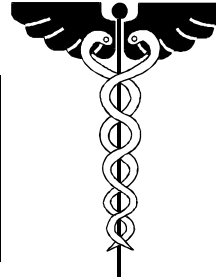




Indiana Drug Utilization Review Board

September, 1998

Issue No. 4



Generic Differences Associated with Cyclosporine Products

Cyclosporine is an immunosuppressant agent used in the prophylaxis of organ rejection in kidney, liver and heart allogeneic transplants. Sandoz currently manufactures cyclosporine as two different oral products; Sandimmune[®] and Neoral[®]. The differences between the two products relate to their absorptive characteristics.

Whereas the GI absorptive characteristic of Sandimmune[®] is incomplete and erratic, Neoral's[®] lipid microemulsion formulation enhances its GI absorption by making it more rapid and complete. As a result, there is a decreased bioavailability with Sandimmune[®] oral products compared to Neoral[®].

While the DUR Board is aware that Sandimmune[®] and Neoral[®] may share certain indications for use, the FDA does not consider them to be bioequivalent and recommends they are not used interchangeably.

It is important for providers to understand the difference between these two products and to assure that the appropriate product is prescribed for each patient's case.

If a patient receiving high dose Sandimmune[®] is converted to Neoral[®], caution should be taken to determine if a lower oral dose of Neoral[®] is required to avoid toxicity (high levels) of cyclosporine in the body. Likewise, conversion of Neoral[®] to Sandimmune[®] may require an increased dosage of Sandimmune[®] to avoid possible organ rejection due to decreased cyclosporine concentrations from lower absorption rates.

To avoid the potential adverse events associated with the interchange of these two cyclosporine formulations, written prescriptions for cyclosporine should specify the brand name of the product used in the initiation of the patient's drug therapy. Physicians and pharmacists should review the patient's medication profile to assure consistent brand product selection throughout the course of the cyclosporine therapy. Additionally, pharmacists should contact prescribers when presented with a prescription that uses the generic name of cyclosporine, in order to clarify the specific brand product for dispensing.

The Indiana Drug Utilization Review Newsletter is prepared by the Indiana DUR Board, Office of Medicaid Policy and Planning and EDS. Any comments or suggestions should be forwarded to:

**Indiana DUR Board
402 West Washington St.
Room W382
Indianapolis, Indiana 46204**

MARK YOUR CALENDARS

The final Indiana DUR Board Meeting for 1998 will be held Friday, December 11, at 9:30 a.m. at the Indiana Government Center - Room 1 in Indianapolis.

**INDIANA'S
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**Life Threatening
Cardiac Arrhythmias
Associated With Cisapride**

Cisapride (Propulsid®-Janssen), is indicated for symptomatic treatment of patients with nocturnal heartburn due to Gastroesophageal Reflux Disease (GERD). Cisapride is a gastrointestinal stimulant that achieves its therapeutic effect by increasing the lower esophageal sphincter pressure and the lower esophageal pressure.

Reports of serious cardiac arrhythmias, including ventricular arrhythmias and torsades de pointes associated with QT prolongation have been attributed to patients taking cisapride concurrently with certain other medication. Ketoconazole, itraconazole, fluconazole, miconazole IV, erythromycin, clarithromycin, troleandomycin, nefazodone, indinavir, and ritonavir are contraindicated in patients taking cisapride since they inhibit the hepatic enzyme system mainly responsible for the metabolism of cisapride (Cytochrome P450 IIIA4), resulting in markedly elevated cisapride plasma concentrations. Although these incidences were rare, the cases of serious cardiac arrhythmias occurred in patients regardless of whether or not they had a cardiac history. However, most of the patients who did not have a cardiac history had been receiving multiple other medications and had pre-existing cardiac disease or risk factors for arrhythmias. Some of these events were fatal.

While the DUR Board is aware that these interactions are not newly identified, we wish to bring it to the attention of all providers again. Concurrent use of cisapride and the medications listed above should be avoided.

Indiana Medicaid DUR Board Report
 Top 25 Legend Drugs by **Total Paid Claims**
 4th Quarter - Calendar Year 1997

RANKING	NDC	DRUG NAME	STRENGTH	DOSAGE FORM	TOTAL PAID CLAIMS	NUMBER OF CLAIMS	AVERAGE QUANTITY	AVERAGE CLAIM AMOUNT
1	61113-0742	Prilosec	20 MG	Capsule	\$1,720,775	14,577	35	\$118.05
2	00002-4117	Zyprexa	10 MG	Tablet	1,321,990	4,612	40	286.64
3	00777-3105	Prozac	20 MG	Pulvule	1,071,053	11,518	44	92.99
4	00944-2938	Recombinate	1020 AHFU	Vial	842,971	122	6,608	6,909.60
5	00002-3144	Axid	150 MG	Pulvule	581,236	7,911	52	73.47
6	00300-3046	Prevacid	30 MG	Capsule	527,745	4,994	34	105.68
7	00074-6215	Depakote	500 MG	Tablet	480,351	4,786	89	100.37
8	00078-0127	Clozaril	100 MG	Tablet	475,929	4,998	30	95.22
9	55953-0544	Ranitidine	150 MG	Tablet	463,980	7,218	55	64.28
10	50458-0330	Risperdal	3 MG	Tablet	440,193	2,089	56	210.72
11	00002-4115	Zyprexa	5 MG	Tablet	427,612	2,468	37	173.26
12	00049-4900	Zoloft	50 MG	Tablet	424,408	6,333	35	67.02
13	50458-0300	Risperdal	1 MG	Tablet	409,665	4,775	44	85.79
14	00029-3211	Paxil	20 MG	Tablet	404,748	5,973	35	67.76
15	00049-4910	Zoloft	100 MG	Tablet	361,820	4,895	37	73.92
16	00045-0659	Ultram	50 MG	Tablet	351,843	8,752	63	40.20
17	00006-0963	Pepcid	20 MG	Tablet	345,694	4,791	49	72.15
18	50458-0430	Propulsid	10 MG	Tablet	316,062	4,869	101	64.91
19	00085-0458	Claritin	10 MG	Tablet	289,161	5,399	28	53.56
20	50458-0320	Risperdal	2 MG	Tablet	280,232	1,759	50	159.31
21	00071-0805	Neurontin	300 MG	Capsule	262,634	2,484	113	105.73
22	00074-6214	Depakote	250 MG	Tablet	260,872	4,458	93	58.52
23	00026-8513	Cipro	500 MG	Tablet	254,748	4,027	19	63.26
24	00074-2586	Biaxin	500 MG	Tablet	252,573	4,161	20	60.70
25	00087-0819	Buspar	10 MG	Tablet	244,317	2,785	87	87.73

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1	61113-0742	Prilosec	20 MG	Capsule	\$1,720,775	14,577	35	\$118.05
2	00777-3105	Prozac	20 MG	Pulvule	1,071,053	11,518	44	92.99
3	59930-1560	Albuterol	90 MCG	Inhaler	121,687	9,245	20	13.16
4	00045-0659	Ultram	50 MG	Tablet	351,843	8,752	63	40.20
5	00378-1155	Propoxy-N/ APAP	100/650 MG	Tablet	58,578	8,714	49	6.72
6	52544-0349	Hydrocod/ APAP	5/500 MG	Tablet	46,661	8,550	40	5.46
7	00071-0362	Dilantin	100 MG	Kapseal	214,419	8,389	106	25.56
8	00378-0216	Furosemide	40 MG	Tablet	36,914	8,111	50	4.55
9	00085-0787	K-DUR	20 MEQ	Tablet	199,922	8,098	55	24.69
10	00002-3144	Axid	150 MG	Pulvule	581,236	7,911	52	73.47
11	55953-0544	Ranitidine	150 MG	Tablet	463,980	7,218	55	64.28
12	00003-1738	Trimox	250 MG	Suspension	49,355	7,148	147	6.90
13	00046-0867	Premarin	0.625 MG	Tablet	112,863	6,910	36	16.33
14	00049-4900	Zoloft	50 MG	Tablet	424,408	6,333	35	67.02
15	00173-0242	Lanoxin	0.125 MG	Tablet	41,577	6,321	33	6.58
16	00029-3211	Paxil	20 MG	Tablet	404,748	5,973	35	67.76
17	00085-0458	Claritin	10 MG	Tablet	289,161	5,399	28	53.56
18	00003-1737	Trimox	125 MG	Suspension	31,928	5,397	136	5.92
19	59930-1515	Albuterol	5 MG	Solution	110,141	5,277	28	20.87
20	00597-0082	Atrovent	18 MCG	Inhaler	183,041	5,142	18	35.60
21	00078-0127	Clozaril	100 MG	Tablet	475,929	4,998	30	95.22
22	00300-3046	Prevacid	30 MG	Capsule	527,745	4,994	34	105.68
23	00069-1530	Norvasc	5 MG	Tablet	204,862	4,932	36	41.54
24	00049-4910	Zoloft	100 MG	Tablet	361,820	4,895	37	73.92
25	52544-0387	Hydrocod/ APAP	7.5/750 MG	Tablet	56,836	4,883	49	11.64

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