

E. LANTUS AND LEVEMIR UTILIZATION DATA

A thorough analysis of the MaineCare basal insulin prescription data has failed to show any significant population differences in average daily basal insulin requirements between Lantus and Levemir. Lantus was first made non-preferred to new starters on April 1, 2006. Beginning July 1, 2006, most established Lantus users were required to switch over to Levemir (unless a PA was approved or unless the prescriber was a diabetologist). Finally on October 1, 2006, the established Lantus users of the Lantus specialist prescribers began their switch to Levemir.

The preliminary data showed no significant differences in average daily basal insulin dose between Lantus and Levemir (0.58 ml per day or 58 units per day). See Table 1. There was also no difference in average number of needles used per day (a proxy measure for QD vs BID dosing). See Table 2. This analysis was presented to the DUR Committee, which then requested additional data on age bands, dosing bands and specialist prescribers. The age band data did not show any consistent differences. Two age bands went up on average daily basal insulin dose with Levemir while two age groups went down. See Table 3. The specialist data was interesting. The average daily basal insulin dose declined (52.8 U/day to 50.1 U/day) with a switch to Levemir in the patients managed by the endocrinologists/diabetologists while it went up slightly in the patients managed by all other providers (59.1 U/day to 60.2 U/day). See Table 4. This difference may be related to two factors. First, the specialist may have been more cautious in dosing during the switches and second, their patient switches occurred three months later so there was relatively less Levemir data for their patients. We corrected for this as much as possible but allowing a few more months of utilization data to accumulate before

repeating the analysis is probably the best course to pursue. Finally, there are the average daily dosing bands in Table 5. This allows you to see how many Lantus users went up, down, or remained at roughly the same daily dose. In total, 62% of all Lantus patients remained within 10%+/- of their original daily basal insulin dose after the switch to Levemir. The lower dose Lantus patients (< 50 units/day) were more likely to acquire a higher dose of Levemir after the switch while the higher dose Lantus patients (>= 50 units/day) were more likely to have a lower Levemir dose. In all, of the 306 Lantus switchers that experienced a significant change in daily dose, 137 moved upward (45%) while 169 moved downward (55%).

MaineCare DUR Analysis on Lantus and Levemir Users Based on Medicaid Paid Non-reversed Claims for Lantus and Levemir with Rx Dates since 01/01/2006

Table 1
Lantus

Basal	Insulin	Analysis		
Time	Quantity	Days	Qty/ds	Users

		Supply		
2001	16,364	26,770	0.61	446
2002	101,442	162,089	0.63	1,436
2003	196,595	312,893	0.63	2,330
2004	270,494	434,375	0.62	3,043
2005	340,549	561,053	0.61	3,662
2006	224,174	383,667	0.58	3,205

Levemir

Basal	Insulin	Analysis		
Time	Quantity	Days Supply	Qty/ds	Users
2006	58,212	100,958	0.58	1,355

Table 2

Diabetic Needles- All Diabetic Insulin Users				Lantus Users	Levemir Users
Time	Quantity	Qty/ds (needles)	Qty/ds (needles)	Qty/ds (needles)	Qty/ds (needles)
Q1-2005	608,805	2.02		2.02	
Q2-2005	608,145	2.05		2.05	
Q3-2005	610,037	2.04		2.04	
Q4-2005	639,262	2.07		2.07	
Q1-2006	483,098	2.08	2.21	2.08	2.21
Q2-2006	509,025	2.10	2.11	2.10	2.11
3-2006	508,616	2.07	2.09	2.07	2.09
Q4-2006	465,784	2.06	2.08	2.06	2.08

Table 3

Stats by Age Group Lantus Users

Age_Group	N_of_Users	N_of_Rx	N_Days_Supply	N_of_Units	Avg_N_of_Units_per_Day_Supply
0 - 18	258	1,244	34,607	15,140.000	0.437
19 - 44	770	3,477	94,985	52,410.000	0.552
45 - 64	1,277	6,130	163,489	106,309.000	0.650
65 +	840	4,268	101,265	56,101.000	0.554
Totals:	3,145	15,119	394,346	229,960.000	0.583

Levemir Users

Age_Group	N_of_Users	N_of_Rx	N_Days_Supply	N_of_Units	Avg_N_of_Units_per_Day_Supply
0 - 18	171	561	15,927	6,838.000	0.429
19 - 44	568	1,825	49,992	28,049.000	0.561
45 - 64	673	2,326	63,802	40,915.000	0.641
65 +	63	188	4,644	2,830.000	0.609
Totals:	1,475	4,900	134,365	78,632.000	0.585

Table 4

Stats by Specialty of Prescribing Providers
Lantus Users

Endocrinologists/Diabetologists (N = 20):

Age_Group	N_of_Users	N_of_Rx	N_Days_Supply	N_of_Units	Avg_N_of_Units_per_Day_Supply
0 - 18	213	996	27,734	12,010.000	0.433
19 - 44	95	357	9,553	5,400.000	0.565
45 - 64	74	271	8,031	6,540.000	0.814
65 +	18	73	2,082	1,090.000	0.524
Totals:	400	1,697	47,400	25,040.000	0.528

All Other Prescribers (N = 1182):

Age_Group	N_of_Users	N_of_Rx	N_Days_Supply	N_of_Units	Avg_N_of_Units_per_Day_Supply
0 - 18	75	245	6,789	3,100.000	0.457
19 - 44	691	2,968	81,020	44,550.000	0.550
45 - 64	1,188	5,520	145,784	93,660.000	0.642
65 +	751	3,753	89,286	49,461.000	0.554
Totals:	2,705	12,486	322,879	190,771.000	0.591

Levemir Users

Endocrinologists/Diabetologists (N = 19):

Age_Group	N_of_Users	N_of_Rx	N_Days_Supply	N_of_Units	Avg_N_of_Units_per_Day_Supply
0 - 18	139	458	13,057	5,450.000	0.417
19 - 44	66	191	5,466	2,915.000	0.533
45 - 64	25	85	2,272	1,960.000	0.863
65 +	6	18	500	350.000	0.700
Totals:	236	752	21,295	10,675.000	0.501

All Other Prescribers (N = 720):

Age_Group	N_of_Users	N_of_Rx	N_Days_Supply	N_of_Units	Avg_N_of_Units_per_Day_Supply
0 - 18	37	102	2,840	1,378.000	0.485
19 - 44	524	1,626	44,311	25,049.000	0.565
45 - 64	653	2,231	61,270	38,845.000	0.634
65 +	53	158	3,848	2,340.000	0.608
Totals:	1,267	4,117	112,269	67,612.000	0.602

Table 5

Stats by Average Units per Days Supply

Users who Switched from Lantus to Levemir:

Lantus Users		Levemir Users- Average Units per Day						
Avg_N_of_Units_ per_Day_Supply	N of Users	Avg_N_of_Units_ per_Day_Supply	N of Users	< 0.25	0.25 - 0.49	0.50 - 0.74	0.75 - 0.99	>= 1
< 0.25	1	< 0.25	3		1	2		
0.25 - 0.49	395	0.25 - 0.49	399	1	302	60	10	26
0.50 - 0.74	228	0.50 - 0.74	214		73	110	13	18
0.75 - 0.99	60	0.75 - 0.99	65		10	31	17	7
>= 1	128	>= 1	131		9	25	20	77
Total:	812	Total:	812					