

Memorandum

Department of Health and Human Services
Public Health Service
Food and Drug Administration
Center for Drug Evaluation and Research

PID#: 2007-27

DATE: February 5, 2007

FROM: Vicky Borders-Hemphill, Pharm.D./ Drug Use Data Specialist
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TO: M. Dianne Murphy, MD
Director, Office of Pediatric Therapeutics (OPT), OIASI
Office of the Commissioner

SUBJECT: Post-Pediatric Exclusivity Postmarketing Adverse Event Review: Drug
Use Data Update
Orlistat (Xenical[®], NDA 20-766)
Pediatric Exclusivity Granted Date: September 12, 2003

****This document contains proprietary drug use data obtained by FDA under contract. The drug use data/information cannot be released to the public/non-FDA personnel without contractor approval obtained through the FDA/CDER Office of Surveillance and Epidemiology.****

INTRODUCTION

Xenical[®] (orlistat), a gastric lipase inhibitor, was granted pediatric exclusivity on September 12, 2003. On December 12, 2003, NDA 20-766/S-018 provided for use of Xenical[®] (orlistat) in the management of obesity in adolescent patients aged 12 to 16. One year post-pediatric exclusivity postmarketing adverse event review of drug use data was provided in December 2004. The Pediatric Advisory Committee requested follow-up data at the end of 2nd year post-exclusivity. January 5, 2007, NDA 20-766/S-022 provided for labeling revisions to address post-marketing reports suggesting an association between Xenical[®] and pancreatitis by providing information from clinical trial data on the incidence rates of cholelithiasis associated with Xenical[®] and providing information on the association of Xenical[®] and pancreatitis based on postmarketing reports.

This review provides drug utilization data for Xenical[®] in the pediatric population (0-16 years of age). We examined outpatient drug use data for Xenical[®] for a six-year period, September 2000 – September 2006 (3 years before exclusivity, 3 years after). The majority of use for this product occurs in the outpatient setting and outpatient use was measured with the following data sources from Verispan, LLC: Vector One[®]: National (VONA), Total Patient Tracker (TPT) and indications for use were obtained from the Physician's Drug and Diagnosis Audit (see Methods and Materials).

SUMMARY

- There was a **65% decrease** in prescriptions dispensed for Xenical[®] from an estimated 1.6 million prescriptions in the 12-month period ending in September 2002 (10/01 – 9/02) to 547,000 prescriptions in the 12-month period ending in September 2006 (10/05 – 9/06) (**Table 1**).
- The majority of the prescriptions dispensed for Xenical[®] (**Table 2**), as also reflected by the number of patients who received a prescription for Xenical[®] (**Table 3**), were for adults aged 17 years and older. Less than 1% of the total prescriptions dispensed for Xenical[®] were for persons aged 1-16 years.
- The top two prescribing specialties for Xenical[®] were from general practice (39.2%) and Internal medicine (31.2%) from September 2000 through September 2006 (**Table 4**). The pediatric specialty represented approximately 1% of prescriptions dispensed for this product.
- The most common indication for use of Xenical[®] for adult patients was “**Obesity/Hyperalimint**” (ICD-9 278.0) which accounted for approximately 91% of adult Xenical[®] diagnosis mentions from October 1999 through September 2006 (**Table 5**). There were no mentions associated with the use of Xenical[®] in the pediatric population.

METHODS AND MATERIALS - DATABASE DESCRIPTIONS

Verispan, LLC: Vector One: National (VONA)

Verispan's VONA measures retail dispensing of prescriptions or the frequency with which drugs move out of retail pharmacies into the hands of consumers via formal prescriptions. Information on the physician specialty, the patient's age and gender, and estimates for the numbers of patients that are continuing or new to therapy are available.

The Vector One database integrates prescription activity from a variety of sources including national retail chains, mass merchandisers, mail order pharmacies, pharmacy benefits managers and their data systems, and provider groups. Vector One receives over 2 billion prescription claims, representing over 160 million unique patients.

Prescriptions are captured from a sample of approximately 54,000 pharmacies throughout the US. The pharmacies in the data base account for nearly all retail pharmacies and represent approximately 50% of retail prescriptions dispensed nationwide. Verispan receives all prescriptions from approximately one-third of the stores and a significant sample of prescriptions from the remaining stores.

Verispan, LLC: Vector One: Total Patient Tracker (TPT)

Verispan's Total Patient Tracker is a national-level projected audit designed to estimate the total number of unique patients across all drugs and therapeutic classes in the retail outpatient setting.

TPT derives its data from the Vector One database which integrates prescription activity from a variety of sources including national retail chains, mail order pharmacies, mass merchandisers, pharmacy benefits managers and their data systems. Vector one receives over 2 billion prescription claims per year, which represents over 160 million patients tracked across time.

Verispan, LLC: (Physician Drug & Diagnosis Audit) PDDA

Verispan's Physician Drug & Diagnosis Audit (PDDA) is a monthly survey designed to provide descriptive information on the patterns and treatment of diseases encountered in office-based physician practices in the U.S. The survey consists of data collected from approximately 3,100 office-based physicians representing 29 specialties across the United States that report on all patient activity during one typical workday per month. These data may include profiles and trends of diagnoses, patients, drug products mentioned during the office visit and treatment patterns. The data are then projected nationally by physician specialty and region to reflect national prescribing patterns.

Verispan uses the term "drug uses" to refer to mentions of a drug in association with a diagnosis during an office-based patient visit. This term may be duplicated by the number of diagnosis for which the drug is mentioned. It is important to note that a "drug use" does not necessarily result in prescription being generated. Rather, the term indicates that a given drug was mentioned during an office visit.

DATA/RESULTS

I. Dispensed Prescriptions

Table 1.

Total Number of Prescriptions (TRx) including New (NRx) and Refilled (RRx) Prescriptions Dispensed (in Thousands) by Retail Pharmacies for Xenical® (orlistat) During September 2000 through September 2006 (mail order pharmacies not included)							
	MAT/SEP/2000	MAT/SEP/2001	MAT/SEP/2002	MAT/SEP/2003	MAT/SEP/2004	MAT/SEP/2005	MAT/SEP/2006
TRx	2,632	2,097	1,578	1,218	900	660	547
NRx	1,560	1,158	798	596	430	315	266
RRx	1,072	939	780	622	470	346	280

Verispan, LLC, Vector One® National (VONA) Data extracted 1-12-2007

Source File: 2007-27 VONA 1-12-07 xenical TRx NRx RRx Oct99-Sept06.qry; VONA BPCA 2007-27 1-12-07 xenical TRx NRx RRx Oct99-Sept06.xls

II. Patient Demographics

Table 2.

Total Number of Prescriptions Dispensed (in Thousands) by Retail Pharmacies for Xenical® (orlistat) Stratified by Age During September 2003 through September 2006 (mail order pharmacies not included)

	MAT/SEP/2003		MAT/SEP/2004		MAT/SEP/2005		MAT/SEP/2006	
	TRxs	Share	TRxs	Share	TRxs	Share	TRxs	Share
Xenical	1,218	100%	900	100%	660	100%	547	100%
0-11 years	1	0.1%	1	0.1%	0	0.1%	0	0.1%
12-16 years	3	0.2%	3	0.3%	2	0.3%	2	0.3%
17+ years	1,209	99.3%	890	99.0%	656	99.3%	543	99.3%
Unspecified age	5	0.4%	6	0.6%	2	0.4%	2	0.3%

Verispan, LLC, Vector One® National (VONA) Data extracted 1-12-2007

Source File: 2007-27 VONA 1-12-07 xenical age Oct99-Sept06.qry; VONA BPCA 2007-27 1-12-07 xenical age Oct99-Sept06.xls

Table 3.

Total Number of Patients Receiving Prescriptions Through Retail Pharmacies for Xenical® (orlistat) by Patient Age, During September 2003 through September 2006* (mail order pharmacies not included)

Age Group	MAT SEPT 2003		MAT SEPT 2004		MAT SEPT 2005		MAT SEPT 2006	
	Projected Patient Count	Total Patient Share						
Xenical Total	494,807	100%	356,946	100%	261,694	100%	222,542	100%
0 – 11 years	596	0.12%	406	0.11%	349	0.13%	244	0.11%
12 – 16 years	1,648	0.33%	1,587	0.44%	1,031	0.39%	902	0.41%
17 – 85 years	491,414	99.31%	352,627	98.79%	259,311	99.09%	220,693	99.17%
Unknown Age	2,459	0.50%	4,640	1.30%	1,766	0.67%	1,146	0.51%

*Subtotals may not sum exactly, due to rounding. Due to aging of patients during the study period (“the cohort effect”), patients may be counted more than once in the individual age categories. For this reason, summing across age bands is not advisable and will result in overestimates of patient counts.

Verispan, Total Patient Tracker, data extracted 1-18-07

Source File: 2007-27 TPT 1-18-07 xenical age MATSept03.XLS, 2007-27 TPT 1-18-07 xenical age MATSept04.XLS, 2007-27 TPT 1-18-07 xenical age MATSept05.XLS, 2007-27 TPT 1-18-07 xenical age MATSept06.XLS; TPT BPCA 2007-27 1-18-07 xenical age MATSept03-SEPT06.XLS

III. Prescriber Specialty (top 10)

Table 4.

Total Number of Retail Prescriptions Dispensed (in Thousands) for Xenical® (orlistat) by Prescriber Specialty (top 10), During September 2000 through September 2006* (mail order pharmacies not included)

Rank	Physician Specialty	Total Rx Dispensed (000)	Percent of Total Rx Dispensed
1	GP/FM/DO	3,775	39.2
2	Internal medicine	3,001	31.2
3	OB/GYN	483	5.0
4	Unspecified	333	3.5
5	Cardiology	252	2.6
6	Endocrinologist	234	2.4
7	Nurse practitioner	146	1.5
8	Psychiatry	124	1.3
9	Pediatrics	116	1.2
10	General Surgery	108	1.1

Verispan, LLC: Vector One®: National (VONA) Specialty (top 20) ending Sept 2000, MAT ending Sept 2001, MAT ending Sept 2002, MAT ending Sept 2003, MAT ending Sept 2004, MAT ending Sept 2005, MAT ending Sept 2006 data extracted 1-25-07

Source Files: 2007-27 VONA 1-25-07 xenical Specialty Oct99-Sept06.qry; VONA BPCA 2007-27 1-25-07 xenical specialty Oct99-Sept06.xls

*Numbers may not sum exactly, due to rounding

†General Practice includes general practice, Family Medicine, Doctors of Osteopathy

IV. Indication for Use (top 10)

Table 5.

Projected Uses* of Xenical® (orlistat) (in Thousands) in Association with a Diagnosis During an Office-Based Patient Visit by 3-digit ICD-9 code from October 1999 through September 2006

	Oct 99 thru Sept 06	
	Uses	Share
Xenical	6,739	100.0%
278 OBESITY/HYPERALIMENT	6,193	91.9%
V65 OTHER REASON FOR CONSULT	150	2.2%
783 NUTRIT/METAB/DEVEL SYMP	98	1.5%
272 DIS OF LIPOID METABOLISM	89	1.3%
250 DIABETES MELLITUS	34	0.5%
277 METABOLISM DIS NEC/NOS	27	0.4%
V85 BODY MASS INDEX	25	0.4%
V68 ADMINISTRATIVE ENCOUNTER	16	0.2%
V72 SPECIAL EXAMINATIONS	15	0.2%
401 ESSENTIAL HYPERTENSION	15	0.2%
All Others	78	1.2%

*Number of times Xenical® has been reported for treatment of a particular disease during an office-based patient visit

SOURCE: Verispan, Physician Drug and Diagnosis Audit (PDDA), cumm October 1999 through September 2006, Extracted 1-25-07

File: 2007-43 PDDA 1-25-07 xenical MATsept2000-sept2006cumm.xls

Source Files: 2007-27 PDDA 1-25-07 xenical MATsept2000-sept2006cumm.qry

Attachment

[Please see attached Excel spreadsheets.](#)

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/s/

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2/5/2007 10:24:58 AM
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