7 pm. For XL: Every 5-7 days titrate upward, starting at 150 mg; plateau at 300 mg for 2-3 weeks before advance to 450 mg. For IR: Every 3-4 days titrate upward, starting at 50-100 mg/d, increasing by 50-100 mg, up to max of 450 mg/d. DO NOT DOUBLE-UP MISSED DOSES.

[i] "ADHD" means attention deficit hyperactivity disorder.