

Running Head: MEMORY AND PERCEPTION TESTS PREDICT DRUG ERRORS

Online Appendix

Drug name stimuli and data

Prescribed Drug	Dispensed Drug	Transformed Real-World Error Rate	Backward Masking Error Rate	Progressive Demasking Error Rate	Speech-in-Noise Error Rate	Short-Term Memory Error Rate	Target/Prescribed Name Familiarity Ratings
Alprazolam	Lorazepam	5.0	5.0	0.0	22.5	7.7	5
Amlodipine Besylate/Olmesartan Medoxomil	Amlodipine Besylate/Benazepril HCL	42.8	60.0	30.0	32.5	33.3	3
Amlodipine	<i>Ambien</i>	1.4	7.5	0.0	37.5	0.0	5
Amlodipine	Amitriptyline	1.9	12.5	0.0	57.5	0.0	5
<i>Amoxil</i>	<i>Augmentin</i>	2.3	20.0	0.0	30.0	2.6	3
<i>Augmentin</i>	<i>Amoxil</i>	24.6	5.0	0.0	52.5	2.6	5
Bacitracin	Bactroban	255.5	27.5	2.5	10.0	12.8	5
Benazepril	Bisoprolol	18.2	5.0	0.0	7.5	2.6	5
<i>Benicar</i>	Benazepril	26.4	15.0	0.0	30.0	0.0	5
Buprenorphine HCL	Buprenorphine HCL/Naloxone HCL	211.1	20.0	2.5	32.5	7.7	3
Butalbital/Aspirin/Caffeine	Butalbital/Acetaminophen/Caffeine	811.6	40.0	12.5	42.5	28.2	5
<i>Cardura</i>	<i>Counadin</i>	34.7	10.0	0.0	22.5	0.0	3
Cefdinir	Cephalexin	5.6	15.0	0.0	20.0	0.0	3
Cefprozil	Cefadroxil	21.4	40.0	0.0	37.5	7.7	2
<i>Ceftin</i>	Cefdinir	16.4	50.0	0.0	40.0	0.0	2
<i>Cefzil</i>	Cefdinir	35.7	42.5	0.0	7.5	5.1	2
<i>Celexa</i>	<i>Celebrex</i>	4.8	25.0	2.5	20.0	5.1	4
Chlorthalidone	Chlorothiazide	36.2	32.5	5.0	32.5	10.3	5
Cholecalciferol	Ergocalciferol	469.0	20.0	0.0	47.5	0.0	5
<i>Cipro</i>	<i>Ciprodex</i>	4.7	40.0	0.0	17.5	0.0	5
<i>Clarinex-D</i>	<i>Claritin-D</i>	271.6	40.0	2.5	42.5	12.8	5
Clindamycin Phosphate/Benzoyl Peroxide	Erythromycin Base/Benzoyl Peroxide	36.3	27.5	5.0	27.5	2.6	4
Clomiphene	Clomipramine	338.8	40.0	10.0	42.5	7.7	2
Clonazepam	Lorazepam	8.8	22.5	0.0	25.0	5.1	5
Clonidine	<i>Klonopin</i>	5.6	5.0	0.0	55.0	0.0	5
<i>Desyrel</i>	Desipramine	2.1	15.0	0.0	15.0	2.6	1
<i>Desyrel</i>	<i>Seroquel</i>	4.1	10.0	0.0	2.5	0.0	1
Dexmethylphenidate	Methylphenidate	16.5	10.0	2.5	50.0	5.1	3
Dextroamphetamine	Dexmethylphenidate	134.5	37.5	10.0	27.5	15.4	4
Doxepin	Donepezil	25.0	22.5	0.0	32.5	0.0	3
Doxycycline	Doxepin	10.0	15.0	2.5	22.5	2.6	5
Ergocalciferol	Cholecalciferol	14.4	7.5	2.5	55.0	2.6	5
Erythromycin Base/Benzoyl Peroxide	Clindamycin Phosphate/Benzoyl Peroxide	171.8	25.0	10.0	50.0	7.7	4
Escitalopram	Citalopram	13.9	15.0	2.5	20.0	10.3	5
<i>Exforge HCT</i>	<i>Exforge</i>	105.8	55.0	0.0	15.0	15.4	1
Famotidine	Furosemide	22.1	12.5	0.0	40.0	5.1	5
Felodipine	<i>Feldene</i>	17.6	20.0	0.0	47.5	0.0	4
<i>Fioricet</i>	<i>Fiorinal</i>	74.0	12.5	0.0	12.5	0.0	5
Flavoxate	Fluvoxamine	1269.8	40.0	0.0	45.0	12.8	1
Fluocinonide	Fluocinolone	69.3	30.0	5.0	22.5	17.9	2
Flurazepam	Temazepam	193.0	7.5	0.0	15.0	5.1	2
Gabapentin	Gemfibrozil	1.9	5.0	0.0	32.5	0.0	5
Glipizide	Glyburide	539.5	22.5	0.0	22.5	10.3	5

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<i>Humalog Mix</i>	<i>Humalog</i>	102.1	30.0	0.0	35.0	5.1	5
Hydralazine	Hydroxyzine	176.1	37.5	5.0	37.5	10.3	5
Hydroxyzine HCL	Hydroxyzine Pamoate	17.1	17.5	2.5	50.0	0.0	5
Hydroxyzine	Hydralazine	154.2	22.5	0.0	15.0	5.1	5
Hydroxyzine	Hydrochlorothiazide	36.7	20.0	0.0	17.5	5.1	5
Isosorbide Dinitrate	Isosorbide Mononitrate	101.1	22.5	12.5	5.0	12.8	5
<i>Keppra</i>	<i>Keflex</i>	28.1	25.0	2.5	25.0	2.6	5
<i>Lamictal</i>	<i>Lomotil</i>	4.5	7.5	0.0	47.5	2.6	5
<i>Lamisil</i>	<i>Lamictal</i>	109.9	22.5	0.0	17.5	2.6	4
Lamotrigine	Levothyroxine	10.1	10.0	0.0	12.5	5.1	4
Levalbuterol	Albuterol	36.2	10.0	0.0	57.5	2.6	5
Levofloxacin	Levetiracetam	8.8	5.0	0.0	17.5	0.0	5
<i>Lipitor</i>	Lisinopril	4.5	5.0	0.0	10.0	2.6	5
Lisinopril	<i>Lasix</i>	1.0	7.5	0.0	15.0	0.0	5
Loratadine	Lovastatin	4.7	5.0	0.0	17.5	2.6	5
Lorazepam	Alprazolam	21.1	12.5	0.0	25.0	7.7	5
Losartan Potassium/Hydrochlorothiazide	Losartan Potassium	9.7	42.5	5.0	22.5	10.3	5
<i>Lotrisone</i>	<i>Lotrimin</i>	15.9	40.0	0.0	15.0	7.7	2
Metolazone	Methimazole	52.1	30.0	0.0	40.0	2.6	3
Metoprolol Succinate	Metoprolol Tartrate	35.0	15.0	7.5	15.0	10.3	5
Metronidazole	Metformin	5.8	17.5	5.0	12.5	5.1	5
Naproxen	<i>Naprosyn</i>	28.1	10.0	0.0	35.0	5.1	5
<i>Navane</i>	<i>Norvasc</i>	441.9	42.5	0.0	10.0	5.1	1
<i>Nicazel</i>	<i>Nizorel</i>	1516.8	40.0	2.5	32.5	7.7	1
<i>Novolog Mix</i>	<i>Novolog</i>	279.0	30.0	2.5	27.5	7.7	5
<i>Novolog</i>	<i>Novolog Mix</i>	31.4	22.5	0.0	30.0	2.6	5
<i>Onglyza</i>	Olanzapine	65.0	15.0	0.0	27.5	2.6	1
Oxcarbazepine	Oxaprozin	15.6	35.0	0.0	37.5	2.6	3
<i>Pravachol</i>	Propranolol	11.5	15.0	0.0	20.0	5.1	3
Prednisolone	Prednisone	82.3	80.0	55.0	55.0	20.5	5
<i>Prilosec</i>	Prednisone	1.8	12.5	0.0	32.5	2.6	5
<i>Prilosec</i>	<i>Prozac</i>	4.8	2.5	0.0	17.5	5.1	5
Promethazine	Prochlorperazine	4.6	7.5	0.0	32.5	2.6	5
<i>Prosom</i>	Prazosin	335.8	55.0	5.0	35.0	2.6	1
<i>Protonix</i>	<i>Pravachol</i>	9.6	22.5	0.0	30.0	0.0	5
<i>Prozac</i>	<i>Prilosec</i>	8.0	17.5	0.0	12.5	7.7	5
<i>Prozac</i>	<i>Provera</i>	1.6	20.0	0.0	10.0	0.0	5
Pyridoxine	<i>Pyridium</i>	134.1	32.5	2.5	17.5	5.1	3.5
<i>Relafen</i>	<i>Robaxin</i>	37.2	25.0	0.0	12.5	2.6	1
<i>Remeron</i>	<i>Restoril</i>	12.7	10.0	0.0	32.5	0.0	3
<i>Restoril</i>	<i>Remeron</i>	6.5	12.5	0.0	7.5	0.0	3
Risperidone	Ropinirole	11.0	10.0	0.0	15.0	5.1	5
<i>Robaxin</i>	<i>Relafen</i>	20.6	15.0	0.0	7.5	2.6	1
Ropinirole	Risperidone	19.9	22.5	0.0	27.5	15.4	3
Sertraline	<i>Seroquel</i>	1.4	12.5	0.0	7.5	0.0	5
Sulfasalazine	Sulfadiazine	124.3	42.5	12.5	12.5	20.5	3.5
<i>Tenuate</i>	<i>Tenormin</i>	127.8	50.0	0.0	25.0	2.6	1
<i>Thorazine</i>	Thioridazine	139.6	22.5	2.5	12.5	0.0	3

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<i>Tobradex</i>	Tobramycin	77.2	7.5	0.0	7.5	0.0	4
Tobramycin	<i>Tobradex</i>	78.1	15.0	0.0	12.5	5.1	5
<i>Tofranil</i>	Topiramate	43.0	27.5	0.0	5.0	0.0	1
<i>Topamax</i>	<i>Toprol-XL</i>	6.5	10.0	2.5	22.5	2.6	4
<i>Toprol-XL</i>	<i>Topamax</i>	1.9	12.5	0.0	55.0	2.6	5
<i>Toradol</i>	Tramadol	19.4	42.5	0.0	30.0	5.1	5
Torsemide	Furosemide	33.4	10.0	0.0	55.0	2.6	4
Tramadol HCL/Acetaminophen	Tramadol HCL	21.6	35.0	7.5	17.5	5.1	5
Tramadol	Trazodone	7.6	5.0	0.0	10.0	5.1	5
Trazodone	Tramadol	55.0	30.0	0.0	40.0	2.6	5
<i>Voltaren</i>	<i>Ultram</i>	5.1	2.5	0.0	27.5	0.0	3.5
Zaleplon	Zolpidem	90.4	45.0	2.5	30.0	2.6	2
<i>Zantac</i>	<i>Zyrtec</i>	7.2	15.0	0.0	10.0	7.7	5
<i>Zestril</i>	<i>Flexeril</i>	1.0	20.0	0.0	5.0	5.1	3
Zolpidem	Zaleplon	1.4	10.0	2.5	10.0	7.7	5
<i>Zyrtec</i>	<i>Zantac</i>	5.0	5.0	0.0	22.5	0.0	5
AVERAGES		95.7	22.1	2.3	26.3	5.2	3.9

Legend:

- Prescribed Drug: The name of the drug that was prescribed (i.e., the name of the target drug).
- Dispensed Drug: The name of the drug that was incorrectly dispensed (i.e., the name of the competitor drug).
- Transformed Real-World Error Rate: The rate of the error (i.e., the number of wrong prescriptions dispensed divided by the total number of prescriptions) multiplied by an undisclosed constant. Multiplication by the constant number set the lowest error rate to 1.0.

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- **Backward Masking Error Rate:** The percentage of participants who responded incorrectly to the drug name pair in the two-alternative forced-choice part of the backward masking test.
- **Progressive Demasking Error Rate:** The percentage of participants who responded incorrectly to the drug name pair in the two-alternative forced-choice part of the progressive demasking test.
- **Speech-In-Noise Error Rate:** The percentage of participants who responded incorrectly to the drug name pair in the two-alternative forced-choice part of the speech-in-noise test.
- **Short-Term Memory Error Rate:** The percentage of participants who responded incorrectly to the drug name pair in the two-alternative forced-choice part of the short-term memory test.
- **Target/Prescribed Name Familiarity Ratings:** The median familiarity rating of the target/prescribed drug name on a 1-5 Likert scale, with a higher number indicating more familiarity.

Notes:

- Brand names are displayed in italicized font, whereas generic names are displayed in standard font.
- HCT stands for Hydrochlorothiazide; HCL stands for Hydrochloride; XL stands for Extended Release; D stands for Decongestant.