South Dakota

Department of Social Services

Medicaid P&T Committee Meeting

September 5, 2008

DEPARTMENT OF SOCIAL SERVICES
MEDICAL SERVICES
700 Governors Drive
Pierre, South Dakota 57501-2291
(605) 773-3495
FAX (605) 773-5246

SOUTH DAKOTA
MEDICAID P&T COMMITTEE MEETING
AGENDA

Friday, September 5, 2008
1:00 – 3:00 PM

MINERVAS – Sioux Falls
301 S. Phillips Avenue

Call to Order

Approval of Minutes of Previous Meeting

Prior Authorization Update

Review of Top 15 Therapeutic Categories/Top 25 Drugs

Old Business
- **Utilization Trends**
  - **Cephalosporins**
  - **Antipsychotic Agents**
  - **Anticonvulsant Agents**
  - **Antidepressants**
  - **Singulair®**
- **Drug Product and Utilization Review**
  - **Xopenex®**
  - **Vusion®**
  - **Rid®/Nix®/Lindane/Ovide®**

New Business
- **Drug Product and Utilization Review**
  - **Altabax®**
  - **Lyrica®**
- **Overview of Opioid Utilization**

Oral Presentations and Comments by Manufacturers' Representatives

Next Meeting Date

Adjournment

Minutes of the June 20, 2008
Pharmacy & Therapeutics (P&T) Committee Meeting
SD Department of Social Services, Medical Services Division

Members present
Verdayne Brandenburg, M.D.; Dana Darger, R.Ph.; William Ladwig, R.Ph.; Dennis Hedge, PharmD.; James Engelbrecht, M.D.

Members absent
Willis Sutliff, M.D.; Rick Holm, M.D.; Galen Goeden, R.Ph.

DSS staff present
Mike Jockheck, R.Ph.; Larry Iversen

HID staff present
Candace Rieth, Pharm.D.

Administrative Business
The P&T meeting was called to order by chair, Dana Darger, at approximately 1pm. The minutes of the February 29, 2008 meeting were presented. Dr. Brandenburg made a motion to approve as written, with a second by Mr. Ladwig. The motion was approved unanimously.

Prior Authorization Statistics
C. Rieth presented an overview of the prior authorization (PA) activity for February and March, 2008. There were a total of 2,109 PA's processed in the month of February, with 99.15% of those requests responded to in less than 8 hours. There were a total of 2,124 PA's processed in the month of March, with 97.79% of those requests responded to in less than 8 hours. In February, there were 1948 (92%) requests received electronically and 161 (8%) received by fax. In March, there were 1942 (91%) requests received electronically and 182 (9%) received by fax. Overall, there was a 12.24% approval rating for the month of February and a 15.12% approval rating for the month of March. In response to a request from the committee, C. Rieth presented the number of approvals and denials, by form type, for the faxed (manual) PA requests.

Analysis of the Top 15 Therapeutic Classes
C. Rieth reviewed the Top 15 Therapeutic Classes by total cost of claims from 10/01/2007 – 12/31/2007. The top five classes were antipsychotics, anticonvulsants, ADHD agents, antidepressants, and beta-adrenergic agonists.

Committee members requested additional information on the antipsychotics, anticonvulsants, cephalosporins, and antidepressants. C. Rieth presented the analysis of these classes including cost, number of prescriptions, age of patients, type of medication, and administration method. Committee members would like to review cost per prescription of these four classes. The committee asked for percentage spends of antipsychotics, anticonvulsants, and antidepressants in other State Medicaid programs. This information will be presented at the next P&T meeting.

C. Rieth presented information regarding the Wyoming Medicaid antidepressant step therapy initiative. Committee members are interested in a step therapy approach for antidepressants and would like to gather more information from practitioners in Wyoming as well as Wyoming State Medicaid personnel. This topic will be discussed at future meetings.

Singulair Review

In response to a previous request from the committee, C. Rieth presented information regarding diagnoses codes submitted on patients utilizing Singulair. Committee members requested further analysis of the 1,442 patients that had none of the diagnoses codes related to asthma, allergic rhinitis, exercise induced bronchospasm, laryngotracheobronchitis, or reactive airway disease. This information will be presented at the next P&T meeting.

Evamist Review

C. Rieth presented the drug review for Evamist. Evamist is a low-dose topical estrogen spray approved by the Food and Drug Administration in 2007. Mr. Ladwig suggested tabling this topic, since there is no utilization at this time.

Xopenex Review

C. Rieth presented the drug review and utilization for Xopenex, a beta$_2$-agonist. After reviewing and discussing the utilization data on Xopenex, the committee requested additional information for the next meeting. The committee would like utilization data for ProAir HFA, Proventil HFA, and Ventolin HFA including cost per prescription and age of patients. The committee also requested how many patients were treated acutely, how many were using albuterol and levalbuterol chronically, and how many of the Xopenex patients had albuterol first. This information will be presented at the next meeting.

Invega Review

C. Rieth presented the drug review and utilization for Invega, an antipsychotic indicated for the acute and maintenance treatment of schizophrenia. After a brief discussion, the committee asked that this topic be tabled until the September meeting. The committee expects two new board members to be in attendance that specialize in psychiatry.

Vusion Review

C. Rieth presented the drug review and utilization for Vusion, a combination of miconazole, zinc oxide and petrolatum indicated as adjunctive treatment of diaper dermatitis. After discussing the utilization data, the committee requested a report showing the providers prescribing this medication. This information will be provided at the next meeting.

Medications for Head Lice

C. Rieth presented the drug class review and utilization for medications used to treat head lice. Since this information was requested by a committee member not in attendance, the committee tabled the topic until the next meeting.

New Business

Committee members suggested future agenda items include Altabax, opioid utilization, and Lyrica. The committee would like to know the number of Lyrica patients who have had gabapentin previously.

After discussion, it was requested that potential meeting dates of September 12th and September 19th be sent out to committee members via email. Once a date has been decided, all committee members and advocacy members will be contacted. Meeting was adjourned at 2:50pm.

STATE OF SOUTH DAKOTA
OFFICE OF THE GOVERNOR
EXECUTIVE ORDER 2005-09

WHEREAS, The state of South Dakota recognizes that outpatient prescription drugs are an essential component of patient care; and,

WHEREAS, The state of South Dakota provides prescription drug coverage as a health benefit for its citizens who qualify for the Medical Assistance Program under the provisions of SDCL 28-6; and,

WHEREAS, The population of the Medical Assistance Program continues to increase each year; and,

WHEREAS, The state of South Dakota recognizes efforts must be made to establish a plan that will provide for the effective continuation of the prescription drug coverage benefit; and,

WHEREAS, The state of South Dakota recognizes there is a need to address the high costs of prescription drugs, the increased expenditures for those prescription drugs, and the need to find ways to control the costs of prescription drugs while ensuring the needs of recipients are being met; and,

WHEREAS, The state of South Dakota recognizes that requiring a prior authorization program for coverage of a drug can be an effective tool for helping to ensure beneficiaries have access to medically necessary medications in a clinically appropriate and cost-effective manner; and,

WHEREAS, Requiring a prior authorization program for coverage of a drug can help control prescription drug costs while protecting the consumer's needs;

IT IS, THEREFORE, BY EXECUTIVE ORDER, directed that the South Dakota Medicaid Pharmaceutical and Therapeutics (P & T) Committee be established and authorized to function in compliance with the following sections of this order.

General Provisions

Section 1. The name of the committee is the South Dakota Medicaid Pharmaceutical and Therapeutics (P & T) Committee.

Section 2. The governor of the state of South Dakota may appoint as many members as he deems necessary to accomplish the goals of this committee.

Section 3. The South Dakota Medicaid P & T Committee shall work with the Department of Social Services in addressing the high costs of prescription drugs, the increased expenditures for those prescription drugs, and the need to find ways to control the costs of prescription drugs while ensuring the needs of recipients are being met.

Section 4. The South Dakota Medicaid P & T Committee shall provide expertise and direction to the Department of Social Services in matters relating to the drugs being used by our recipient population including, but not limited to: establishing a prior authorization program, instituting quantity limits, establishing restrictions on early refills, mandating the use of generic drugs, amending the co-pay requirements, investigating state buying pools, considering the coverage of certain over-the-counter medications, developing a preferred drug list, and working with a pharmacy benefit manager to establish a prior authorization program for certain selected drugs.

Section 5. The South Dakota Medicaid P & T Committee shall make recommendations to the Department of Social Services in the development and maintenance of a list of drugs that will require prior authorization before being dispensed for any medically accepted indication.

Section 6. The South Dakota Medicaid P & T Committee shall ensure that interested parties have an opportunity to present public testimony with information or evidence supporting inclusion of a product for prior authorization.

Section 7. The South Dakota Medicaid P & T Committee shall analyze and consider the recommendations of interested parties and the potential impact of a decision to require prior authorization of a drug for individuals covered by the Medical Assistance Program under the provisions of SDCL Chapter 28-6.

Section 8. The South Dakota Medicaid P & T Committee shall develop its recommendations of drugs to be placed on the prior authorization program by considering the clinical efficacy, safety, and cost-effectiveness of a product.

Section 9. The South Dakota Medicaid P & T Committee shall be administered by the South Dakota Department of Social Services.

Section 10. The South Dakota Medicaid P & T Committee shall meet on a semiannual basis, or more often at the discretion of the Secretary of the Department of Social Services.

Section 11. Each member of the South Dakota Medicaid P & T Committee may receive per diem compensation and allowable reimbursement for expenses pursuant to SDCL 4-7-10.4.

Section 12. Executive Order 2003-05 is hereby rescinded.

Dated in Pierre, South Dakota, this 8th day of June, 2005.

M. Michael Rounds, Governor of South Dakota

ATTEST:

Chris Nelson, Secretary of State

Cross-References: Claims, ch 67:16:35; Case management -- Primary care provider, ch 67:16:39.

67:16:14:15. Application of other chapters. In addition to the rules contained in this chapter, providers and recipients must meet the requirements of chapters 67:16:01, 67:16:26, 67:16:33, 67:16:34, 67:16:35, and 67:16:39, if applicable.

Source: 17 SDR 184, effective June 6, 1991; 22 SDR 93, effective January 7, 1996.

General Authority: SDCL 28-6-1

Law Implemented: SDCL 28-6-1.

67:16:14:16. Over-the-counter items covered. Over-the-counter items covered under this chapter are limited to drugs which meet the following requirements:

(1) The department has approved coverage of the drug based on the P and T committee's recommendation;

(2) There is a prescription for the required medication; and

(3) There is not a lower cost drug of similar composition available.

Source: 31 SDR 21, effective August 25, 2004.

General Authority: SDCL 28-6-1.

Law Implemented: SDCL 28-6-1.

Notes: A list of the OTC items covered may be obtained from the department or viewed online at http://dss.sd.gov/medicalservices/providerinfo/pharmacy/index.asp.

The Legislative Research Council corrected obsolete website addresses under the authority of SDCL 1-26A-1, effective December 19, 2006.

67:16:14:17. Drug review by P and T committee. When reviewing OTC drugs for coverage by the department, the P and T committee shall consider the drug's clinical efficacy, safety, and cost-effectiveness. Following the committee's review, it shall make its recommendations for coverage to the department. The department shall make the final determination as to whether an OTC drug is covered. The department shall base its final determination on the committee's recommendations.

Source: 31 SDR 21, effective August 25, 2004.

General Authority: SDCL 28-6-1.

Law Implemented: SDCL 28-6-1.

Notes: A list of the OTC items covered may be obtained from the department or viewed online at http://dss.sd.gov/medicalservices/providerinfo/pharmacy/index.asp.

The Legislative Research Council corrected obsolete website addresses under the authority of SDCL 1-26A-1, effective December 19, 2006.

67:16:14:18. Prior authorization for certain prescription drugs. The department requires prior authorization of certain prescription drugs. Based on recommendations made by the department's P and T committee, the department shall determine which drugs are subject to

prior authorization. The provider must obtain approval from the department before supplying drugs subject to prior authorization.

Drugs subject to prior authorization are listed on the department's website: http://www.hidsdmedicaid.com/.

Source: 32 SDR 129, effective February 1, 2006.

General Authority: SDCL 28-6-1.

Law Implemented: SDCL 28-6-1.

Note: The Legislative Research Council corrected obsolete website addresses under the authority of SDCL 1-26A-1, effective December 19, 2006.

67:16:14:19. P and T committee to make recommendations to department. The P and T committee's recommendations to the department for those drugs requiring prior authorization from the department must include the following information:

(1) A list of the recommended drugs that the department may consider to be appropriate for placement on or removal from the list of drugs that require prior authorization by the department;

(2) For each drug listed, the name or names of alternative, therapeutically equivalent drugs that may be substituted and do not require prior authorization; and

(3) The prior authorization criteria.

When developing the list of alternative, therapeutically equivalent drugs that may be substituted without prior authorization from the department, the committee must consider the clinical efficacy, safety, and cost-effectiveness of the product.

Source: 32 SDR 129, effective February 1, 2006.

General Authority: SDCL 28-6-1.

Law Implemented: SDCL 28-6-1.

67:16:14:20. Notice to interested parties before drug placed on list – Opportunity for interested parties to present data, opinions, and arguments. Before the Division of Medical Services places a drug on its list of drugs that require prior authorization, the division shall provide an opportunity for interested parties to present data, opinions, and arguments concerning the placement of the drug on the list. The division shall notify interested parties of this opportunity. The notice shall be in writing and shall state where and when an interested party can present data, opinions, and arguments concerning the proposal.

When taking final action on the proposals, the division may accept or reject the P and T committee's recommendations and may consider any information provided to the department by an interested party.

When the division places a drug on the list, an interested party may request that the department secretary review the division's decision. The request for the review must be in writing, made to the department secretary, and made within 30 days following the placement of the drug on the list. The request must contain the following information:

(1) The drug's brand name,

(2) A summary, limited to two pages, of the clinical and/or economic reasons why the product should not be included on the list; and

(3) New information on the drug that has become available since the P and T committee's hearing on the drug.

The department secretary shall review the required information and determine whether to override the division's decision. The secretary shall provide a written notice of the final action to the interested party requesting the review.

Source: 32 SDR 154, effective March 22, 2006.
General Authority: SDCL 28-6-1.
Law Implemented: SDCL 28-6-1.

67:16:14:21. Notice to providers when drug is to be placed on list. At least 30 days before the department implements the prior authorization requirements for a particular drug, the department shall provide a written notice to providers. The notice shall contain the following information:

(1) The date on which the department intends to begin requiring prior authorization for the drug;

(2) The name or names of alternative, therapeutically equivalent drugs that do not require prior authorization and which may be substituted;

(3) A statement that the pharmacist or prescribing medical professional must seek prior authorization from the department if the medical professional chooses not to use one of the alternative drugs available; and

(4) A statement that the recipient is responsible for the cost of the drug if prior authorization is not obtained or a therapeutically equivalent drug is not substituted.

Source: 32 SDR 129, effective February 1, 2006.
General Authority: SDCL 28-6-1.
Law Implemented: SDCL 28-6-1.

67:16:14:22. Cost of drug not covered if substitution not made or prior authorization not obtained. If the department informs a pharmacist that a requested drug requires prior authorization and the recipient indicates to the pharmacist that the recipient wishes to proceed, the pharmacist must contact the medical professional who wrote the prescription and request permission to substitute a therapeutically-equivalent drug.

If the request to substitute is not successful, the pharmacist must inform the medical professional that the medical assistance program will not cover the cost unless the medical professional can justify the use of the drug and ultimately receives approval from the department to dispense the drug as written.

Source: 32 SDR 129, effective February 1, 2006.
General Authority: SDCL 28-6-1.
Law Implemented: SDCL 28-6-1.

67:16:14:23. Emergency supplies. If an emergency situation exists and a prior authorization requirement cannot be submitted and a response received within 24 hours, the pharmacy may dispense and receive reimbursement from the department for a five day supply of the drug. An emergency situation includes the need to dispense a drug after

regular working hours or over a weekend or holiday or a situation in which a response to a prior authorization request is unavailable or under appeal.

Source: 32 SDR 129, effective February 1, 2006.

General Authority: SDCL 28-6-1.

Law Implemented: SDCL 28-6-1.

67:16:14:24. Appeal process. If the department denies the prior authorization request, the medical professional may appeal the decision. At the time of the denial, the department shall advise the medical professional of the procedures to follow to appeal the denial and that the appeal must be made within 24 hours following the denial.

The medical professional will receive a final decision within 24 hours after the additional information is received.

If the request is approved, the pharmacist may fill the prescription as written.

If the original decision to deny the claim is confirmed, the medical professional will be notified.

Source: 32 SDR 129, effective February 1, 2006.

General Authority: SDCL 28-6-1.

Law Implemented: SCL 28-6-1.

South Dakota Medicaid
Monthly Prior Authorization Report
April – June 2008

April 2008

Total PAs	Response Under 8 Hours	Response Over 8 Hours	% Under 8 Hours	% Over 8 Hours
1,337	1,325	12	99.10%	0.90%

May 2008

Total PAs	Response Under 8 Hours	Response Over 8 Hours	% Under 8 Hours	% Over 8 Hours
1,644	1,619	25	98.48%	1.52%

June 2008

Total PAs	Response Under 8 Hours	Response Over 8 Hours	% Under 8 Hours	% Over 8 Hours
1,655	1,642	13	99.21%	0.79%

By Form Type
04/01/2008 – 04/30/2008

Form Type	Description	Approve	Deny
ANT	Antihistamines	45	84
ARB	ARBS	32	56
DAW	Dispense As Written	21	208
GRH	Growth Hormone	4	1
MAX	Max Units Override	71	540
PPI	Proton Pump Inhibitors	105	163
SYN	Synagis	0	6
XEN	Xenical	0	1
Totals		278	1,059

By Form Type
05/01/2008 – 05/31/2008

Form Type	Description	Approve	Deny
ANT	Antihistamines	49	154
ARB	ARBS	17	31
DAW	Dispense As Written	9	376
GRH	Growth Hormone	9	4
MAX	Max Units Override	56	563
PPI	Proton Pump Inhibitors	110	257
SYN	Synagis	0	7
VIA	Viagra	0	1
XEN	Xenical	0	1
Totals		250	1,394

By Form Type
06/01/2008 – 06/30/2008

Form Type	Description	Approve	Deny
ANT	Antihistamines	59	142
ARB	ARBS	19	41
DAW	Dispense As Written	2	358
GRH	Growth Hormone	6	1
MAX	Max Units Override	44	539
PPI	Proton Pump Inhibitors	110	326
SYN	Synagis	0	8
Totals		240	1,415

By Request Type
04/01/2008 – 04/30/2008

04/01/08 - 04/30/08	# of	Electronic Requests		Faxed Requests		Mailed Requests		Phone Requests	
	Requests	#	%	#	%	#	%	#	%
Prior Authorizations:									
Antihistamines	129	108	84%	21	10%	0	0%	0	0%
ARBS	88	65	74%	23	0%	0	0%	0	0%
Dispense As Written	229	206	90%	23	5%	0	0%	0	0%
Growth Hormone	5	0	0%	5	55%	0	0%	0	0%
Max Units Override	611	557	91%	54	4%	0	0%	0	0%
Proton Pump Inhibitors	268	192	72%	76	22%	0	0%	0	0%
Synagis	6	6	100%	0	0%	0	0%	0	0%
Xenical	1	0	0%	1	100%	0	0%	0	0%
Prior Authorization Totals	1,337	1,134	85%	203	15%	0	0%	0	0%

By Request Type
05/01/2008 – 05/31/2008

05/01/08 - 05/31/08	# of	Electronic Requests		Faxed Requests		Mailed Requests		Phone Requests	
	Requests	#	%	#	%	#	%	#	%
Prior Authorizations:									
Antihistamines	203	175	86%	28	14%	0	0%	0	0%
ARBS	48	42	88%	6	13%	0	0%	0	0%
Dispense As Written	385	370	96%	15	4%	0	0%	0	0%
Growth Hormone	13	3	23%	10	77%	0	0%	0	0%
Max Units Override	619	577	93%	42	7%	0	0%	0	0%
Proton Pump Inhibitors	367	304	83%	63	17%	0	0%	0	0%
Synagis	7	7	100%	0	0%	0	0%	0	0%
Viagra	1	0	0%	1	100%	0	0%	0	0%
Xenical	1	0	0%	1	100%	0	0%	0	0%
Prior Authorization Totals	1,644	1,478	90%	166	10%	0	0%	0	0%

By Request Type
06/01/2008 – 06/30/2008

06/01/08 - 06/30/08	# of	Electronic Requests		Faxed Requests		Mailed Requests		Phone Requests	
	Requests	#	%	#	%	#	%	#	%
Prior Authorizations:									
Antihistamines	201	166	83%	35	17%	0	0%	0	0%
ARBS	60	45	75%	15	25%	0	0%	0	0%
Dispense As Written	360	354	98%	6	2%	0	0%	0	0%
Growth Hormone	7	1	14%	6	86%	0	0%	0	0%
Max Units Override	583	544	93%	39	7%	0	0%	0	0%
Proton Pump Inhibitors	436	348	80%	88	20%	0	0%	0	0%
Synagis	8	8	100%	0	0%	0	0%	0	0%
Prior Authorization Totals	1,655	1,466	89%	189	11%	0	0%	0	0%

Electronic PAs
04/01/2008 – 04/30/2008

04/01/08 - 04/30/08	# Unique Approved	# Unique Denied	# Unique Incomplete	Unique Total	Approval %	Total Transactions
Prior Authorizations:						
Antihistamines	27	79	0	106	25.50%	108
ARBS	9	54	0	63	14.30%	65
Dispense As Written	0	206	0	206	0.00%	206
Max Units Override	21	526	0	547	3.80%	557
Proton Pump Inhibitors	35	155	0	190	18.40%	192
Synagis	0	6	0	6	0.00%	6
Prior Authorization Totals:	92	1,026	0	1,118	8.20%	1,134

Electronic PAs
05/01/2008 – 05/31/2008

05/01/08 - 05/31/08	# Unique Approved	# Unique Denied	# Unique Incomplete	Unique Total	Approval %	Total Transactions
Prior Authorizations:						
Antihistamines	29	140	0	169	17.20%	175
ARBS	13	29	0	42	31.00%	42
Dispense As Written	0	363	0	363	0.00%	370
Growth Hormone	0	3	0	3	0.00%	3
Max Units Override	21	540	0	561	3.70%	577
Proton Pump Inhibitors	59	241	0	300	19.70%	304
Synagis	0	6	0	6	0.00%	7
Prior Authorization Totals:	122	1,322	0	1,444	8.40%	1,478

Electronic PAs
06/01/2008 – 06/30/2008

06/01/08 - 06/30/08	# Unique Approved	# Unique Denied	# Unique Incomplete	Unique Total	Approval %	Total Transactions
Prior Authorizations:						
Antihistamines	31	132	0	163	19.00%	166
ARBS	5	39	0	44	11.40%	45
Dispense As Written	0	348	0	348	0.00%	354
Growth Hormone	0	1	0	1	0.00%	1
Max Units Override	20	494	0	514	3.90%	544
Proton Pump Inhibitors	43	296	0	339	12.70%	348
Synagis	0	5	0	5	0.00%	8
Prior Authorization Totals:	99	1,315	0	1,414	7.00%	1,466

Manual Approvals and Denials

	April 2008			May 2008			June 2008		
	Total	**Approvals**	**Denials**	**Total**	**Approvals**	**Denials**	**Total**	**Approvals**	**Denials**
Antihistamines	**21**	**18**	**3**	**28**	**20**	**8**	**35**	**28**	**7**
ARBs	**23**	**23**	**0**	**6**	**4**	**2**	**15**	**14**	**1**
DAW	**23**	**21**	**2**	**15**	**9**	**6**	**6**	**2**	**4**
GH	**5**	**4**	**1**	**10**	**9**	**1**	**6**	**6**	**0**
Max Units	**54**	**50**	**4**	**42**	**35**	**7**	**39**	**24**	**15**
PPIs	**76**	**70**	**6**	**63**	**51**	**12**	**88**	**67**	**21**
Synagis	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ultram ER	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Xenical	**1**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**0**
Viagra	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**
Totals	**203**	**186**	**17**	**166**	**128**	**38**	**189**	**141**	**48**

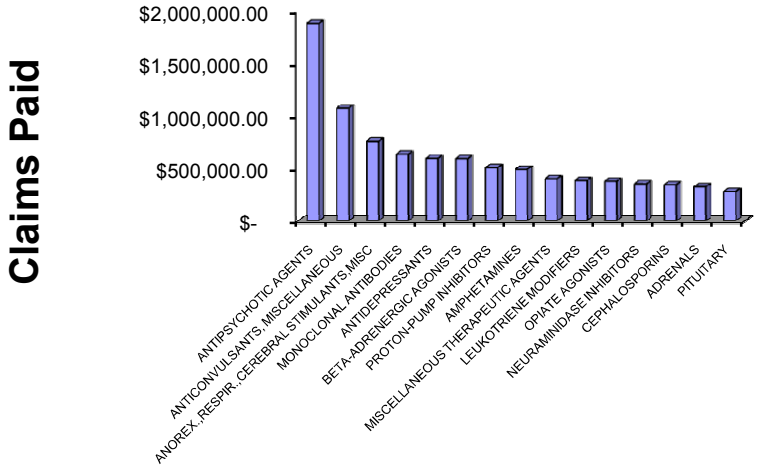
SOUTH DAKOTA MEDICAID
Cost Management Analysis

TOP 15 THERAPEUTIC CLASSES BY TOTAL COST OF CLAIMS FROM 01/01/2008 - 03/31/2008

AHFS Therapeutic Class	Rx	Paid	Paid/Rx	% Total Claims
ANTIPSYCHOTIC AGENTS	7,041	$ 1,875,255.42	$ 266.33	3.45%
ANTICONVULSANTS, MISCELLANEOUS	6,338	$ 1,072,381.96	$ 169.20	3.11%
ANOREX.,RESPIR.,CEREBRAL STIMULANTS,MISC	5,797	$ 758,375.48	$ 130.82	2.84%
MONOCLONAL ANTIBODIES	470	$ 633,970.92	$ 1,348.87	0.23%
ANTIDEPRESSANTS	12,709	$ 595,657.76	$ 46.87	6.23%
BETA-ADRENERGIC AGONISTS	10,191	$ 592,835.44	$ 58.17	5.00%
PROTON-PUMP INHIBITORS	5,360	$ 507,503.14	$ 94.68	2.63%
AMPHETAMINES	3,921	$ 490,900.72	$ 125.20	1.92%
MISCELLANEOUS THERAPEUTIC AGENTS	1,481	$ 402,292.05	$ 271.64	0.73%
LEUKOTRIENE MODIFIERS	3,766	$ 385,051.88	$ 102.24	1.85%
OPIATE AGONISTS	11,849	$ 378,570.68	$ 31.95	5.81%
NEURAMINIDASE INHIBITORS	4,782	$ 352,944.08	$ 73.81	2.35%
CEPHALOSPORINS	7,182	$ 344,577.04	$ 47.98	3.52%
ADRENALS	5,153	$ 325,729.21	$ 63.21	2.53%
PITUITARY	574	$ 281,236.58	$ 489.96	0.28%
TOTAL TOP 15	86,614	$ 8,997,282.36	$ 103.88	42.48%

Total Rx Claims From 01/01/2008 - 03/31/2008	203,901

Top 15 Therapeutic Classes
Based on Total Cost of Claims

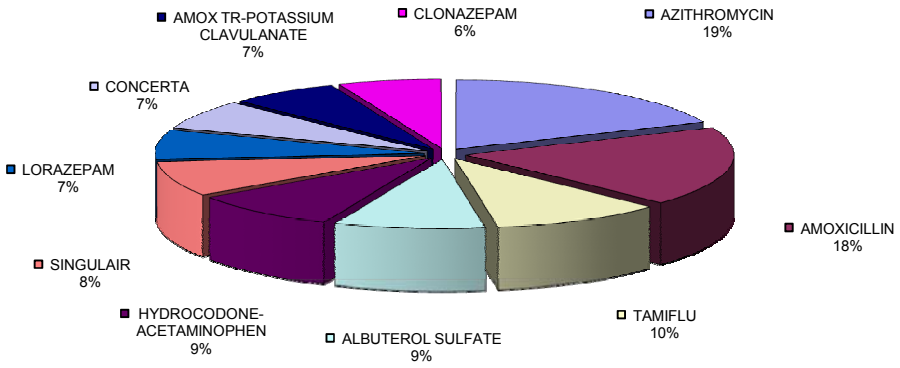


TOP 25 DRUGS BASED ON NUMBER OF CLAIMS FROM 01/01/2008 - 03/31/2008

Drug	AHFS Therapeutic Class	Rx	Paid	Paid/Rx	% Total Claims
AZITHROMYCIN	MACROLIDES	8,616	$ 244,509.26	$ 28.38	4.23%
AMOXICILLIN	PENICILLINS	8,554	$ 88,976.13	$ 10.40	4.20%
TAMIFLU	NEURAMINIDASE INHIBITORS	4,778	$ 352,687.56	$ 73.81	2.34%
ALBUTEROL SULFATE	BETA-ADRENERGIC AGONISTS	4,220	$ 88,508.02	$ 20.97	2.07%
HYDROCODONE-ACETAMINOPHEN	OPIATE AGONISTS	4,136	$ 51,108.79	$ 12.36	2.03%
SINGULAIR	LEUKOTRIENE MODIFIERS	3,750	$ 383,560.92	$ 102.28	1.84%
LORAZEPAM	BENZODIAZEPINES (ANXIOLYTIC,SEDATIV/HYP)	3,165	$ 38,061.93	$ 12.03	1.55%
CONCERTA	ANOREX.,RESPIR.,CEREBRAL STIMULANTS,MISC	3,164	$ 438,194.98	$ 138.49	1.55%
AMOX TR-POTASSIUM CLAVULANATE	PENICILLINS	3,056	$ 120,722.85	$ 39.50	1.50%
CLONAZEPAM	BENZODIAZEPINES (ANTICONVULSANTS)	2,860	$ 33,999.62	$ 11.89	1.40%
ADDERALL XR	AMPHETAMINES	2,574	$ 373,006.12	$ 144.91	1.26%
CEFDINIR	CEPHALOSPORINS	2,268	$ 174,683.46	$ 77.02	1.11%
FLUOXETINE HCL	ANTIDEPRESSANTS	2,053	$ 21,666.60	$ 10.55	1.01%
CEPHALEXIN	CEPHALOSPORINS	2,033	$ 27,378.96	$ 13.47	1.00%
SEROQUEL	ANTIPSYCHOTIC AGENTS	1,949	$ 434,790.88	$ 223.08	0.96%
SERTRALINE HCL	ANTIDEPRESSANTS	1,947	$ 35,440.57	$ 18.20	0.95%
RISPERDAL	ANTIPSYCHOTIC AGENTS	1,907	$ 372,593.09	$ 195.38	0.94%
IBUPROFEN	NONSTEROIDAL ANTI-INFLAMMATORY AGENTS	1,904	$ 14,364.18	$ 7.54	0.93%
ZYRTEC	SECOND GENERATION ANTIHISTAMINES	1,867	$ 113,118.68	$ 60.59	0.92%
LORATADINE	SECOND GENERATION ANTIHISTAMINES	1,866	$ 24,992.55	$ 13.39	0.92%
PREVACID	PROTON-PUMP INHIBITORS	1,829	$ 254,654.00	$ 139.23	0.90%
ALBUTEROL	BETA-ADRENERGIC AGONISTS	1,801	$ 46,105.15	$ 25.60	0.88%
CEFPROZIL	CEPHALOSPORINS	1,651	$ 82,931.28	$ 50.23	0.81%
LEVOTHYROXINE SODIUM	THYROID AGENTS	1,641	$ 18,526.37	$ 11.29	0.80%
TRAZODONE HCL	ANTIDEPRESSANTS	1,552	$ 12,680.25	$ 8.17	0.76%
TOTAL TOP 25		75,141	$ 3,847,262.20	$ 51.20	36.85%

Total Rx Claims From 01/01/2008 - 03/31/2008	203,901

Top 10 Drugs
Based on Number of Claims

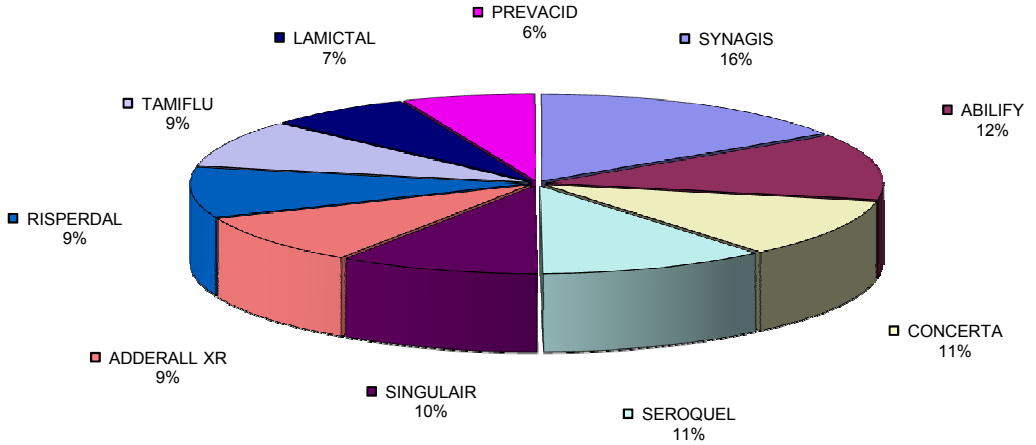


TOP 25 DRUGS BASED ON TOTAL CLAIMS COST FROM 01/01/2008 - 03/31/2008

Drug	AHFS Therapeutic Class	Rx	Paid	Paid/Rx	% Total Claims
SYNAGIS	MONOCLONAL ANTIBODIES	470	$ 633,970.92	$ 1,348.87	0.23%
ABILIFY	ANTIPSYCHOTIC AGENTS	1,358	$ 491,196.89	$ 361.71	0.67%
CONCERTA	ANOREX.,RESPIR.,CEREBRAL STIMULANTS,MISC	3,164	$ 438,194.98	$ 138.49	1.55%
SEROQUEL	ANTIPSYCHOTIC AGENTS	1,949	$ 434,790.88	$ 223.08	0.96%
SINGULAIR	LEUKOTRIENE MODIFIERS	3,750	$ 383,560.92	$ 102.28	1.84%
ADDERALL XR	AMPHETAMINES	2,574	$ 373,006.12	$ 144.91	1.26%
RISPERDAL	ANTIPSYCHOTIC AGENTS	1,907	$ 372,593.09	$ 195.38	0.94%
TAMIFLU	NEURAMINIDASE INHIBITORS	4,778	$ 352,687.56	$ 73.81	2.34%
LAMICTAL	ANTICONVULSANTS, MISCELLANEOUS	913	$ 274,608.14	$ 300.78	0.45%
PREVACID	PROTON-PUMP INHIBITORS	1,829	$ 254,654.00	$ 139.23	0.90%
AZITHROMYCIN	MACROLIDES	8,616	$ 244,509.26	$ 28.38	4.23%
ADVAIR DISKUS	BETA-ADRENERGIC AGONISTS	1,108	$ 201,152.15	$ 181.55	0.54%
STRATTERA	CENTRAL NERVOUS SYSTEM AGENTS, MISC.	1,419	$ 198,846.91	$ 140.13	0.70%
ZYPREXA	ANTIPSYCHOTIC AGENTS	407	$ 191,038.51	$ 469.38	0.20%
CEFDINIR	CEPHALOSPORINS	2,268	$ 174,683.46	$ 77.02	1.11%
TOPAMAX	ANTICONVULSANTS, MISCELLANEOUS	625	$ 172,327.17	$ 275.72	0.31%
PULMICORT	ADRENALS	788	$ 155,404.91	$ 197.21	0.39%
FOCALIN XR	ANOREX.,RESPIR.,CEREBRAL STIMULANTS,MISC	1,117	$ 152,817.45	$ 136.81	0.55%
XOPENEX	BETA-ADRENERGIC AGONISTS	1,102	$ 127,086.01	$ 115.32	0.54%
AMOX TR-POTASSIUM CLAVU	PENICILLINS	3,056	$ 120,722.85	$ 39.50	1.50%
NUTROPIN AQ	PITUITARY	53	$ 116,812.74	$ 2,204.01	0.03%
EFFEXOR XR	ANTIDEPRESSANTS	836	$ 116,196.17	$ 138.99	0.41%
GEODON	ANTIPSYCHOTIC AGENTS	325	$ 113,951.87	$ 350.62	0.16%
NEXIUM	PROTON-PUMP INHIBITORS	622	$ 113,240.89	$ 182.06	0.31%
ZYRTEC	SECOND GENERATION ANTIHISTAMINES	1,867	$ 113,118.68	$ 60.59	0.92%
TOTAL TOP 25		46,901	$ 6,321,172.53	$ 134.78	23.00%

Total Rx Claims From 01/01/2008 - 03/31/2008	203,901

Top 10 Drugs
Based on Total Claims Cost



South Dakota Medicaid
Analysis of AHFS Class 081206 - Cephalosporins
10/01/2007 - 12/31/2007

Label Name	Rx Num	Total Paid Amt	Cost per script
CEFACLOR 125 MG/5 ML SUSP	16	$276.25	$17.27
CEFACLOR 250 MG CAPSULE	29	$447.15	$15.42
CEFACLOR 250 MG/5 ML SUSP	73	$1,679.59	$23.01
CEFACLOR 375 MG/5 ML SUSPEN	47	$1,220.65	$25.97
CEFACLOR 500 MG CAPSULE	15	$372.62	$24.84
	180	$3,996.26	$22.20
CEFADROXIL 250 MG/5 ML SUSP	117	$7,282.06	$62.24
CEFADROXIL 500 MG CAPSULE	92	$1,830.43	$19.90
CEFADROXIL 500 MG/5 ML SUSP	43	$2,886.97	$67.14
	252	$11,999.46	$47.62
CEFAZOLIN 1 GM VIAL	2	$36.64	$18.32
	2	$36.64	$18.32
CEFDINIR 125 MG/5 ML SUSP	686	$36,320.62	$52.95
CEFDINIR 250 MG/5 ML SUSP	1014	$96,238.55	$94.91
CEFDINIR 300 MG CAPSULE	188	$15,299.55	$81.38
	1888	$147,858.72	$78.32
CEFEPIME HCL 2 GRAM VIAL	2	$1,454.39	$727.20
	2	$1,454.39	$727.20
CEFPODOXIME 100 MG TABLET	1	$70.36	$70.36
CEFPODOXIME 200 MG TABLET	4	$373.46	$93.37
	5	$443.82	$88.76
CEFPROZIL 125 MG/5 ML SUSP	224	$7,326.46	$32.71
CEFPROZIL 250 MG TABLET	129	$8,220.25	$63.72
CEFPROZIL 250 MG/5 ML SUSP	857	$42,614.12	$49.72
CEFPROZIL 500 MG TABLET	51	$5,290.46	$103.73
	1261	$63,451.29	$50.32
CEFTIN 125 MG/5 ML ORAL SUSP	20	$1,444.81	$72.24
CEFTIN 250 MG/5 ML ORAL SUSP	189	$21,833.03	$115.52
	209	$23,277.84	$111.38
CEFTRIAXONE 1 GM VIAL	10	$499.19	$49.92
CEFTRIAXONE 2 GM VIAL	2	$172.94	$86.47
CEFTRIAXONE 250 MG VIAL	2	$38.04	$19.02
CEFTRIAXONE 500 MG VIAL	3	$70.31	$23.44
	17	$780.48	$45.91
CEFUROXIME AXETIL 250 MG TAB	195	$4,939.28	$25.33
CEFUROXIME AXETIL 500 MG TAB	194	$6,219.82	$32.06
	389	$11,159.10	$28.69
CEFZIL 125 MG/5 ML SUSPENSION	2	$65.50	$32.75
CEFZIL 250 MG/5 ML SUSPENSION	1	$58.75	$58.75
	3	$124.25	$41.42
CEPHALEXIN 125 MG/5 ML SUSP	113	$1,731.84	$15.33
CEPHALEXIN 250 MG CAPSULE	197	$1,703.93	$8.65
CEPHALEXIN 250 MG/5 ML SUSP	574	$12,004.30	$20.91
CEPHALEXIN 500 MG CAPSULE	1031	$10,801.79	$10.48
	1915	$26,241.86	$13.70
OMNICEF 125 MG/5 ML SUSP	13	$715.17	$55.01
OMNICEF 250 MG/5 ML SUSPENSION	9	$1,031.65	$114.63

Label Name	Rx Num	Total Paid Amt	Cost per script
OMNICEF 300 MG CAPSULE	7	$576.17	$82.31
	29	$2,322.99	$80.10
ROCEPHIN 250 MG VIAL	4	$61.87	$15.47
ROCEPHIN 500 MG VIAL	6	$166.30	$27.72
	10	$228.17	$22.82
SPECTRACEF 200 MG TABLET	1	$68.70	$68.70
	1	$68.70	$68.70
SUPRAX 100 MG/5 ML SUSPENSION	8	$51.75	$6.47
SUPRAX 200 MG/5 ML SUSPENSION	3	$740.94	$246.98
	11	$792.69	$72.06
VANTIN 100 MG/5 ML SUSPENSION	1	$119.92	$119.92
	1	$119.92	$119.92
Totals	**6176**	**$294,356.58**	

Drug Name	18 & under		19-64		65 & older	
	count	cost	count	cost	count	cost
ABILIFY	810	$ 252,085.37	468	$ 184,666.62	3	$ 1,571.01
ABILIFY DISCMELT	6	$ 3,255.47	0	$ -	0	$ -
CHLORPROMAZINE HCL	1	$ 5.22	22	$ 502.32	0	$ -
CLOZAPINE	9	$ 243.27	434	$ 39,250.87	0	$ -
CLOZARIL	0	$ -	53	$ 18,054.98	0	$ -
FAZACLO	0	$ -	5	$ 195.62	0	$ -
FLUPHENAZINE DECANOATE	0	$ -	2	$ 47.90	0	$ -
FLUPHENAZINE HCL	0	$ -	16	$ 257.18	0	$ -
GEODON	76	$ 17,533.87	237	$ 83,231.90	0	$ -
HALOPERIDOL	9	$ 175.94	60	$ 1,664.04	1	$ 18.25
HALOPERIDOL DECANOATE	0	$ -	14	$ 734.93	0	$ -
HALOPERIDOL LACTATE	0	$ -	3	$ 114.68	0	$ -
INVEGA	69	$ 22,660.38	69	$ 27,767.74	0	$ -
LOXAPINE	0	$ -	14	$ 849.35	0	$ -
ORAP	0	$ -	1	$ 41.31	0	$ -
PERPHENAZINE	0	$ -	4	$ 183.22	0	$ -
RISPERDAL	1,257	$ 202,423.09	670	$ 156,929.17	4	$ 290.88
RISPERDAL CONSTA	6	$ 2,707.23	143	$ 103,069.97	0	$ -
SEROQUEL	808	$ 126,796.12	1,111	$ 294,923.57	5	$ 224.10
SEROQUEL XR	64	$ 15,502.21	25	$ 8,262.01	0	$ -
THIORIDAZINE HCL	0	$ -	7	$ 183.04	0	$ -
THIOTHIXENE	0	$ -	1	$ 24.55	0	$ -
TRIFLUOPERAZINE HCL	0	$ -	19	$ 503.84	0	$ -
ZYPREXA	93	$ 22,723.46	321	$ 157,571.37	0	$ -
ZYPREXA ZYDIS	19	$ 4,437.04	49	$ 19,638.08	0	$ -
Totals:	3,227	$ 670,548.67	3,748	$ 1,098,668.26	13	$ 2,104.24

Age	# Recipients
18 & under	999
19 - 64	997
65 & older	16

South Dakota Medicaid
Analysis of AHFS Class 281608 - Antipsychotic Agents
10/01/2007 - 12/31/2007

Label Name	Rx Num	Total Paid Amt	Cost per script
ABILIFY 1 MG/ML SOLUTION	6	$1,459.82	$243.30
ABILIFY 10 MG TABLET	298	$97,686.96	$327.81
ABILIFY 15 MG TABLET	226	$65,393.81	$289.35
ABILIFY 2 MG TABLET	41	$16,606.72	$405.04
ABILIFY 20 MG TABLET	125	$58,676.76	$469.41
ABILIFY 30 MG TABLET	124	$60,308.02	$486.36
ABILIFY 5 MG TABLET	460	$138,173.94	$300.38
ABILIFY 9.7 MG/1.3 ML VIAL	1	$16.97	$16.97
ABILIFY DISCMELT 10 MG TABLET	3	$1,337.02	$445.67
ABILIFY DISCMELT 15 MG TABLET	3	$1,918.45	$639.48
	1287	$441,578.47	$343.11
CHLORPROMAZINE 10 MG TABLET	2	$43.84	$21.92
CHLORPROMAZINE 100 MG TABLET	5	$120.16	$24.03
CHLORPROMAZINE 25 MG TABLET	7	$186.31	$26.62
CHLORPROMAZINE 25 MG/ML AMP	1	$16.00	$16.00
CHLORPROMAZINE 50 MG TABLET	8	$141.23	$17.65
	23	$507.54	$22.07
CLOZAPINE 100 MG TABLET	297	$27,778.52	$93.53
CLOZAPINE 200 MG TABLET	41	$8,664.27	$211.32
CLOZAPINE 25 MG TABLET	105	$3,051.35	$29.06
	443	$39,494.14	$89.15
CLOZARIL 100 MG TABLET	48	$17,552.69	$365.68
CLOZARIL 25 MG TABLET	5	$502.29	$100.46
	53	$18,054.98	$340.66
FAZACLO 25 MG TABLET	5	$195.62	$39.12
	5	$195.62	$39.12
FLUPHENAZINE 10 MG TABLET	6	$91.50	$15.25
FLUPHENAZINE 5 MG TABLET	10	$165.68	$16.57
FLUPHENAZINE DEC 25 MG/ML VL	2	$47.90	$23.95
	18	$305.08	$16.95
GEODON 20 MG CAPSULE	34	$7,978.64	$234.67
GEODON 20 MG VIAL	1	$114.39	$114.39
GEODON 40 MG CAPSULE	79	$17,593.63	$222.70
GEODON 60 MG CAPSULE	55	$18,640.25	$338.91
GEODON 80 MG CAPSULE	144	$56,438.86	$391.94
	313	$100,765.77	$321.94
HALOPERIDOL 0.5 MG TABLET	6	$59.70	$9.95
HALOPERIDOL 1 MG TABLET	13	$198.75	$15.29
HALOPERIDOL 10 MG TABLET	14	$936.31	$66.88
HALOPERIDOL 2 MG TABLET	19	$271.75	$14.30
HALOPERIDOL 5 MG TABLET	18	$391.72	$21.76
HALOPERIDOL DEC 100 MG/ML VIAL	13	$701.65	$53.97
HALOPERIDOL DEC 50 MG/ML VL	1	$33.28	$33.28
HALOPERIDOL LAC 5 MG/ML VIAL	3	$114.68	$38.23
	87	$2,707.84	$31.12
INVEGA 3 MG ER TABLET	41	$12,777.71	$311.65
INVEGA 6 MG ER TABLET	67	$24,720.90	$368.97

Label Name	Rx Num	Total Paid Amt	Cost per script
INVEGA 9 MG ER TABLET	30	$12,929.51	$430.98
	138	$50,428.12	$365.42
LOXAPINE SUCCINATE 10 MG CAP	8	$439.94	$54.99
LOXAPINE SUCCINATE 25 MG CAP	5	$298.02	$59.60
LOXAPINE SUCCINATE 5 MG CAP	1	$111.39	$111.39
	14	$849.35	$60.67
ORAP 2 MG TABLET	1	$41.31	$41.31
	1	$41.31	$41.31
PERPHENAZINE 16 MG TABLET	1	$38.42	$38.42
PERPHENAZINE 4 MG TABLET	2	$43.70	$21.85
PERPHENAZINE 8 MG TABLET	1	$101.10	$101.10
	4	$183.22	$45.81
RISPERDAL 0.25 MG TABLET	304	$41,799.57	$137.50
RISPERDAL 0.5 MG TABLET	553	$86,680.88	$156.75
RISPERDAL 0.5 M-TAB	35	$4,324.80	$123.57
RISPERDAL 1 MG M-TAB	13	$2,217.41	$170.57
RISPERDAL 1 MG TABLET	517	$77,289.54	$149.50
RISPERDAL 1 MG/ML SOLUTION	56	$6,819.45	$121.78
RISPERDAL 2 MG M-TAB	9	$3,404.58	$378.29
RISPERDAL 2 MG TABLET	216	$58,298.21	$269.90
RISPERDAL 3 MG M-TAB	4	$1,708.44	$427.11
RISPERDAL 3 MG TABLET	135	$40,214.15	$297.88
RISPERDAL 4 MG M-TAB	2	$1,611.04	$805.52
RISPERDAL 4 MG TABLET	87	$35,275.07	$405.46
RISPERDAL CONSTA 25 MG SYR	29	$12,402.68	$427.68
RISPERDAL CONSTA 37.5 MG SYR	49	$25,106.18	$512.37
RISPERDAL CONSTA 50 MG SYR	71	$68,268.34	$961.53
	2080	$465,420.34	$223.76
SEROQUEL 100 MG TABLET	513	$73,409.49	$143.10
SEROQUEL 200 MG TABLET	374	$110,225.48	$294.72
SEROQUEL 25 MG TABLET	371	$41,362.09	$111.49
SEROQUEL 300 MG TABLET	272	$122,589.94	$450.70
SEROQUEL 400 MG TABLET	74	$29,317.44	$396.18
SEROQUEL 50 MG TABLET	320	$45,039.35	$140.75
SEROQUEL XR 200 MG TABLET	31	$6,217.14	$200.55
SEROQUEL XR 300 MG TABLET	39	$11,489.51	$294.60
SEROQUEL XR 400 MG TABLET	19	$6,057.57	$318.82
	2013	$445,708.01	$221.41
THIORIDAZINE 10 MG TABLET	1	$32.29	$32.29
THIORIDAZINE 25 MG TABLET	3	$89.46	$29.82
THIORIDAZINE 50 MG TABLET	3	$61.29	$20.43
	7	$183.04	$26.15
THIOTHIXENE 10 MG CAPSULE	1	$24.55	$24.55
	1	$24.55	$24.55
TRIFLUOPERAZINE 10 MG TABLET	6	$198.30	$33.05
TRIFLUOPERAZINE 2 MG TABLET	10	$201.29	$20.13
TRIFLUOPERAZINE 5 MG TABLET	3	$104.25	$34.75
	19	$503.84	$26.52
ZYPREXA 10 MG TABLET	105	$37,408.51	$356.27
ZYPREXA 10 MG VIAL	8	$521.94	$65.24

Label Name	Rx Num	Total Paid Amt	Cost per script
ZYPREXA 15 MG TABLET	70	$52,354.56	$747.92
ZYPREXA 2.5 MG TABLET	35	$7,223.14	$206.38
ZYPREXA 20 MG TABLET	79	$49,726.12	$629.44
ZYPREXA 5 MG TABLET	99	$27,241.94	$275.17
ZYPREXA 7.5 MG TABLET	18	$5,818.62	$323.26
ZYPREXA ZYDIS 10 MG TABLET	35	$12,158.05	$347.37
ZYPREXA ZYDIS 15 MG TAB	6	$3,297.00	$549.50
ZYPREXA ZYDIS 20 MG TAB	7	$4,657.34	$665.33
ZYPREXA ZYDIS 5 MG TABLET	20	$3,962.73	$198.14
	482	$204,369.95	$424.00
Totals	**6988**	**$1,771,321.17**	

Total spent on Atypical Antipsychotics	$1,766,015.40
Total spent on Traditional Antipsychotics	$5,305.77

South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Invega®

I. Overview

Invega (paliperidone) is the major active metabolite of risperidone. The exact mechanism of action is unknown, but it is thought that paliperidone works through a combination of dopamine type 2 and serotonin type 2 receptor antagonisms. Invega is indicated for the acute and maintenance treatment of schizophrenia in patients greater than 18 years of age.

II. Pharmacology

Although the exact mechanism is unknown, paliperidone is a centrally active dopamine type 2 antagonist with serotonin type 2 activities. Paliperidone is also active as an antagonist at α adrenergic receptors and H_1 histaminergic receptors. It has no affinity for cholinergic, muscarinic, or β-adrenergic receptors.

III. Pharmacokinetics

Drug	Serum Half-Life (hours)	C_{max} (hours)	Time to steady-state concentration (days)	Renal Excretion (%)	Active Metabolites
Paliperidone	23	24	4-5	59	Yes

IV. Warnings/Precautions

Increased Mortality in Elderly Patients with Dementia-Related Psychosis (Boxed Warning) - These patients, when treated with atypical antipsychotic drugs, are at an increased risk of death compared to placebo. Analysis of 17 placebo-controlled trials in these subjects revealed a risk of death in the drug-treated subjects of between 1.6 to 1.7 times that seen in placebo-treated subjects. Over the course of a typical 10-week trial, the rate of death in drug-treated subjects was about 4.5%, compared to a rate of about 2.6% in the placebo group. Although the causes of death were varied, most of the deaths appeared to be either cardiovascular (e.g., heart failure, sudden death) or infectious (e.g. pneumonia) in nature. Invega is not approved for the treatment of patients with Dementia-Related Psychosis.

Cerebrovascular Adverse Reactions, Including Stroke, in Elderly Patients With Dementia-Related Psychosis-In placebo-controlled trials with risperidone, aripiprazole, and olanzapine in elderly subjects with dementia, there was a higher incidence of cerebrovascular adverse reactions (CVA and TIA) including fatalities compared to placebo-treated subjects. Paliperidone was not marketed at the time these studies were performed; however, it is not approved for the treatment of patients with dementia-related psychosis.

Neuroleptic Malignant Syndrome (NMS)-This symptom complex has been reported in association with antipsychotic drugs, including paliperidone. Clinical manifestations of NMS are hyperpyrexia, muscle rigidity, altered mental status, and evidence of autonomic instability. Additional signs may include elevated creatine phosphokinase, myogloinuria, and acute renal failure.

QT Prolongation-Paliperidone causes a modest increase in the corrected QT interval. The use of paliperidone should be avoided in combination with other drugs that are known to prolong QT interval, including Class 1A or Class III antiarrhythmic agents, antipsychotic agents, and certain antibiotics. Paliperidone should also be avoided in patients with congenital long QT syndrome and in patients with a history of cardiac arrhythmias.

Tardive Dyskinesia-This syndrome of potentially irreversible, involuntary, dyskinetic movements may develop in patients treated with antipsychotic drugs.

***Hyperglycemia and Diabetes Mellitus*-**Hyperglycemia, and in some cases extreme and associated with ketoacidosis or hyperosmolar coma or death, has been reported in patients treated with all atypical antipsychotics.

***Hyperprolactinemia*-**Paliperidone elevates prolactin levels and the elevation persists during chronic administration. This may suppress hypothalamic GnRH, resulting in reduced pituitary gonadotropin secretion. This may inhibit reproductive function and cause a variety of symptoms, including galactorrhea, amenorrhea, gynecomastia, and impotence.

***Potential for Gastrointestinal Obstructions*-**The Invega tablet is non-deformable and does not appreciably change shape in the GI tract. It should ordinarily not be administered to patients with pre-existing severe GI narrowing (pathologic or iatrogenic, for example: esophageal motility disorders, small bowel inflammatory disease, "short guy" syndrome due to adhesions or decreased transit time, past history of peritonitis, cystic fibrosis, chronic intestinal pseudoobstruction, or Meckel's diverticulum).

A decrease in transit time (e.g. diarrhea) would be expected to decrease bioavailability and an increase in transit time (e.g. GI neuropathy or diabetic gastroparesis) would be expected to increase bioavailability.

***Orthostatic Hypotension and Syncope*-**Paliperidone can induce orthostatic hypotension and syncope in some patients because of its alpha-blocking activity.

***Potential for Cognitive and Motor Impairment*-**Somnolence and sedation were reported in subjects treated with paliperidone. Antipsychotics have the potential to impair judgment, thinking, or motor skills.

***Seizures*-**Paliperidone should be used cautiously in patients with a history of seizures or other conditions that potentially lower the seizure threshold.

***Dysphagia*-**Esophageal dysmotility and aspiration have been associated with antipsychotic drug use.

***Suicide*-**The possibility of suicide attempt is inherent in psychotic illnesses, and close supervision of high-risk patients should accompany drug therapy.

***Priapism*-**Drugs with alpha-adrenergic blocking effects have been reported to induce priapism, although no cases have been reported in clinical trials with paliperidone.

***Thrombotic Thrombocytopenic Purpura (TTP)*-**Cases of TTP have been reported in association with risperidone, but no cases have been observed during clinical studies with paliperidone.

***Body Temperature Regulation*-**Disruption of the body's ability to reduce core body temperature has been attributed to antipsychotic agents.

***Antiemetic Effect*-**An antiemetic effect was observed in preclinical studies with paliperidone.

***Use in Patients with Concomitant Illness*-**Clinical experience with paliperidone in patients with certain concomitant illnesses is limited. Patients with Parkinson's disease or Dementia with Lewy Bodies are reported to have an increased sensitivity to antipsychotic medications.

V. Drug Interactions

Drug	Interaction	Description
Paliperidone	Alcohol, CNS depressants	Coadministration may lead to enhanced CNS depression.

Drug	Interaction	Description
Paliperidone	Antihypertensive agents	Paliperidone may enhance the effects of the antihypertensive agent. Because of its alpha blocking activity, paliperidone may cause orthostatic hypotension and/or syncope may occur when given in combination with an antihypertensive medications.
Paliperidone	Levodopa and dopamine agonists	Coadministration may antagonize the effects of levodopa or dopamine agonists.

VI. Adverse Drug Events

Adverse Event ≥ 2% (given in %)	Placebo (n=355)	Paliperidone 3mg (n=127)	Paliperidone 6mg (n=235)	Paliperidone 9mg (n=246)	Paliperidone 12mg (n=242)
Total Adverse Events	66	72	66	70	76
Cardiovascular					
AV block, 1st degree	1	2	0	2	1
BP increased	1	2	<1	<1	1
Bundle branch block	2	3	1	3	<1
QT prolongation	3	3	4	3	5
Abnormal T wave	1	2	1	2	1
Orthostatic hypotension	1	2	1	2	4
Sinus arrhythmia	0	2	1	1	<1
Tachycardia	7	14	12	12	14
CNS					
Akathesia	4	4	3	8	10
Anxiety	8	9	7	6	5
Asthenia	1	2	<1	2	2
Dizziness	4	6	5	4	5
Dystonia	1	1	1	5	4
EPS	2	5	2	7	7
Fatigue	1	2	1	2	2
Headache	12	11	12	14	14
Hypertonia	1	2	1	4	3
Parkinsonism	0	0	<1	2	1
Somnolence	7	6	9	10	11
Tremor	3	3	3	4	3
GI					
Upper abdominal pain	1	1	3	2	2
Dry mouth	1	2	3	1	3
Dyspepsia	4	2	3	2	5
Nausea	5	6	4	4	4
Salivary hypersecretion	<1	0	<1	1	4
Miscellaneous					
Back pain	1	2	3	1	3
Increased blood insulin	1	2	1	1	<1
Cough	1	3	2	3	2
Pain in extremity	1	0	1	0	2
Pyrexia	1	1	<1	2	2
Blurred vision	1	1	<1	0	2

Paliperidone Treatment-Emergent EPS (%)					
EPS Group	**Placebo**	**Paliperidone 3mg**	**Paliperidone 6mg**	**Paliperidone 9mg**	**Paliperidone 12mg**
Parkinsonism	9	11	3	15	14
Akathesia	6	6	4	7	9
Use of anticholinergic medications	10	10	9	22	22
Overall EPS-related adverse event	11	12.6	10.2	25.2	26
Dyskinesia	3.4	4.7	2.6	7.7	8.7
Dystonia	1.1	0.8	1.3	5.3	4.5
Hyperkinesia	3.9	3.9	3	8.1	9.9
Tremor	3.4	3.1	2.6	4.5	3.3

VII. Dosing and Administration

Drug	Adult Dosing	Pediatric Dosing	Availability
Paliperidone	Schizophrenia: Initial dose is 6mg daily, given in the morning. Initial dose titration is not required. Some patients may require up to 12mg/day, while others can be maintained on 3mg/day. Dose increases above 6mg/day should occur at intervals > 5 days and be made in 3mg/day increments.	Safety and efficacy of paliperidone in patients under the age of 18 have not been established.	Paliperidone extended-release tablets are available in 3mg, 6mg, and 9mg.

VIII. Utilization

Invega Utilization 05/01/2007 - 04/30/2008

Label Name	Rx Num	Total Reimb Amt	Average cost per script
INVEGA 9 MG ER TABLET	112	$49,592.93	$442.79
INVEGA 3 MG ER TABLET	157	$49,795.37	$317.17
INVEGA 6 MG ER TABLET	238	$81,804.84	$343.72
Total 97 Recipients	**507**	**$181,193.14**	**$357.38**

Risperdal Utilization 05/01/2007 - 04/30/2008

Label Name	Rx Num	Total Reimb Amt	Average cost per script
RISPERDAL 0.25 MG TABLET	1166	$161,496.12	$138.50
RISPERDAL 0.5 MG TABLET	2092	$328,659.21	$157.10
RISPERDAL 0.5 M-TAB	138	$17,487.75	$126.72
RISPERDAL 1 MG M-TAB	63	$10,311.05	$163.67

Label Name	Rx Num	Total Reimb Amt	Average cost per script
RISPERDAL 1 MG TABLET	2042	$311,025.62	$152.31
RISPERDAL 1 MG/ML SOLN	237	$31,597.61	$133.32
RISPERDAL 2 MG M-TAB	42	$13,561.83	$322.90
RISPERDAL 2 MG TABLET	903	$233,359.70	$258.43
RISPERDAL 3 MG M-TAB	6	$2,270.44	$378.41
RISPERDAL 3 MG TABLET	501	$147,033.26	$293.48
RISPERDAL 4 MG M-TAB	14	$8,077.26	$576.95
RISPERDAL 4 MG TABLET	332	$125,459.78	$377.89
RISPERDAL CONSTA 25 MG	129	$53,969.79	$418.37
RISPERDAL CONSTA 37.5 MG	168	$86,565.51	$515.27
RISPERDAL CONSTA 50 MG	271	$258,113.02	$952.45
Total 1,015 Recipients	**8104**	**$1,788,987.95**	**$220.75**

IX. Ages of Patients

Invega Summary by Age
05/01/2007 – 04/30/2008

Age	Recip Count	Rx Count
6	3	8
7	1	8
8	2	8
9	3	25
10	3	29
11	1	10
12	3	17
13	10	38
14	4	19
15	2	8
16	4	26
17	5	29
18	3	10
19	5	41
20	4	8
21	2	21
23	1	10
25	2	23
26	3	12
27	2	11
28	1	5
29	1	13

Age	Recip Count	Rx Count
31	1	5
33	2	4
34	1	3
35	2	2
36	1	2
37	1	1
38	1	1
40	4	11
41	2	4
42	2	11
44	1	5
46	1	1
47	1	2
48	1	3
49	2	13
50	1	3
51	1	2
52	1	12
57	1	6
58	1	7
61	1	2
62	3	28

Risperdal Summary by Age
05/01/2007 – 04/30/2008

Age	Recip Count	Rx Count
1	1	1
2	1	1
3	4	24
4	11	49
5	16	92
6	37	304
7	49	299
8	40	269
9	55	495
10	59	417
11	52	363
12	62	433
13	53	422
14	59	489
15	37	330
16	50	323
17	27	190
18	28	219
19	24	193
20	13	76
21	9	107
22	7	61
23	6	46
24	10	87
25	8	82
26	13	125
27	9	118
28	7	66
29	9	77
30	10	101
31	9	87
32	7	73
33	2	3
34	9	61
35	9	46
36	10	55

Age	Recip Count	Rx Count
37	8	65
38	9	110
39	4	76
40	4	21
41	6	54
42	12	95
43	4	15
44	5	44
45	5	86
46	12	135
47	7	88
48	9	61
49	8	50
50	8	84
51	6	47
52	6	42
53	10	90
54	11	94
55	14	131
56	1	15
57	6	69
58	10	104
59	8	79
60	4	65
61	7	57
62	4	33
63	3	39
64	3	19
65	3	29
66	1	5
82	1	5
83	2	5
87	1	2
94	1	6

X. Conclusion

Paliperidone is the active metabolite of risperidone. There are no head to head comparisons with paliperidone and risperidone. One study compared Invega to one other antipsychotic, Olanzapine, and it showed Invega appeared similar in efficacy. It appears that paliperidone and risperidone have similar efficacy and side effect profiles, differing only in dosing, cost, and drug interaction profiles. No specific advantages of the new formulation have been demonstrated other than being dosed once a day.

HID Recommendation: It is recommended that a prior authorization be placed on paliperidone in consideration of the fact that paliperidone adds significant cost and provides no clinically proven benefit over risperidone. It is further recommended that if a patient fails a course of risperidone, the provider may request a prior authorization for paliperidone.

References:

1. Wolters Kluwer Health, Inc. Drug Facts and Comparisons. St. Louis, MO. 2008.
2. Invega® [package insert]. Titusville, NJ: Janssen, L.P.; February 2008.
3. New drug: Invega (paliperidone extended-release tablets). Pharmacist's Letter/Prescriber's Letter 2007;23(5):230512.
4. Owen RT. Extended-release paliperidone: efficacy, safety and tolerability profile of a new atypical antipsychotic. Drugs Today. 2007 Apr;43(4):249-58.
5. Yang LP, Plosker GL. Paliperidone extended release. CNS Drugs. 2007;21(5):417-25.

INVEGA PRIOR AUTHORIZATION
SD DEPARTMENT OF SOCIAL SERVICES
MEDICAL SERVICES DIVISION

Fax Completed Form to:
866-254-0761
For questions regarding this Prior authorization, call
866-705-5391

SD Medicaid requires that patients receiving a new prescription for Invega must first try Risperidone.

- **Risperidone (Risperdal) does not require a prior authorization.**

Part I: RECIPIENT INFORMATION (To be completed by physician's representative or pharmacy):

RECIPIENT NAME:	RECIPIENT MEDICAID ID NUMBER:
Recipient Date of birth: / /	

Part II: PHYSICIAN INFORMATION (To be completed by physician's representative or pharmacy):

PHYSICIAN NAME:		PHYSICIAN DEA NUMBER:
City:	PHONE: ( )	FAX: ( )

Part III: TO BE COMPLETED BY PHYSICIAN:

Requested Dosage: (must be completed) **Diagnosis for this request:**
Qualifications for coverage:
☐ Failed / intolerant to Risperidone (Risperdal)
Adverse Reaction (attach FDA MedWatch form) or contraindication to risperidone: (provide description below):
Medical Justification for use of risperidone without trial of paliperidone:
Physician Signature: Date:

Part IV: PHARMACY INFORMATION

PHARMACY NAME:	SD MEDICAID PROVIDER NUMBER:
Phone: ( ):	FAX:: ( )
Drug:	NDC#:

Part V: FOR OFFICIAL USE ONLY

Date: / /	Initials: _____
Approved - Effective dates of PA: From: / /	To: / /
Denied: (Reasons)	

Drug Name	18 & under		19-64		65 & older	
	count	cost	count	cost	count	cost
CARBAMAZEPINE	94	$ 2,087.50	284	$ 6,336.95	0	$ -
CARBATROL	77	$ 7,838.81	145	$ 13,582.88	0	$ -
DEPAKENE	9	$ 761.13	2	$ 424.18	0	$ -
DEPAKOTE	191	$ 23,406.30	431	$ 79,348.41	0	$ -
DEPAKOTE ER	241	$ 24,546.05	342	$ 57,159.37	1	$ 40.51
DEPAKOTE SPRINKLE	228	$ 21,159.23	82	$ 13,941.24	2	$ 66.86
EPITOL	3	$ 18.00	10	$ 86.00	0	$ -
EQUETRO	0	$ -	9	$ 1,554.48	0	$ -
FELBATOL	36	$ 6,323.60	36	$ 7,849.31	0	$ -
GABAPENTIN	29	$ 581.30	577	$ 21,647.02	1	$ 63.25
GABITRIL	4	$ 834.89	19	$ 6,017.42	0	$ -
KEPPRA	182	$ 31,672.78	206	$ 62,893.67	0	$ -
LAMICTAL	310	$ 102,582.56	575	$ 164,840.96	0	$ -
LAMICTAL (ORANGE)	0	$ -	1	$ 200.48	0	$ -
LAMOTRIGINE	44	$ 11,378.13	18	$ 5,392.63	0	$ -
LYRICA	15	$ 1,247.28	391	$ 55,512.45	0	$ -
MAGNESIUM SULFATE	1	$ 19.85	0	$ -	0	$ -
NEURONTIN	11	$ 1,083.65	4	$ 1,277.48	0	$ -
OXCARBAZEPINE	81	$ 15,531.93	74	$ 16,233.51	0	$ -
TEGRETOL	27	$ 2,427.47	21	$ 1,657.97	0	$ -
TEGRETOL XR	52	$ 2,227.49	103	$ 7,943.51	0	$ -
TOPAMAX	142	$ 34,923.70	510	$ 146,306.36	1	$ 31.97
TRILEPTAL	260	$ 49,153.53	110	$ 26,902.02	0	$ -
VALPROIC ACID	107	$ 3,720.47	142	$ 10,412.22	0	$ -
ZONEGRAN	1	$ 119.95	7	$ 2,006.26	0	$ -
ZONISAMIDE	39	$ 3,254.05	78	$ 8,944.94	0	$ -
Totals:	2,184	$ 346,899.65	4,177	$ 718,471.72	5	$ 202.59

Age	# Recipients
18 & under	652
19-64	1246
65 & older	11
Total	1909

South Dakota Medicaid
Analysis of AHFS Class 281292 - Anticonvulsant Agents, Misc
10/01/2007 - 12/31/2007

Label Name	Rx Num	Total Paid Amt	Cost per script
CARBAMAZEPINE 100 MG TAB CHW	116	$2,679.02	$23.10
CARBAMAZEPINE 100 MG/5 ML SUSP	56	$1,990.09	$35.54
CARBAMAZEPINE 200 MG TABLET	206	$3,755.34	$18.23
	378	$8,424.45	$22.29
CARBATROL 100 MG CAPSULE SA	27	$2,459.38	$91.09
CARBATROL 200 MG CAPSULE SA	97	$9,821.05	$101.25
CARBATROL 300 MG CAPSULE SA	98	$9,141.26	$93.28
	222	$21,421.69	$96.49
DEPAKENE 250 MG CAPSULE	2	$424.18	$212.09
DEPAKENE 250 MG/5 ML SYRUP	9	$761.13	$84.57
	11	$1,185.31	$296.66
DEPAKOTE 125 MG SPRINKLE CAP	312	$35,167.33	$112.72
DEPAKOTE 125 MG TABLET EC	69	$3,941.98	$57.13
DEPAKOTE 250 MG TABLET EC	286	$39,940.44	$139.65
DEPAKOTE 500 MG TABLET EC	270	$58,872.29	$218.05
DEPAKOTE ER 250 MG TABLET	222	$17,059.21	$76.84
DEPAKOTE ER 500 MG TAB SA	362	$64,686.72	$178.69
	1521	$219,667.97	$144.42
EPITOL 200 MG TABLET (carbamazepine)	13	$104.00	$8.00
	13	$104.00	$8.00
EQUETRO 200 MG CAPSULE (carbamazepine)	3	$554.79	$184.93
EQUETRO 300 MG CAPSULE	6	$999.69	$166.62
	9	$1,554.48	$172.72
FELBATOL 400 MG TABLET	26	$2,870.96	$110.42
FELBATOL 600 MG TABLET	36	$6,688.21	$185.78
FELBATOL 600 MG/5 ML SUSP	10	$4,613.74	$461.37
	72	$14,172.91	$196.85
GABAPENTIN 100 MG CAPSULE	102	$1,862.73	$18.26
GABAPENTIN 300 MG TABLET/CAPSULE	295	$7,966.33	$27.00
GABAPENTIN 400 MG CAPSULE	36	$1,156.20	$32.12
GABAPENTIN 600 MG TABLET	129	$7,887.69	$61.14
GABAPENTIN 800 MG TABLET	44	$3,418.62	$77.70
	606	$22,291.57	$36.78
GABITRIL 2 MG TABLET	7	$1,326.78	$189.54
GABITRIL 4 MG TABLET	16	$5,525.53	$345.35
	23	$6,852.31	$297.93
KEPPRA 1,000 MG TABLET	18	$7,518.92	$417.72
KEPPRA 100 MG/ML ORAL SOLN	106	$11,627.55	$109.69
KEPPRA 250 MG TABLET	39	$12,460.96	$319.51
KEPPRA 500 MG TABLET	178	$48,651.69	$273.32
KEPPRA 750 MG TABLET	47	$14,307.33	$304.41
	388	$94,566.45	$243.73
LAMICTAL 100 MG TABLET	304	$88,236.18	$290.25
LAMICTAL 150 MG TABLET	141	$39,215.55	$278.12
LAMICTAL 200 MG TABLET	265	$76,637.45	$289.20
LAMICTAL 25 MG DISPER TABLET	13	$12,623.18	$971.01
LAMICTAL 25 MG TABLET	162	$50,711.16	$313.03
LAMICTAL TB START KIT (ORANGE)	1	$200.48	$200.48

Label Name	Rx Num	Total Paid Amt	Cost per script
	886	$267,624.00	$302.06
LAMOTRIGINE 25 MG DISPER TAB	50	$15,795.04	$315.90
LAMOTRIGINE 5 MG DISPER TABLET	12	$975.72	$81.31
	62	$16,770.76	$270.50
LYRICA 100 MG CAPSULE	65	$9,843.60	$151.44
LYRICA 150 MG CAPSULE	39	$5,618.35	$144.06
LYRICA 200 MG CAPSULE	4	$659.58	$164.90
LYRICA 25 MG CAPSULE	16	$1,761.52	$110.10
LYRICA 300 MG CAPSULE	4	$476.60	$119.15
LYRICA 50 MG CAPSULE	114	$18,205.19	$159.69
LYRICA 75 MG CAPSULE	164	$20,194.89	$123.14
	406	$56,759.73	$139.80
MAGNESIUM SULFATE 50% VIAL	1	$19.85	$19.85
	1	$19.85	$19.85
NEURONTIN 100 MG CAPSULE	3	$247.86	$82.62
NEURONTIN 250 MG/5 ML SOLN	9	$953.42	$105.94
NEURONTIN 800 MG TABLET	3	$1,159.85	$386.62
	15	$2,361.13	$157.41
OXCARBAZEPINE 150 MG TABLET	15	$1,336.19	$89.08
OXCARBAZEPINE 300 MG TABLET	92	$17,708.23	$192.48
OXCARBAZEPINE 600 MG TABLET	48	$12,721.02	$265.02
	155	$31,765.44	$204.94
TEGRETOL 100 MG TABLET CHEW	9	$977.39	$108.60
TEGRETOL 100 MG/5 ML SUSP	24	$1,995.26	$83.14
TEGRETOL 200 MG TABLET	15	$1,112.79	$74.19
TEGRETOL XR 100 MG TABLET SA	40	$1,552.40	$38.81
TEGRETOL XR 200 MG TABLET SA	66	$3,654.33	$55.37
TEGRETOL XR 400 MG TABLET SA	49	$4,964.27	$101.31
	203	$14,256.44	$70.23
TOPAMAX 100 MG TABLET	247	$79,532.25	$321.99
TOPAMAX 15 MG SPRINKLE CAP	5	$504.57	$100.91
TOPAMAX 200 MG TABLET	130	$47,884.29	$368.34
TOPAMAX 25 MG SPRINKLE CAP	8	$3,025.02	$378.13
TOPAMAX 25 MG TABLET	166	$27,431.63	$165.25
TOPAMAX 50 MG TABLET	97	$22,884.27	$235.92
	653	$181,262.03	$277.58
TRILEPTAL 150 MG TABLET	26	$2,222.95	$85.50
TRILEPTAL 300 MG TABLET	140	$32,660.54	$233.29
TRILEPTAL 300 MG/5 ML SUSP	158	$27,605.57	$174.72
TRILEPTAL 600 MG TABLET	46	$13,566.49	$294.92
	370	$76,055.55	$205.56
VALPROIC ACID 250 MG CAPSULE	122	$10,428.65	$85.48
VALPROIC ACID 250 MG/5 ML SYR	127	$3,704.04	$29.17
	249	$14,132.69	$56.76
ZONEGRAN 100 MG CAPSULE	8	$2,126.21	$265.78
	8	$2,126.21	$265.78
ZONISAMIDE 100 MG CAPSULE	106	$11,681.18	$110.20
ZONISAMIDE 25 MG CAPSULE	9	$517.81	$57.53
	115	$12,198.99	$106.08
Totals	6366	$1,065,573.96	

SOUTH DAKOTA MEDICAID
Anticonvulsants – AHFS Class 281292
Breakdown of Diagnoses

Diagnosis	Number of Recipients	Number of Prescriptions	Total Reimbursed
Seizure disorder	790	3394	$602,011.68
Bipolar Disorder (without seizure/epilepsy diagnosis)	465	1472	$261,373.04
Chronic Pain (without seizure/epilepsy diagnosis)	201	591	$79,149.04
Other/No Diagnosis	530		

Drug Name	18 & under		19-64		65 & older	
	count	cost	count	cost	count	cost
AMITRIPTYLINE HCL	148	$ 993.14	445	$ 3,329.60	13	$ 89.44
BUDEPRION SR	19	$ 840.25	98	$ 5,271.50	0	$ -
BUDEPRION XL	64	$ 7,584.21	198	$ 25,226.31	0	$ -
BUPROBAN	0	$ -	2	$ 99.50	0	$ -
BUPROPION HCL	13	$ 192.65	29	$ 1,033.18	0	$ -
BUPROPION HCL SR	47	$ 2,151.95	201	$ 12,475.60	0	$ -
BUPROPION XL	30	$ 2,963.78	119	$ 13,785.54	0	$ -
CELEXA	0	$ -	2	$ 181.84	0	$ -
CITALOPRAM	1	$ 137.49	9	$ 1,261.26	0	$ -
CITALOPRAM HBR	166	$ 2,095.46	539	$ 7,427.25	1	$ -
CLOMIPRAMINE HCL	2	$ 43.25	11	$ 279.20	0	$ -
CYMBALTA	47	$ 4,937.07	723	$ 94,937.86	0	$ -
DESIPRAMINE HCL	14	$ 309.02	4	$ 84.85	0	$ -
DOXEPIN HCL	7	$ 42.15	52	$ 573.62	0	$ -
EFFEXOR	0	$ -	3	$ 459.73	0	$ -
EFFEXOR XR	60	$ 6,526.01	787	$ 106,445.62	2	$ 227.26
FLUOXETINE HCL	1,181	$ 12,024.72	775	$ 9,067.04	0	$ -
FLUVOXAMINE MALEATE	6	$ 361.50	64	$ 2,899.09	0	$ -
IMIPRAMINE HCL	121	$ 2,261.61	38	$ 932.04	0	$ -
LEXAPRO	310	$ 24,601.01	1,015	$ 83,400.60	2	$ 211.85
MIRTAZAPINE	200	$ 5,999.09	263	$ 8,845.70	1	$ 76.59
NEFAZODONE HCL	0	$ -	19	$ 1,076.13	0	$ -
NORTRIPTYLINE HCL	42	$ 407.01	136	$ 1,411.00	1	$ 9.85
PAROXETINE HCL	37	$ 1,230.56	423	$ 16,586.00	2	$ 66.40
PAXIL CR	36	$ 4,166.62	87	$ 10,519.37	0	$ -
PERPHENAZINE-AMITRIPTYLINE	0	$ -	9	$ 73.35	0	$ -
PROZAC	0	$ -	4	$ 1,517.30	0	$ -
PROZAC WEEKLY	6	$ 664.50	10	$ 1,034.91	0	$ -
REMERON	2	$ 164.50	0	$ -	0	$ -
SERTRALINE HCL	702	$ 13,198.15	1,284	$ 26,609.80	3	$ 80.10
SYMBYAX	0	$ -	33	$ 11,442.22	0	$ -
TOFRANIL-PM	2	$ 74.37	0	$ -	0	$ -
TRAZODONE HCL	757	$ 5,175.77	735	$ 7,320.38	3	$ 8.35
VENLAFAXINE HCL	0	$ -	47	$ 4,153.35	0	$ -
WELLBUTRIN XL	151	$ 18,050.86	238	$ 30,889.01	0	$ -
ZOLOFT	11	$ 644.94	9	$ 708.49	0	$ -
Totals:	4,182	$ 117,841.64	8,411	$ 491,358.24	28	$ 769.84

Age	# Recipients
18 & under	1554
19 - 64	3068
65 & older	28

South Dakota Medicaid
Analysis of AHFS Class 281604 - Antidepressant Agents
10/01/2007 - 12/31/2007

Label Name	Rx Num	Total Paid Amt	Cost per script
AMITRIPTYLINE HCL 10 MG TAB	124	$774.26	$6.24
AMITRIPTYLINE HCL 100 MG TAB	34	$276.15	$8.12
AMITRIPTYLINE HCL 150 MG TAB	21	$262.47	$12.50
AMITRIPTYLINE HCL 25 MG TAB	235	$1,670.02	$7.11
AMITRIPTYLINE HCL 50 MG TAB	156	$1,098.10	$7.04
AMITRIPTYLINE HCL 75 MG TAB	36	$331.18	$9.20
	606	$4,412.18	$7.28
BUDEPRION SR 100 MG TABLET	10	$617.50	$61.75
BUDEPRION SR 150 MG TABLET	107	$5,494.25	$51.35
BUDEPRION XL 300 MG TABLET	262	$32,810.52	$125.23
BUPROBAN 150 MG TABLET	2	$99.50	$49.75
BUPROPION HCL 100 MG TABLET	26	$971.02	$37.35
BUPROPION HCL 75 MG TABLET	16	$254.81	$15.93
BUPROPION HCL ER 100 MG TAB	16	$807.82	$50.49
BUPROPION HCL ER 200 MG TAB	10	$707.05	$70.71
BUPROPION HCL SR 100 MG TAB	18	$1,148.50	$63.81
BUPROPION HCL SR 200 MG TABLET	14	$1,318.85	$94.20
BUPROPION HCL XL 300 MG TABLET	149	$16,749.32	$112.41
BUPROPION SR 150 MG TABLET	190	$10,645.33	$56.03
	820	$71,624.47	$87.35
CELEXA 20 MG TABLET	2	$181.84	$90.92
	2	$181.84	$90.92
CITALOPRAM 10 MG/5 ML SOLUTION	10	$1,398.75	$139.88
CITALOPRAM HBR 10 MG TABLET	45	$586.89	$13.04
CITALOPRAM HBR 20 MG TABLET	436	$5,635.39	$12.93
CITALOPRAM HBR 40 MG TABLET	225	$3,300.43	$14.67
	716	$10,921.46	$15.25
CLOMIPRAMINE 25 MG CAPSULE	1	$24.85	$24.85
CLOMIPRAMINE 50 MG CAPSULE	9	$233.85	$25.98
CLOMIPRAMINE 75 MG CAPSULE	3	$63.75	$21.25
	13	$322.45	$24.80
CYMBALTA 20 MG CAPSULE	20	$3,262.75	$163.14
CYMBALTA 30 MG CAPSULE	236	$30,624.45	$129.76
CYMBALTA 60 MG CAPSULE	514	$65,987.73	$128.38
	770	$99,874.93	$129.71
DESIPRAMINE 25 MG TABLET	13	$256.16	$19.70
DESIPRAMINE 50 MG TABLET	2	$64.06	$32.03
DESIPRAMINE 75 MG TABLET	3	$73.65	$24.55
	18	$393.87	$21.88
DOXEPIN 10 MG CAPSULE	29	$287.66	$9.92
DOXEPIN 100 MG CAPSULE	14	$200.60	$14.33
DOXEPIN 25 MG CAPSULE	5	$27.96	$5.59
DOXEPIN 50 MG CAPSULE	10	$98.95	$9.90
DOXEPIN 75 MG CAPSULE	1	$0.60	$0.60
	59	$615.77	$10.44
EFFEXOR 37.5 MG TABLET	2	$341.32	$170.66
EFFEXOR 50 MG TABLET	1	$118.41	$118.41

Label Name	Rx Num	Total Paid Amt	Cost per script
EFFEXOR XR 150 MG CAPSULE SA	470	$70,318.80	$149.61
EFFEXOR XR 37.5 MG CAP SA	66	$5,535.89	$83.88
EFFEXOR XR 75 MG CAPSULE SA	313	$37,344.20	$119.31
	852	$113,658.62	$133.40
FLUOXETINE 10 MG CAPSULE	236	$2,456.19	$10.41
FLUOXETINE 20 MG CAPSULE	1065	$10,971.57	$10.30
FLUOXETINE 20 MG/5 ML SOLN	41	$1,282.27	$31.27
FLUOXETINE 40 MG CAPSULE	13	$429.52	$33.04
FLUOXETINE HCL 10 MG	311	$2,843.13	$9.14
FLUOXETINE HCL 20 MG	282	$2,957.83	$10.49
FLUOXETINE HCL 40 MG CAPSULE	8	$151.25	$18.91
	1956	$21,091.76	$10.78
FLUVOXAMINE MALEATE 100 MG TAB	25	$1,521.75	$60.87
FLUVOXAMINE MALEATE 25 MG TB	16	$491.13	$30.70
FLUVOXAMINE MALEATE 50 MG TB	29	$1,247.71	$43.02
	70	$3,260.59	$46.58
IMIPRAMINE HCL 10 MG TABLET	29	$380.50	$13.12
IMIPRAMINE HCL 25 MG TABLET	76	$1,500.65	$19.75
IMIPRAMINE HCL 50 MG TABLET	54	$1,312.50	$24.31
	159	$3,193.65	$20.09
LEXAPRO 10 MG TABLET	711	$56,019.90	$78.79
LEXAPRO 20 MG TABLET	588	$49,851.76	$84.78
LEXAPRO 5 MG TABLET	24	$1,687.88	$70.33
LEXAPRO 5 MG/5 ML SOLUTION	4	$653.92	$163.48
	1327	$108,213.46	$81.55
MIRTAZAPINE 15 MG RPD DISLV TB	9	$278.03	$30.89
MIRTAZAPINE 15 MG TABLET	186	$5,047.68	$27.14
MIRTAZAPINE 30 MG RPD DISLV TB	13	$887.51	$68.27
MIRTAZAPINE 30 MG TABLET	174	$5,255.72	$30.21
MIRTAZAPINE 45 MG RPD DISLV TB	12	$968.46	$80.71
MIRTAZAPINE 45 MG TABLET	57	$1,689.54	$29.64
MIRTAZAPINE 7.5 MG TABLET	13	$794.44	$61.11
	464	$14,921.38	$32.16
NEFAZODONE HCL 100 MG TABLET	4	$235.03	$58.76
NEFAZODONE HCL 150 MG TABLET	8	$531.10	$66.39
NEFAZODONE HCL 200 MG TABLET	4	$130.00	$32.50
NEFAZODONE HCL 50 MG TABLET	3	$180.00	$60.00
	19	$1,076.13	$56.64
NORTRIPTYLINE HCL 10 MG CAP	64	$618.21	$9.66
NORTRIPTYLINE HCL 25 MG CAP	52	$446.25	$8.58
NORTRIPTYLINE HCL 50 MG CAP	54	$663.95	$12.30
NORTRIPTYLINE HCL 75 MG CAP	9	$99.45	$11.05
	179	$1,827.86	$10.21
PAROXETINE HCL 10 MG TABLET	57	$1,695.39	$29.74
PAROXETINE HCL 10 MG/5 ML SUSP	2	$292.40	$146.20
PAROXETINE HCL 20 MG TABLET	207	$7,172.42	$34.65
PAROXETINE HCL 30 MG TABLET	56	$2,790.28	$49.83
PAROXETINE HCL 40 MG TABLET	140	$5,932.47	$42.37
	462	$17,882.96	$38.71
PAXIL CR 12.5 MG TABLET	28	$3,203.86	$114.42

Label Name	Rx Num	Total Paid Amt	Cost per script
PAXIL CR 25 MG TABLET	82	$10,024.15	$122.25
PAXIL CR 37.5 MG TABLET	13	$1,457.98	$112.15
	123	$14,685.99	$119.40
PERPHEN-AMITRIP 2 MG-10 MG TAB	6	$50.10	$8.35
PERPHEN-AMITRIP 2 MG-25 MG TAB	3	$23.25	$7.75
	9	$73.35	$8.15
PROZAC 40 MG PULVULE	4	$1,517.30	$379.33
PROZAC WEEKLY 90 MG CAPSULE	16	$1,699.41	$106.21
	20	$3,216.71	$160.84
REMERON 15 MG SOLTAB	2	$164.50	$82.25
	2	$164.50	$82.25
SERTRALINE 20 MG/ML ORAL CONC	36	$1,162.19	$32.28
SERTRALINE HCL 100 MG TABLET	1010	$21,832.72	$21.62
SERTRALINE HCL 25 MG TABLET	136	$2,263.76	$16.65
SERTRALINE HCL 50 MG TABLET	807	$14,629.38	$18.13
	1989	$39,888.05	$20.05
SYMBYAX 12-25 MG CAPSULE	2	$835.36	$417.68
SYMBYAX 12-50 MG CAPSULE	16	$6,452.01	$403.25
SYMBYAX 6-25 MG CAPSULE	9	$2,492.91	$276.99
SYMBYAX 6-50 MG CAPSULE	6	$1,661.94	$276.99
	33	$11,442.22	$346.73
TOFRANIL-PM 75 MG CAPSULE	2	$74.37	$37.19
	2	$74.37	$37.19
TRAZODONE 100 MG TABLET	387	$3,537.99	$9.14
TRAZODONE 150 MG TABLET	194	$2,459.76	$12.68
TRAZODONE 300 MG TABLET	3	$385.30	$128.43
TRAZODONE 50 MG TABLET	911	$6,121.45	$6.72
	1495	$12,504.50	$8.36
VENLAFAXINE HCL 100 MG TABLET	6	$587.97	$98.00
VENLAFAXINE HCL 25 MG TABLET	2	$137.60	$68.80
VENLAFAXINE HCL 37.5 MG TABLET	12	$1,070.36	$89.20
VENLAFAXINE HCL 75 MG TABLET	27	$2,357.42	$87.31
	47	$4,153.35	$88.37
WELLBUTRIN XL 150 MG TABLET	379	$47,377.58	$125.01
WELLBUTRIN XL 300 MG TABLET	10	$1,562.29	$156.23
	389	$48,939.87	$125.81
ZOLOFT 100 MG TABLET	12	$667.87	$55.66
ZOLOFT 20 MG/ML ORAL CONC	3	$69.69	$23.23
ZOLOFT 50 MG TABLET	5	$615.87	$123.17
	20	$1,353.43	$67.67
Totals	**12621**	**$609,969.72**	

South Dakota Medicaid
Pharmacy and Therapeutics Committee
Wyoming Medicaid Step-Therapy Requirements for Antidepressants

During the February 2008, the committee discussed the Wyoming Medicaid Step-Therapy Prior Authorization Requirement. It was requested that more information be provided. The following information was taken from the meeting minutes of the January 31, 2008 WYDUR Board Meeting.

Step 1 for all recipients
Citalopram (all strengths)
Fluoxetine (all strengths)
Bupropion SR (all strengths)

Step 2 for all recipients
Sertraline (all strengths)
Paroxetine (all strengths)
Bupropion XL 300mg and Wellbutrin XL 150mg
Mirtazapine (all strengths, not including rapid dissolve tablets or brand name)
Effexor XR

Step 3 for all recipients
Cymbalta (all strengths) *PA will **NOT** be required for a diagnosis of diabetic peripheral neuropathy.
Lexapro (all strengths)

Medications NOT requiring PA
Trazodone (generic)
Nefazodone (generic)
MAO Inhibitors (generics)
Tricyclic Antidepressants (generics)
Buspirone (generic)
Fluvoxamine (generic)
Immediate Release Bupropion and Venlafaxine

Medications Requiring PA
Mirtazapine rapid dissolve tablets
All brand name versions of generics listed above.

For treatment naïve patients, there will be a trial of one (1) step 1 drug lasting 6 weeks before moving to a step 2 drug. There will be a trial of at least two (2) different step 2 drugs lasting 6 weeks each before moving to a step 3 drug.

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South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Singulair® Utilization

The chart below illustrates the findings of Singulair utilization based on diagnosis during a specified time frame (05/08/07 to 05/07/08).

Diagnosis (ICD-9)	Number of Unique Patients	Percentage of Total Patients receiving a prescription for Singulair
ALL	3,900	100%
Patients < 18 years	3,330	85%
FDA-Approved Indications:		
Asthma (493)	1,496	38%
Allergic Rhinitis (477)	1,052	27%
Both Asthma and Allergic Rhinitis	467	12%
Exercise-induced bronchospasm (493.81)	34	1%
Laryngotracheobronchitis/croup (490, 466)	375	10%
Patients with an LTB diagnosis but no asthma diagnosis on file	122	3%
Reactive Airway Disease (493.9, 493.92)	1,361	35%
Patients with NONE of the above diagnoses on file.	1,464	38%
Unlabeled Uses:		
Chronic urticaria (708.8)	3	0%
Atopic dermatitis (691.8)	115	3%

*Note: there may be some overlap since patients can have more than one diagnosis on file.

During the June P&T Committee meeting, several members requested information about the 1,464 patients that had none of the above listed diagnoses on file. In reviewing those specific patient profiles, there were a few patients that had diagnoses such as upper respiratory infection or unspecified airway disorder on file, but the majority of patients did have a diagnosis of asthma or allergic rhinitis, but not recently. When reviewing the data for reports, a patients profile is reviewed for diagnoses codes submitted within the last 365 days. Regarding the number of diagnosis codes that can be submitted at one time, providers can submit up to six. In fact, providers can submit more than that, but the claim will be relegated to a pending status. There is no place on the claim for providers to submit pre-existing diagnoses for informational purposes only.

The Committee also asked how many patients are using Singulair as monotherapy, without albuterol and/or corticosteroids and how many patients are taking Singular regularly.

South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Singulair® Utilization

Results for period 05/08/07 – 05/07/08:

Number of unique patients taking Singulair: 3900
Number of unique patients taking Singulair ≥ 10 times in one year: 455
Number of unique patients taking Singulair ≥ 10 times in one year that did not take albuterol or corticosteroids: 142
Number of unique patients taking Singulair 1 or more times per year that did not take albuterol or corticosteroids: 1523

South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Xopenex®

I. Overview

Xopenex (levalbuterol) is a beta$_2$-agonist. Beta$_2$-agonists relax airway smooth muscle by stimulating beta$_2$-receptors. Xopenex HFA is indicated for the treatment or prevention of bronchospasm in adults, adolescents, and children 4 years of age and older with reversible obstructive airway disease. Xopenex inhalation solution is indicated for the treatment of bronchospasm in adults, adolescents, and children 6 years of age and older with reversible obstructive airway disease.

II. Pharmacology

Activation of beta$_2$-adrenergic receptors on airway smooth muscles leads to the activation of adenylcyclase and to an increase in the intracellular concentration of cyclic AMP. This increase leads to the activation of protein kinase A, which inhibits the phosphorylation of myosin and lowers intracellular ionic calcium concentrations, resulting in relaxation. Levalbuterol relaxes the smooth muscles of all airways, from the trachea to the terminal bronchioles.

III. Pharmacokinetics

Drug	Serum Half-Life (hours)	Onset (minutes)	Duration (hours)	Renal Excretion (%)	Active Metabolites
Levalbuterol	3.3-4	5-17	3-6	80-100	Yes

IV. Warnings/Precautions

Paradoxical Bronchospasm-Like other inhaled beta-adrenergic agonists, Xopenex can produce paradoxical bronchospasm, which may be life threatening.

Deterioration of Asthma-Asthma may deteriorate acutely over a period of hours or chronically over several days or longer. If the patient needs more doses than usual of beta agonist, this may be a marker of destabilization of asthma.

Use of Anti-Inflammatory Agents-The use of beta-adrenergic agonist bronchodilators alone may not be adequate to control asthma in many patients. Early consideration should be given to adding anti-inflammatory agents, e.g., corticosteroids, to the therapeutic regimen.

Cardiovascular Effects-Beta-adrenergic agonists can produce clinically significant cardiovascular effects in some patients, as measured by heart rate, blood pressure, and/or symptoms. In addition, beta-agonists have been reported to produce ECG changes, such as flattening of the T wave, prolongation of the QTc interval, and ST segment depression. Levalbuterol, like all sympathomimetic amines, should be used with caution in patients with cardiovascular disorders, especially coronary insufficiency, cardiac arrhythmias, and hypertension.

Do Not Exceed Recommended Dose-Fatalities have been reported in association with excessive use of inhaled sympathomimetic drugs in patients with asthma.

Immediate Hypersensitivity Reactions-Immediate hypersensitivity reactions may occur after administration of racemic albuterol, as demonstrated by rare cases of urticaria, angioedema, rash, bronchospasm, anaphylaxis, and oropharyngeal edema.

Diabetes Mellitus and Ketoacidosis-Large doses of intravenous racemic albuterol have been reported to aggravate preexisting diabetes mellitus and ketoacidosis.

V. Drug Interactions

Drug	Interaction	Description
Levalbuterol	Monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants, or drugs known to prolong the QTc interval	Beta2 Agonists should be administered very cautiously in patients taking MAOIs, tricyclic antidepressants, or drugs known to prolong the QTc interval or who have taken them within 2 weeks prior to the start of therapy with beta2 agonists.
Levalbuterol	Nonselective beta-adrenergic blocking agents	By blocking the same receptor that the adrenergic agonists target, the nonselective blocking agents may lead to an antagonistic effect.
Levalbuterol	Diuretics	The ECG changes and hypokalemia that may result from the administration of non-potassium-sparing diuretics can be acutely worsened by beta-agonists. Caution is advised in the coadministration of beta-agonists with non-potassium sparing diuretics.
Levalbuterol	Digoxin	Serum digoxin levels in patients who are currently receiving digoxin and Xopenex or albuterol should be monitored.

VI. Adverse Drug Events

Adverse Event	Levalbuterol inhalation solution	Levalbuterol HFA inhalation
Cardiovascular		
Chest pain	< 2	-
ECG change	< 2	-
Hypertension	< 2	< 2
Hypotension	< 2	-
Syncope	< 2	-
Tachycardia	2.7 – 2.8	-
CNS		
Anxiety	< 2.7	-
Asthenia	3	-
Dizziness	1.4 – 2.7	2.7
Somnolence	< 2	-
Tremor	< 6.8	-
GI		
Abdominal pain	< 1.5	-
Constipation	-	< 2
Diarrhea	1.5 – 6	-
Dry mouth	< 2	-
Dyspepsia	1.4 – 2.7	-
Gastroenteritis	< 2	< 2
Nausea	< 2	-

Adverse Event	Levalbuterol inhalation solution	Levalbuterol HFA inhalation
Vomiting	-	10.5
Miscellaneous		
Accidental injury	< 2.7	9.2
Acne	-	< 2
Articular rheumatism	4.5 – 6.1	-
Asthma	9 – 9.1	9.4
Bronchitis	-	2.6
Conjunctivitis	-	< 2
Cough	1.4 – 4.1	-
Cyst	-	< 2
Dysmenorrhea	-	< 2
Ear pain	-	< 2
Edema	1.4 – 2.8	-
Epistaxis	-	< 2
Fever	3 – 9.1	-
Flu syndrome	1.4 – 4.2	< 2
Leg cramps	< 2.7	-
Lymphadenopathy	< 3	-
Myalgia	< 1.5	< 2
Pain (nonspecific)	1.5 – 3	4
Pharyngitis	3 – 10.4	6.6 – 7.9
Rash	< 7.5	-
Rhinitis	2.7 – 11.1	7.4
Sinusitis	1.4 – 4.2	-
Urticaria	< 3	-
Vaginal Moniliasis	-	< 2
Viral infection	7.6 – 9	< 2

VII. Dosing and Administration

Drug	Adult Dosing	Pediatric Dosing	Availability
Levalbuterol	Asthma, nocturnal asthma, and reversible bronchospasm: Inhalation solution: 0.63 mg 3 times daily every 6-8 hours; maximum 1.25 mg 3 times daily. Aerosol inhaler (HFA): 1-2 inhalations (59-118 mcg) every 4-6 hours; maximum 12 inhalations daily.	Inhalation solution: 6-11 years of age: 0.31 mg 3 times daily; maximum 0.63 mg 3 times daily. Aerosol inhaler (HFA): Children 4 years of age and older are approved to use adult dose.	Inhalation solution: 0.31 mg, 0.63 mg, and 1.25 mg unit dose vials. Aerosol inhaler (HFA): 15 g (200 inhalations)

VIII. Clinical Efficacy

References	Study Type and Size	Methods/Results/Conclusions
Lam	Randomized N=20 ICU patients (10 with baseline tachycardia and 10 without baseline tachycardia)	**Method:** Patients were randomized to receive at least 2 consecutive doses of albuterol 2.5mg or levalbuterol 1.25mg via nebulizer 4 hours apart. **Results:** Patients with baseline tachycardia, the mean largest heartrate (HR) increase was 1.4 beats/min (1.3%) with albuterol and 2.0 beats/min (2.1%) with levalbuterol. In patients without baseline tachycardia, there was an increase of 4.4 beats/min (6.7%) with albuterol and 3.6 beats/min with levalbuterol (5.0%). **Conclusions:** This study shows that short-term use of albuterol and levalbuterol results in similar changes in heartrate.
Hardasmalani	Prospective, double-blind, randomized. N=70 (children ages 5-21 with a history of asthma presenting to the ED in acute exacerbation)	**Method:** Patients received either 1.25mg of levalbuterol or albuterol 2.5mg via nebulizer along with ipratropium. Patients received 3 back-to-back treatments as needed every 20 minutes to a maximum of 3 doses; 2mg/kg of oral prednisone was administered after the second treatment. **Results:** All patients in both groups showed improvement in oxygen saturations, respiratory rates, and peak flow rates. No statistically significant difference was observed between the 2 groups. **Conclusions:** This study shows that levalbuterol and albuterol are similarly efficacious.
Qureshi	Prospective, double-blind, randomized, controlled. N=129 (children ages 2-14 presenting to the ED with an acute moderate or severe asthma exacerbation)	**Method:** 64 children were given albuterol and 65 were given levalbuterol – they were treated using a standard ED asthma pathway. Primary outcomes were changes from baseline in clinical asthma score and the percentage of predicted FEV1 after the first, third, and fifth treatment. Secondary outcomes included number of treatments, length of ED care, rate of hospitalization, and changes in pulse rate, respiratory rate, and oxygen saturation. **Results:** There were no differences between groups in primary or secondary outcomes or in the rate of adverse events. **Conclusions:** This study shows that levalbuterol and albuterol are similarly efficacious.
Nelson	Randomized, double-blind, parallel-group. N=362 (patients > 12)	**Method:** Patients were treated with levalbuterol and albuterol via nebulizer three times a day for 28 days. Primary endpoint was peak change in FEV1 after 4 weeks. **Results:** The change in peak FEV1 was nonsignificant after 4 weeks, 0.84L (levalbuterol) and 0.74L (albuterol). All active treatments were well tolerated. At week 4, the predose FEV1 value was greater in patients who received levalbuterol or placebo when compared with albuterol **Conclusions:** This study shows that levalbuterol and albuterol are similarly efficacious.
Carl	Randomized, double-blind, controlled. N=482 (children age 1-18 years)	**Method:** Patients received albuterol 2.5mg or levalbuterol 1.25mg via nebulizer every 20 minutes (max=6 doses). Primary outcome was hospitalization rate. **Results:** Hospitalization rate was significantly lower in the levalbuterol group (36%) compared to the albuterol group (45%). Length of stay was not significantly shorter in the

References	Study Type and Size	Methods/Results/Conclusions
		levalbuterol group (44.9 hours) compared to the albuterol group (50.3 hours). No significant adverse events occurred in either group. **Conclusions:** This study shows that levalbuterol reduced the rate of hospitalization.
Nowak	Multicenter, randomized, double-blind. N=627 (adults with acute asthma exacerbations)	**Method:** Patients received prednisone and either levalbuterol 1.25mg or albuterol 2.5mg via nebulizer. Treatments were given every 20 minutes in the first hour, then every 40 minutes for 3 additional doses, then as necessary for up to 24 hours. Primary endpoint was time to discharge. Secondary endpoint included changes in lung function and hospitalization rate. *A subset of 160 patients had plasma S-albuterol concentrations at study entry. **Results:** Time to discharge did not differ between the 2 treatments. FEV1 improvement was greater following levalbuterol compared to albuterol (0.50 +/- 0.43L and 0.43 +/- 0.37L, respectively). 7.0% of levalbuterol patients and 9.3% of albuterol patients required hospitalization. **Conclusions:** This study shows that levalbuterol and albuterol are effective at improving airway function and are well tolerated.
Berger	Multicenter, randomized, double-blind. N=173 (children aged 4-11)	**Method:** Patients were given levalbuterol 90mcg, albuterol 180mcg, and placebo via MDI QID. Primary endpoint was the double-blind average peak percent change in FEV1 from visit predose. Secondary endpoints included the area under the FEV1 percent change from predose curve and peak percent predicted FEV1. **Results:** Levalbuterol significantly improved the least square mean peak percent change in FEV1 compared with placebo. The incidence of adverse events was 43.4% for levalbuterol, 56.4% for albuterol, and 51.4% for placebo. The rate of discontinuation was 1.3% for levalbuterol, 2.6% for albuterol, and 8.6% for placebo. **Conclusions:** This study shows that levalbuterol and albuterol are similarly efficacious and that levalbuterol offers significant advantage over placebo.

IX. Summary of Evidence

Short Acting Beta2 Agonists (albuterol vs levalbuterol)

- Among adults with asthma, 1 trial found less rescue medication use with levalbuterol with no apparent difference in symptoms.
- No significant difference between drugs for symptoms, and use of rescue medications, among children with asthma using these medications daily.
- Heart rate increases with both drugs. No significant difference between drugs for blood pressure, palpitations, tachycardia, increased blood glucose, or dizziness/nervousness/anxiety/tremor in adults.
- No significant differences between drugs in heart rate, light-headedness, tremor, dizziness and nervousness in children. Blood glucose increased with both drugs, more with albuterol in children.

X. Conclusion

The National Asthma Education and Prevention Program guidelines state that levalbuterol, at half the dose of albuterol, produces similar bronchodilation and side effects as albuterol. Clinical studies do not support routine use of levalbuterol over albuterol. Albuterol will be safe and well-tolerated for most patients. Certain subsets of patients, including patients requiring high doses of albuterol, might achieve greater bronchodilation from levalbuterol. More prospective studies in these subsets of patients are needed.

HID recommendation: It is recommended that a prior authorization be placed on levalbuterol in consideration of the fact that levalbuterol offers no clinical advantage over the use of albuterol and has a similar side effect profile. It is recommended that providers request prior authorization for patients who fail a trial of albuterol.

References:

1. Wolters Kluwer Health, Inc. Drug Facts and Comparisons. St. Louis, MO. 2007.
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4. Norris S., Yen P., Dana T., Care B., Burda B. Drug Class Review on $Beta_2$ Agonists. Final Report 2006. Accessed January 2008.
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8. Gawchik SM, Saccar CL, Noonan M, et al. The safety and efficacy of nebulized levalbuterol compared with racemic albuterol and placebo in the treatment of asthma in pediatric patients. J Allergy Clin Immunol. 1999;103:615-21.
9. Milgrom H, Skoner DP, Bensch G, et al. Low-dose levalbuterol in children with asthma: safety and efficacy in comparison with placebo and racemic albuterol. J Allergy Clin Immunol. 2001;108:938-45.
10. Nowak RM, Emerman CL, Schaefer K, et al. Levalbuterol compared with racemic albuterol in the treatment of acute asthma: results of a pilot study. Am J Emerg Med. 2004;22:29-36.
11. National Asthma Education and Prevention Program. Guidelines for the Diagnosis and Management of Asthma: Expert Panel Report 3 (EPR3). Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute, 2007; Available from http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm. Accessed January 11th, 2008.
12. Global Strategy for Asthma Management and Prevention, Global Initiative for Asthma (GINA) 2007. Available from http://www.ginasthma.org. Accessed January 11th, 2008.
13. Lam S, Chen J. Changes in heart rate associated with nebulized racemic albuterol and levalbuterol in intensive care patients. Am J Health Syst Pharm. 2003 Oct1;60(19):1971-5.
14. Hardasmalani MD, DeBari V, Bithoney WG, et al. Levalbuterol versus racemic albuterol in the treatment of acute exacerbation of asthma in children. Pediatr Emerg Care. 2005 Jul;21(7):415-9.
15. Carl JC, Myers TR, Kirchner HL, et al. comparison of racemic albuterol and levalbuterol for treatment of acute asthma. J Pediatr. 2003 Dec;143(6):731-6.
16. Berger WE, Milgrom H, Skoner DP, et al. Evaluation of levalbuterol metered dose inhaler in pediatric patients with asthma: a double-blind, randomized, placebo-and active-controlled trial. Curr Med Res Opin 2006 Jun;22(6):1217-26.

South Dakota Medicaid
Levalbuterol and Albuterol Utilization
05/01/2007 – 04/30/2008

Total Xopenex Utilization 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
XOPENEX HFA 45 MCG INHALER	612	$30,285.84	$49.49
XOPENEX 0.31 MG/3 ML SOLUTION	239	$24,107.47	$100.87
XOPENEX 0.63 MG/3 ML SOLUTION	1499	$177,247.69	$118.24
XOPENEX 1.25 MG/3 ML SOLUTION	1135	$136,595.61	$120.35
TOTAL	3485	$368,236.61	

There were 1696 unique patients

Total Albuterol Utilization 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
ACCUNEB 0.63 MG/3 ML INH SOLN	292	$18,003.88	$61.66
ACCUNEB 1.25 MG/3 ML INH SOLN	121	$7,473.46	$61.76
ALBUTEROL 0.83 MG/ML SOLN	8240	$140,973.46	$17.11
ALBUTEROL 5 MG/ML SOLUTION	786	$7,738.89	$9.85
ALBUTEROL 90 MCG INHALER	7160	$181,470.03	$25.34
ALBUTEROL SUL 0.63 MG/3 ML SOL	452	$21,083.84	$46.65
ALBUTEROL SUL 1.25 MG/3 ML SOL	678	$37,154.54	$54.80
PROAIR HFA 90 MCG INHALER	2847	$104,914.99	$36.85
PROVENTIL HFA 90 MCG INHALER	432	$18,494.36	$42.81
PROVENTIL 90 MCG INHALER	7	$324.87	$46.41
VENTOLIN HFA 90 MCG INHALER	867	$31,209.10	$36.00
TOTAL	21882	$568,841.42	

There were 10,450 unique patients

Xopenex Utilization - Patients under 18 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
XOPENEX HFA 45 MCG INHALER	315	$16,206.31	$51.45
XOPENEX 0.31 MG/3 ML SOLUTION	237	$23,944.59	$101.03
XOPENEX 0.63 MG/3 ML SOLUTION	1401	$163,571.17	$116.75
XOPENEX 1.25 MG/3 ML SOLUTION	790	$92,474.19	$117.06
TOTAL	2743	$296,196.26	

There were 1460 unique patients < 18

Albuterol Utilization - Patients under 18 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
ACCUNEB 0.63 MG/3 ML INH SOLN	292	$18,003.88	$61.66
ACCUNEB 1.25 MG/3 ML INH SOLN	120	$7,384.45	$61.54
ALBUTEROL 0.83 MG/ML SOLN	7050	$115,412.11	$16.37
ALBUTEROL 5 MG/ML SOLUTION	682	$6,574.52	$9.64
ALBUTEROL 90 MCG INHALER	3474	$89,168.71	$25.67
ALBUTEROL SUL 0.63 MG/3 ML SOL	452	$21,083.84	$46.65
ALBUTEROL SUL 1.25 MG/3 ML SOL	652	$35,552.20	$54.53
PROAIR HFA 90 MCG INHALER	1517	$58,228.55	$38.38
PROVENTIL 90 MCG INHALER	2	$37.36	$18.68
PROVENTIL HFA 90 MCG INHALER	202	$8,760.68	$43.37
VENTOLIN HFA 90 MCG INHALER	489	$17,720.58	$36.24
TOTAL	14,932	$377,926.88	

There were 8096 unique patients < 18

Xopenex Utilization - Patients 18 to 65 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
XOPENEX HFA 45 MCG INHALER	296	$14,025.84	$47.38
XOPENEX 0.31 MG/3 ML SOLUTION	2	$162.88	$81.44
XOPENEX 0.63 MG/3 ML SOLUTION	98	$13,676.52	$139.56
XOPENEX 1.25 MG/3 ML SOLUTION	340	$43,299.25	$127.35
TOTAL	736	$71,164.49	

There were 232 unique patients 18 - 65

Albuterol Utilization - Patients 18 to 65 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
ACCUNEB 1.25 MG/3 ML INH SOLN	1	$89.01	$89.01
ALBUTEROL 0.83 MG/ML SOLN	1158	$24,827.44	$21.44
ALBUTEROL 5 MG/ML SOLUTION	93	$1,057.12	$11.37
ALBUTEROL 90 MCG INHALER	3641	$91,180.01	$25.04
ALBUTEROL SUL 1.25 MG/3 ML SOL	26	$1,602.34	$61.63
PROAIR HFA 90 MCG INHALER	1316	$46,210.73	$35.11
PROVENTIL 90 MCG INHALER	3	$129.87	$43.29
PROVENTIL HFA 90 MCG INHALER	228	$9,651.50	$42.33
VENTOLIN HFA 90 MCG INHALER	362	$12,930.24	$35.72
TOTAL	6828	$187,678.26	

There were 2329 unique patients 18 - 65

Xopenex Utilization - Patients over 65 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
XOPENEX 1.25 MG/3 ML SOLUTION	6	$875.86	$145.98
TOTAL	6	$875.86	

There were 4 unique patients > 65

Albuterol Utilization - Patients over 65 05/01/2007 to 04/30/2008

Drug Name	Number of Prescriptions	Total Paid Amount	Cost per script
ALBUTEROL 0.83 MG/ML SOLN	32	$733.91	$22.93
ALBUTEROL 5 MG/ML SOLUTION	11	$107.25	$9.75
ALBUTEROL 90 MCG INHALER	45	$1,121.31	$24.92
PROAIR HFA 90 MCG INHALER	14	$475.71	$33.98
PROVENTIL 90 MCG INHALER	2	$157.64	$78.82
PROVENTIL HFA 90 MCG INHALER	2	$82.18	$41.09
VENTOLIN HFA 90 MCG INHALER	16	$558.28	$34.89
TOTAL	122	$3,236.28	

There were 25 unique patients > 65

At the June P&T meeting, committee members asked how many patients taking Xopenex or Xopenex HFA were treated acutely. Claims were scanned for patients that had 1 Rx for Xopenex/Xopenex HFA in 12 months (050107 – 043008) and then patients that had 6 or more Rx's for Xopenex/Xopenex HFA in 12 months. Claims were also scanned to find out how many patients had a prescription for albuterol prior to using Xopenex/Xopenex HFA.

Results are:
Number of unique patients taking Xopenex once during the year (acute): 1071
Number of unique patients taking Xopenex 6 or more times in 1year (chronic): 73
Number of unique patients taking Albuterol prior to taking Xopenex: 481

XOPENEX HFA PRIOR AUTHORIZATION
SD DEPARTMENT OF SOCIAL SERVICES
MEDICAL SERVICES DIVISION

Fax Completed Form to:
866-254-0761
For questions regarding this Prior authorization, call
866-705-5391

SD Medicaid requires that patients receiving a prescription for Xopenex HFA must first try and fail Proventil HFA, ProAir HFA, or Ventolin HFA.

- **Patients must use albuterol HFA products for a minimum of 5 days for the trial to be considered a failure.**
- **Proventil HFA, ProAir HFA, and Ventolin HFA do not require a prior authorization.**

Part I: RECIPIENT INFORMATION (To be completed by physician's representative or pharmacy):

RECIPIENT NAME:	RECIPIENT MEDICAID ID NUMBER:
Recipient Date of birth: / /	

Part II: PHYSICIAN INFORMATION (To be completed by physician's representative or pharmacy):

PHYSICIAN NAME:			PHYSICIAN PROVIDER NUMBER:
City:	State:	PHONE: ( )	FAX: ( )

Part III: TO BE COMPLETED BY PHYSICIAN:

Requested Drug and Dosage: (must be completed)	**Diagnosis for this request:**
Qualifications for coverage:	
❑ Failed trial of albuterol HFA in the last 90 days	Was albuterol HFA trial for at least 5 days? ❑ YES ❑ NO
Adverse Reaction (attach FDA Medwatch form) or contraindication to albuterol HFA: (provide description below):	
Medical Justification for use of Xopenex HFA without trial of albuterol HFA:	
Physician Signature:	Date:

Part IV: PHARMACY INFORMATION

PHARMACY NAME:	SD MEDICAID PROVIDER NUMBER:
Phone: ( ):	FAX:: ( )
Drug:	NDC#:

Part V: FOR OFFICIAL USE ONLY

Date: / /	Initials: _____
Approved - Effective dates of PA: From: / /	To: / /
Denied: (Reasons)	

South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Vusion®

I. Overview

Vusion ointment is a combination of miconazole, zinc oxide, and petrolatum. It is indicated as adjunctive treatment of diaper dermatitis when complicated by candidiasis in immunocompetent pediatric patients 4 weeks and older.

II. Pharmacology

Vusion ointment contains miconazole 0.25%, which acts topically as an antifungal agent against candidiasis. There are many over-the-counter (OTC) agents that contain a higher concentration of miconazole, but the thought is that a lower concentration reduces the risk of systemic exposure. Zinc oxide and petrolatum are added to the formulation and act as skin protectants.

III. Warnings/Precautions

General-If irritation occurs or if the rash worsens, use of the medication should be discontinued. This product is for topical use only, not for ophthalmic, oral, or intravaginal use. The safety of miconazole/zinc oxide when used for longer than 7 days is not known.

Immunocompromised patients-The safety and efficacy of miconazole/zinc oxide has not been demonstrated in immunocompromised patients.

Incontinent patients-The safety and efficacy of miconazole/zinc oxide have not been evaluated in incontinent adult patients.

Drug resistance-Do not use miconazole/zinc oxide to prevent the occurrence of diaper dermatitis, such as in an adult institutional setting, because preventative use may result in the development of drug resistance.

Children-Efficacy was not demonstrated in infants younger than 4 weeks of age. Safety and efficacy have not been established in very-low-birthweight infants.

Elderly-Clinical studies of miconazole/zinc oxide did not include any subjects 64 years of age or older. Safety and efficacy in this population have not been evaluated.

IV. Drug Interactions

Drug-drug interaction studies were not conducted. Women who take a warfarin anticoagulant and use a miconazole intravaginal cream or suppository may be at risk for developing an increased prothrombin time, INR, and bleeding, the potential for this interaction to occur between warfarin and Vusion ointment is unknown.

V. Adverse Drug Events

A total of 835 infants and young children were evaluated. Of the 418 subjects in the Vusion ointment group, 58 (14%) reported one or more adverse events. Of the 417 subjects in the zinc oxide/petrolatum control group, 85 (20%) reported one or more adverse events.

Another study was conducted in healthy adult volunteers. The study results indicated that Vusion ointment did not induce a contact dermal phototoxic response, contact dermal photoallergic response, contact dermal sensitization, or show evidence of cumulative irritation potential.

VI. Dosing and Administration

Drug	Dosing	Availability
Miconazole/ zinc oxide/ petrolatum ointment	Prior to application, the skin should be cleansed and dried. The ointment should be applied to the affected area at each diaper change for 7 days.	30gm tube

VII. Cost Comparisons

Vusion ointment is available as a 30 gram tube. Average wholesale price (AWP) is $61.

South Dakota Utilization of Vusion ointment 02/28/07 to 02/27/08 (23 recipients)

Drug Name	Number of Prescriptions	Total Paid Amount	Average Cost/RX
Vusion	35	$5,046.49	$144.19

VIII. Conclusion

Vusion ointment is the first antifungal agent specifically indicated for diaper dermatitis complicated by candidiasis. The concentration of miconazole, 0.25%, is lower than the concentration of miconazole found in over-the-counter antifungal products (usually 2-4%). This may be important since the diaper can serve as an occlusive dressing, thereby increasing the systemic absorption of miconazole.

The efficacy of Vusion ointment has not been directly compared to the individual components (zinc oxide, white petrolatum, and miconazole), however, there is no reason to believe it would be more or less effective than the separate components applied together.

HID Recommendation: While the ease of administration of a single product rather than three separate products is important, Vusion ointment offers no other significant clinical advantage and therefore should be considered for prior authorization.

References:

1. Wolters Kluwer Health, Inc. Drug Facts and Comparisons. St. Louis, MO. 2008.
2. Vusion® [package insert]. Princeton, NJ: Barrier Therapeutics, Inc.; April 2007.
3. Vusion (miconazole 0.25%) – A new option for treating diaper rash. Pharmacist's Letter/Prescriber's Letter 2006;22(6):220609.

VUSION PRIOR AUTHORIZATION
SD DEPARTMENT OF SOCIAL SERVICES
MEDICAL SERVICES DIVISION

Fax Completed Form to:
866-254-0761
For questions regarding this Prior authorization, call
866-705-5391

SD Medicaid requires that patients receiving a prescription for Vusion must use nystatin or OTC miconazole first line.

- **Nystatin or miconazole OTC may be prescribed WITHOUT a prior authorization**
- **Patients must use nystatin or OTC miconazole for a minimum of 14 days for the trial to be considered a failure.**

Part I: RECIPIENT INFORMATION (To be completed by physician's representative or pharmacy):

RECIPIENT NAME:	RECIPIENT MEDICAID ID NUMBER:
Recipient Date of birth: / /	

Part II: PHYSICIAN INFORMATION (To be completed by physician's representative or pharmacy):

PHYSICIAN NAME:			PHYSICIAN PROVIDER NUMBER:
City:	State:	PHONE: ( )	FAX: ( )

Part III: TO BE COMPLETED BY PHYSICIAN:

Requested Drug and Dosage: (must be completed)	**Diagnosis for this request:**
Qualifications for coverage:	
❑ Failed trial of nystatin or miconazole in the last 30 days	Was trial for at least 14 days? ❑ YES ❑ NO
Adverse Reaction (attach FDA Medwatch form) or contraindication: (provide description below):	
Medical Justification for use of Vusion without trial of miconazole or nystatin:	
Physician Signature:	Date:

Part IV: PHARMACY INFORMATION

PHARMACY NAME:	SD MEDICAID PROVIDER NUMBER:
Phone: ( ):	FAX:: ( )
Drug:	NDC#:

Part V: FOR OFFICIAL USE ONLY

Date: / /	Initials: _____
Approved - Effective dates of PA: From: / /	To: / /
Denied: (Reasons)	

South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Medications for Head Lice

Prevalence

Head lice are common among school-age children, especially those age 3-11 years old. There are no reliable estimates of the prevalence of these infestations, so it is hard to determine the impact of head lice. Many schools have implemented 'no-nit' policies, and there can be significant amounts of missed school days due to head lice. The American Academy of Pediatrics (AAP), does not necessarily support the 'no-nit' policies, but instead embraces the 'treat and return' policy, so that children who have been appropriately treated can return to school. The policies vary from one school district to another.

Transmission

The most common way to get head lice is through head-to-head transmission, which can occur during sporting activities, slumber parties, or at camp. It is also possible to get lice through contact with clothing, such as hats or scarves, and through shared towels or brushes.

Signs and Symptoms

Signs and symptoms of lice include: tickling sensation of something moving in the hair, itching, irritability, and sores on the scalp caused by scratching.

Treatment

The American Academy of Pediatrics recommends permethrin 1% (Nix®) as first-line treatment for head lice. Other medications include over-the counter pyrethrins (Rid®, Pronto®, etc.), malathion (Ovide®), and lindane (Kwell®).

Permethrin 1% (available OTC) should be used after the hair is shampooed, rinsed and towel-dried. A sufficient amount should be used so that the hair and scalp are saturated (being sure to get the nape of the neck and behind the ears). Leave on hair no longer than ten minutes and rinse. Remove remaining nits with nit comb. One application is generally sufficient; however, if lice are observed within 7 days of application, a second treatment may be applied.

Occasionally practitioners try permethrin 5% on their patients; however, if treatment failure is secondary to resistance, as opposed to inappropriate application, permethrin 5% is no more efficacious than permethrin 1%.

Pyrethrins (available OTC) should be thoroughly applied to DRY hair (wetting the hair makes the treatment less efficacious), lather and rinse after ten minutes. After hair is

towel-dried, remaining nits should be removed with a nit comb. A second treatment of these products is required after 7 to 10 days.

Malathion (prescription only) should be applied to dry hair and the hair should be allowed to dry naturally and should remain uncovered. After 8-12 hours, the hair should be shampooed, and remaining nits should be removed with a nit comb. If necessary, a second treatment can be applied after 7 to 9 days.

Note: malathion is flammable, so it is very important to keep the product, and children with product on their hair, away from heat and open flame. An electric heat source, such as a hair dryer, should never be used on a person using this product.

Malathion does have a very strong smell (the name 'malathion', derived from Latin and Greek, means 'bad sulfur').

Lindane shampoo (prescription only) has been available for many years. However, recently, the Food and Drug Administration (FDA) has included a black box warning in the labeling information of lindane. The black box warns of neurologic toxicity, especially in infants, children, the elderly, patients with other skin conditions, and those who weigh less than 50kg may be at serious risk for neurotoxicity. The black box also reminds that lindane is contraindicated in premature infants and those patients with known uncontrolled seizure disorder. The FDA also specifically instructs that lindane is to be used only after treatment failure with other, safer, first-line agents.

If used, it is very important to follow the instructions carefully. Shampoo should be applied directly to hair without adding water and allow to remain in place for four (4) minutes only. Add small amounts of water to form lather, and then rinse hair thoroughly. Towel-dry hair briskly, then remove remaining nits with a nit comb. If a patient needs to be retreated, another agent should be chosen. The FDA has deemed consecutive treatments unsafe.

Nonpharmacologic approaches involve occlusion therapy, nit combing, and hair removal. Occlusion therapy can include putting mayonnaise, vinegar, olive oil, or petroleum jelly on the head and covering with saran wrap or a shower cap. These techniques generally fail to eliminate an infestation, because lice do not have air sacs or lungs, and not only can they survive for prolonged periods without air, they have other mechanisms they can employ to obtain air.

Hair removal (shaving the head) usually works, if the hair is cut short enough, because the lice require hair shafts to lay eggs. However, the cosmetic result can be less than desirable, especially for school-aged girls.

The use of nit combing alone has various success rates, but is not generally a practical as a monotherapy, because the combing would have to be performed rigorously, over many minutes, over many days. Nit combing is best used as an adjunctive treatment.

Environmental Treatments

The AAP does not recommend the use of chemical sprays, and instead endorses routine house cleaning as a way to rid the area of any remaining lice. This would include vacuuming floors and furniture (discarding vacuum bag following cleaning), laundering linens and towels in hot water and placing them into a hot dryer to dry, and placing combs and brushes into very hot water to disinfect. Stuffed animals, pillows, and other items than cannot be washed can be sealed inside a garbage bag for four (4) weeks.

Drug Name	***Number of Prescriptions***	***Paid Amount***	***Average Cost/RX***
Lindane	400	$52,322.96	$130.81
Malathion	232	$26,486.72	$114.17
Permethrin	916	$24,917.99	$27.20
TOTAL	***1,548***	***$103,727.67***	***N/A***

HID Recommendation: It is recommended that a prior authorization be placed on lindane and malathion based on black box warnings, cost, and lack of evidence to support superiority of these products .

References:

Lebowohl M, Clark L, et al. Therapy for Head Lice Based on Life Cycle, Resistance, and Safety Considerations. Pediatrics. May 2007. 119(5):965-74.

CDC. Parasitic Disease Information. Head Lice Infestation and Treatment. August 2005.

Wolters Kluwer Health, Inc. Drug Facts and Comparisions. St. Louis, MO. 2008.

HEAD LICE MEDICATION PRIOR AUTHORIZATION
SD DEPARTMENT OF SOCIAL SERVICES
MEDICAL SERVICES DIVISION

Fax Completed Form to:
866-254-0761
For questions regarding this Prior authorization, call
866-705-5391

SD Medicaid requires that patients receiving a prescription for lindane or malathion must use Nix® first line.

- **Nix OTC may be prescribed WITHOUT a prior authorization**
- **Patients must use Nix for a minimum of 7 days for the trial to be considered a failure.**

Part I: RECIPIENT INFORMATION (To be completed by physician's representative or pharmacy):

RECIPIENT NAME:	RECIPIENT MEDICAID ID NUMBER:
Recipient Date of birth: / /	

Part II: PHYSICIAN INFORMATION (To be completed by physician's representative or pharmacy):

PHYSICIAN NAME:			PHYSICIAN PROVIDER NUMBER:
City:	State:	PHONE: ( )	FAX: ( )

Part III: TO BE COMPLETED BY PHYSICIAN:

Requested Drug and Dosage: (must be completed)	**Diagnosis for this request:**
Qualifications for coverage:	
❑ Failed trial of Nix in the last 30 days	Was trial for at least 7 days? ❑ YES ❑ NO
Adverse Reaction (attach FDA MedWatch form) or contraindication: (provide description below):	
Medical Justification for use of lindane or malathion without trial of Nix:	
Physician Signature:	Date:

Part IV: PHARMACY INFORMATION

PHARMACY NAME:	SD MEDICAID PROVIDER NUMBER:
Phone: ( ):	FAX:: ( )
Drug:	NDC#:

Part V: FOR OFFICIAL USE ONLY

Date: / /	Initials: _____
Approved - Effective dates of PA: From: / /	To: / /
Denied: (Reasons)	

South Dakota Medicaid

The Over-the-Counter (OTC) drugs listed below have been recommended by the South Dakota Medicaid Pharmacy and Therapeutics (P&T) Committee for coverage. The coverage of these OTC drugs is contingent on the adoption of rules allowing OTC drug coverage

As with all drugs covered under the South Dakota Medicaid Drug Program only drugs whose labeler has a signed rebate agreement with the Centers for Medicare and Medicaid Services (CMS) and are ordered by a physician via legal prescription will be covered by South Dakota Medicaid. OTC drugs are to be dispensed to Medicaid recipients in the same manner as legend products are dispensed.

1. Loratadine (all dosage forms and strengths available)
2. Omeprazole (Prilosec OTC 20mg tablets is the only product currently available)
3. Pediculicides (e.g. permethrin)

If you have questions regarding over-the-counter drug coverage, please contact provider telephone service unit at 1-800-452-7691 (for in-state only). Out-of-state providers may call 605-773-3495 and ask for the telephone service unit.

This information was obtained online at http://dss.sd.gov/medicalservices/providerinfo/pharmacy/index.asp

South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Altabax®

I. Overview

Altabax (retapamulin) is a topical antibacterial indicated for the treatment of impetigo. It is FDA-approved for use in infections caused by methicillin-susceptible *S. aureus* or *S. pyogenes*. Retapamulin can be used topically in adults and children down to 9 months of age. Retapamulin was given final FDA approval in April 2007.

Impetigo is a highly contagious skin infection that most often affects children ages two to five, although it can occur in any age group. It is most commonly spread through direct contact. The goals of treatment are to relieve discomfort, prevent further spread of the infection, and to prevent recurrence. Currently topical mupirocin ointment is the preferred treatment. Alternative treatments include oral antibiotics, such as amoxicillin/clavulanate, cephalexin, and cefuroxime.

II. Pharmacology

Retapamulin selectively inhibits bacterial protein synthesis by interacting at a site on the 50S subunit of the bacterial ribosome. It is the first topical antibiotic in the pleuromutilin class.

III. Pharmacokinetics

Drug	C_{max} (plasma) Intact skin	C_{max} (plasma) Abraded skin	Excretion	Metabolism
Retapamulin	3.5ng/mL on day 7	9ng/mL on day 7	Not studied due to low systemic exposure	Through CYP450 system

IV. Warnings/Precautions

Local Irritation-In the event that severe local irritation occurs, wipe off ointment, discontinue treatment, and substitute an appropriate alternative medication.

Superinfection-Prescribing retapamulin in the absence of strongly suspected bacterial infection is unlikely to benefit the patient and may promote development of drug-resistant bacteria.

Pregnancy-Category B. Animal studies showed no treatment related effect on embryo fetal development; however, retapamulin should be used with caution in pregnancy as animal models are not always predictive of effects on human patients.

Lactation-It is not known if retapamulin is excreted in breast milk.

V. Drug Interactions

Drug	Interaction	Description
Retapamulin	Oral ketoconazole	Coadministration of oral ketoconazole raised the mean AUC and C_{max} of retapamulin by 81% after topical application on abraded skin of healthy adult males. Dosage adjustment of retapamulin is not necessary due to low systemic exposure.

VI. Adverse Drug Events (> 1% incidence)

Adverse Event	Adults	Children (9months – 17 years)
CNS		
Headache	2%	1.2%
GI		
Diarrhea	1.4%	1.7%
Nausea	1.2%	-
Local		
Application site irritation	1.6%	-
Application site pruritus	-	1.9%
Pruritis	-	1.5%
Miscellaneous		
Nasopharyngitis	1.2%	1.5%
Pyrexia	-	1.2%

VII. Dosing and Administration

Drug	Adult Dosing	Pediatric Dosing	Availability
Retapamulin	Apply a thin layer to the affected area (up to 100cm^2 in total area) twice daily for 5 days. The area may be covered with a sterile bandage or gauze if desired.	Apply a thin layer to the affected area (up to 2% of total body surface area) twice daily for 5 days. The area may be covered with a sterile bandage or gauze if desired.	Topical ointment 10mg/g. Available in 5, 10, and 15g tubes.

VIII. Cost Comparisons

Retapamulin is available as an ointment for topical application. Average wholesale price (AWP) for retapamulin is $41.14 for a 5g tube, $69.71 for a 10g tube, and $85.22 for a 15g tube. This can be compared to mupirocin ointment (a multisource product) which has an AWP of about $43.00 for a 22g tube.

South Dakota Utilization of Altabax compared to Mupirocin ointment 05/01/07 - 04/30/08

Drug Name	Number of Prescriptions	Total Paid Amount	Average Cost/RX
Altabax ointment-5g	85	$3,481.10	$40.95
Altabax ointment-10g	89	$5,807.13	$65.25
Altabax ointment-15g	364	$28,741.19	$78.96
TOTAL 477 Recipients	**538**	**$38,029.42**	**$70.69**
Mupirocin 1579 Recipients	**1,880**	**$76,211.56**	**$40.54**

IX. Patient Diagnoses

Recipient Count	Diagnosis
0	**IMPETIGO**
51	**STAPH INFECTION**
240	**UNSPECIFIED SKIN CONDITIONS**
252	**DERMATITIS**

X. Ages of Patients Receiving Altabax

Age	Recip Count	Rx Count
0	19	21
1	65	73
2	55	59
3	43	44
4	49	60
5	29	31
6	32	34
7	21	26
8	24	29
9	19	20
10	17	20
11	18	21
12	5	5
13	5	6
14	10	11
15	7	7
16	9	14
17	10	12
18	8	8
19	1	1
20	2	2
21	1	1

Age	Recip Count	Rx Count
22	1	1
23	2	2
24	1	1
27	1	1
28	2	2
29	2	2
30	1	1
32	3	3
35	2	2
36	1	1
37	1	1
41	1	1
43	1	1
44	1	1
45	1	1
47	1	4
50	1	1
55	1	1
56	1	1
57	1	2
60	1	1
63	1	1

XI. Clinical Efficacy

References	Study Type and Size	Methods/Results/Conclusions
Koning	Randomized, double-blind, multi-center, placebo-controlled. N=213 139 received retapamulin 71 received placebo	**Method:** Primary endpoint was clinical response after 7 days. **Results:** Retapamulin was superior to placebo (success rate 85.6% vs. 52.1%) The most common adverse effect, pruritus at the application site, was reported by 6% in retapamulin group and 1% in placebo group. **Conclusions:** This study shows that topical retapamulin is safe and effective in the treatment of primary impetigo.
Oranje	Randomized, observer-blinded, noninferiority, phase III study. N=519	**Method:** Adults and children randomized to retapamulin vs. sodium fusidate (not FDA approved in US, but commonly used for treatment of impetigo in England). **Results:** Retapamulin and sodium fusidate had comparable clinical efficacies (per-protocol population: 99.1 and 94.0%, respectively; intent-to-treat population: 94.8 and 90.1%) Bacteriological efficacies were similar and both drugs were well tolerated. **Conclusions:** This study shows that topical retapamulin is safe and effective in the treatment of primary impetigo.
Parish	Randomized, controlled.	**Method:** Patients with secondarily infected dermatitis (SID) were randomly assigned to retapamulin ointment BID for 5 days or oral cephalexin 500mg BID for 10 days. Primary endpoint was clinical response at follow-up. Secondary outcomes included microbiologic response at follow-up, safety and compliance. **Results:** Retapamulin and oral cephalexin were equally effective (clinical success rates at follow-up: 85.9% and 89.7%,

References	Study Type and Size	Methods/Results/Conclusions
		respectively). Microbiologic success rates at follow-up were 87.2% for retapamulin and 91.8% for oral cephalexin. **Conclusions:** This study shows that topical retapamulin is as effective as cephalexin in treatment of patients with SID.
Free	Randomized, double-blind, double-dummy, multicenter study. N=1904	**Method:** Patients with secondarily infected traumatic lesions were randomly assigned to retapamulin ointment BID for 5 days or oral cephalexin 500mg BID for 10 days. **Results:** Clinical success rates were 89.5% in protocol-adherent patients receiving retapamulin and 91.9% for cephalexin. In patients with *S. aureus* or *S. pyogenes* at baseline, clinical success was 89.2% for retapamulin and 92.6% for cephalexin. **Conclusions:** This study shows that topical retapamulin is as effective as cephalexin in treatment of patients with secondarily infected traumatic lesions.

XII. Summary of Evidence

Antibacterial agents for the treatment of impetigo

- Mupirocin ointment is currently the preferred treatment for impetigo. There are no studies that directly compare mupirocin and retapamulin. Therefore, it is not known if retapamulin is more or less effective than mupirocin.
- Retapamulin is FDA-approved for use in *S. aureus* or *S. pyogenes*, but early data suggests that retapamulin may be effective against methicillin- and mupirocin-resistant strains of S. aureus.
- No significant difference between retapamulin and oral cephalexin when used for the treatment of SID or secondarily infected traumatic lesions.
- All drugs for the treatment of impetigo are well-tolerated.

XIII. Conclusion

The American Academy of Family Physicians (AAFP) recommend the use of mupirocin as first-line therapy for impetigo involving limited body surface area. They also state that oral antibiotics (such as amoxicillin/clavulanate or cephalosporins) are effective for the treatment of impetigo and should be considered for use in patients with impetigo who have more extensive disease. Oral penicillin VK, amoxicillin, topical bacitracin, neomycin, and hydrogen peroxide are not recommended for use in the treatment of impetigo.

Retapamulin is a new antibacterial agent for use in the treatment of impetigo. There is limited information available to suggest that this agent should be used first-line.

HID recommendation: It is recommended that a prior authorization be placed on retapamulin in consideration of the fact that retapamulin adds significant cost and provides no additional benefit over mupirocin. It is further recommended that if a patient fails a course of mupirocin, the provider may request a prior authorization for retapamulin. Patients with MRSA may be approved to use Altabax first-line.

References:

1. Wolters Kluwer Health, Inc. Drug Facts and Comparisons. St. Louis, MO. 2007.
2. Altabax® [package insert]. Research Triangle Park, NC: GlaxoSmithKline; 2007.
3. Koning S, van der Wouden JC, Chosidow O, et al. Efficacy and safety of retapamulin ointment as treatment of impetigo: randomized double-blind multicentre placebo-controlled trial. Br J Dermatol. 2008 May;158(5):1077-82.
4. Oranje AP, Chosidow O, Sacchidanand S, et al. Topical retapamulin ointment, 1%, versus sodium fusidate ointment, 2%, for impetigo: a randomized, observer-blinded, noninferiority study. Dermatology. 2007;215(4):331-40.
5. Parish LC, Jorizzo JL, Breton JJ, et al. Topical retapamulin ointment (1%, wt/wt) twice daily for 5 days versus oral cephalexin twice daily for 10 days in the treatment of secondarily infected dermatitis: results of a randomized controlled trial. J Am Acad Dermatol. 2006 Dec;55(6):1003-13.
6. Free A, Roth E, Dalessandro M, et al. Retapamulin ointment twice daily for 5 days vs. oral cephalexin twice daily for 10 days for empiric treatment of secondarily infected traumatic lesions of the skin. Skinmed. 2006 Sep-Oct;5(5):224-32.
7. Cole C, Gazewood J. Diagnosis and Treatment of Impetigo. Am Fam Physician 2007;75:859-64,868.
8. New Drug: Altabax (retapamulin 1% ointment) for impetigo. Pharmacist's Letter/Prescriber's Letter 2007;23(6):230605.

ALTABAX PRIOR AUTHORIZATION
SD DEPARTMENT OF SOCIAL SERVICES
MEDICAL SERVICES DIVISION

Fax Completed Form to:
866-254-0761
For questions regarding this Prior authorization, call
866-705-5391

SD Medicaid requires that patients receiving a prescription for Altabax must first try and fail MUPIROCIN.

- **Patients must use generic mupirocin for a minimum of 5 days for the trial to be considered a failure.**
- **Patients diagnosed with MRSA may be approved to use Altabax first-line.**

Part I: RECIPIENT INFORMATION (To be completed by physician's representative or pharmacy):

RECIPIENT NAME:	RECIPIENT MEDICAID ID NUMBER:
Recipient Date of birth: / /	

Part II: PHYSICIAN INFORMATION (To be completed by physician's representative or pharmacy):

PHYSICIAN NAME:			PHYSICIAN PROVIDER NUMBER:
City:	State:	PHONE: ( )	FAX: ( )

Part III: TO BE COMPLETED BY PHYSICIAN:

Requested Dosage: (must be completed)	**Diagnosis for this request:**
Qualifications for coverage:	
❑ Failed trial of mupirocin in the last 90 days	Was mupirocin trial for at least 5 days? ❑ YES ❑ NO
Adverse Reaction (attach FDA Medwatch form) or contraindication to mupirocin: (provide description below):	
Medical Justification for use of Altabax without trial of mupirocin:	
Physician Signature:	Date:

Part IV: PHARMACY INFORMATION

PHARMACY NAME:	SD MEDICAID PROVIDER NUMBER:
Phone: ( ):	FAX:: ( )
Drug:	NDC#:

Part V: FOR OFFICIAL USE ONLY

Date: / /	Initials: _____
Approved - Effective dates of PA: From: / /	To: / /
Denied: (Reasons)	

South Dakota Department of Social Services
Pharmacy and Therapeutics Committee Meeting
Lyrica®

I. Overview

Lyrica® (pregabalin) is indicated for use in patients with fibromyalgia, neuropathic pain associated with diabetic peripheral neuropathy, adjunctive therapy for adult patients with partial-onset seizures, and postherpetic neuralgia. It was approved by the FDA in December 2004.

Treatment of neuropathic pain is one of pregabalin's leading uses. Neuropathic pain is chronic pain that arises from damage to sensory nerves and includes pain arising from trapped or compressed nerves, drug-induced nerve damage, diabetic neuropathy, post-herpetic pain, phantom limb syndrome following limb amputation, peripheral neuropathy and fibromyalgia.

II. Pharmacology

Although the mechanism of action of pregabalin is unknown, results with genetically modified mice and with compounds structurally related to pregabalin (such as gabapentin) suggest that binding to the alpha$_2$-delta subunit may be involved in pregabalin's antinociceptive and antiseizure effects in animal models. In vitro, pregabalin reduces the calcium-dependent release of several neurotransmitters, possibly by modulation of calcium channel function.

While pregabalin is a structural derivative of the inhibitory neurotransmitter GABA, it does not bind directly to $GABA_A$, $GABA_B$, or benzodiazepine receptors, does not augment $GABA_A$ responses in cultured neurons, does not alter rat brain GABA concentration, or have acute effects on GABA uptake or degradation. In cultured neurons, however, prolonged application of pregabalin increases the density of GABA transporter protein and increases the rate of functional GABA transport. Pregabalin does not block sodium channels, is not active at opiate receptors, and does not alter cyclooxygenase enzyme activity. It is inactive at serotonin and dopamine receptors and does not inhibit dopamine, serotonin, or noradrenaline reuptake.

III. Pharmacokinetics

Drug	T_{max} hours	Metabolism	$T_{1/2}$ hours
Pregabalin	1.5	Not appreciably metabolized; approximately 90% excreted in urine unchanged.	6.3

IV. Drug Interactions

Precipitant drug	Object drug	Description
Pregabalin	Ethanol Lorazepam Oxycodone	Additive effects on cognitive and gross motor functioning were seen when pregabalin was coadministered with these drugs. No clinically important effects on respiration were seen.
Pregabalin	Thiazolidinediones	Because the thiazolidinedione class of antidiabetic drugs can cause weight gain and/or fluid retention, possibly exacerbating or leading to heart failure, take care when coadministering these agents.

V. Warnings and Precautions

- Angioedema (e.g., swelling of the throat, head, and neck) can occur, and may be associated with life-threatening respiratory compromise requiring emergency treatment.
- Hypersensitivity reactions (e.g., hives, dyspnea, and wheezing) can occur.
- Increased seizure frequency may occur in patients with seizure disorders if pregabalin is rapidly discontinued. Withdraw pregabalin gradually over a minimum of one week.
- Pregabalin may cause peripheral edema. Exercise caution when co-administering pregabalin and thiazolidinedione antidiabetic agents.
- Pregabalin may cause dizziness and somnolence and impair patients' ability to drive or operate machinery.

VI. Adverse Effects

In controlled trials of all patient populations combined, dizziness, somnolence, dry mouth, edema, blurred vision, weight gain, and "thinking abnormally" (primarily difficulty with concentration/attention) were more commonly reported by subjects treated with pregabalin than by subjects treated with placebo (five percent or more and twice the rate of that seen in placebo).

There have been post marketing reports of angioedema in patients. Specific symptoms include swelling of the face, mouth, and neck. Some of these reported incidents were life-threatening with respiratory compromise requiring emergency treatment. Caution should be exercised when prescribing pregabalin in patients who have had previous episodes of angioedema or are currently taking other drugs associated with angioedema (e.g. angiotensin converting enzyme inhibitors).

There have been reports of hypersensitivity reactions after initiation of therapy, weight gain, ophthalmic effects, creatine kinase elevation, decreased platelet count, and prolonged PR intervals.

VII. Dosing and Administration

Drug	Adult Dosing	Pediatric Dosing	Availability
Pregabalin	*Neuropathic pain associated with diabetic peripheral neuropathy* – Start 50mg three times a day (150mg/day). Titrate to 300mg/day within one week based on efficacy and tolerability. Maximum recommended dose of pregabalin is 300mg/day in patients with creatinine clearance (CLcr) of at least 60mL/min. Dose should be adjusted for patients with reduced renal function. Doses of 600mg/day have not been shown to confer additional significant benefit and are less well tolerated. *Epilepsy* – Doses of 150 to 600mg/day have been shown to be effective as adjunctive therapy in the treatment of partial-onset seizures in adults.	The safety and efficacy of pregabalin in pediatric patients have not been established.	Capsules: 25mg, 50mg, 75mg, 100mg, 150mg, 200mg, 225mg and 300mg.

Drug	Adult Dosing	Pediatric Dosing	Availability
	The total daily dose should be divided and given two or three times daily. The efficacy and adverse reaction profiles of pregabalin have been shown to be dose related. In general, it is recommended that patients be started on a total daily dose no greater than 150mg/day (75 mg two times a day, or 50mg three times a day). Based on individual patient response and tolerability, the dose may be increased to a maximum dose of 600mg/day. *Postherpetic neuralgia* – Recommended dose is150 to 300mg/day in patients with CLcr of at least 60mL/min. Start 75mg two times a day, or 50mg three times a day (150mg/day). Increase to 300mg/day within one week based on efficacy and tolerability. Because pregabalin is eliminated primarily by renal excretion, the dose should be adjusted for patients with reduced renal function. Patients who do not experience sufficient pain relief following two to four weeks of treatment with 300mg/day and who are able to tolerate pregabalin may be treated with up to 300mg two times a day or 200mg three times a day (600mg/day). In view of the dose-dependent adverse effects and the higher rate of treatment discontinuation caused by adverse reactions, dosing above 300mg/day should be reserved only for those patients who have ongoing pain and are tolerating 300mg daily. *Fibromyalgia* – Recommended dose is 300 – 450mg/day (for patients with a CLcr greater than 60mL/min). Dosing should begin at 75mg BID (150mg/day) and may be increased to 150mg BID (300mg/day) within one week based on efficacy and		

Drug	Adult Dosing	Pediatric Dosing	Availability
	tolerability. Patients who do not experience sufficient benefit may increase to 225mg BID (450mg/day). There is no evidence that doses above 450mg/day confers additional benefit and is not recommended.		

VIII. Clinical Efficacy

Drug	Condition	Duration	Methods/Results/Conclusions
Pregabalin versus placebo	Fibromyalgia	8 weeks	529 patients with fibromyalgia were followed to primary endpoint of comparison of end point mean pain scores. Pregabalin at 450mg/day significantly reduced the average severity of pain compared with placebo. Significantly more patients in the pregabalin group had ≥ 50% improvement in pain at the end point. Pregabalin at 300 – 450mg/day was associated with significant improvements in sleep quality, fatigue, and global measures of change. Dizziness and somnolence were the most frequent adverse events.
Pregabalin versus placebo	Fibromyalgia	6 weeks (open label) 26 weeks (double blind)	633 patients (279 pregabalin and 287 placebo) were followed to determine the time to loss of therapeutic response (LTR). Time to LTR was significantly longer for patients treated with pregabalin. 61% of placebo patients (vs. 32% of pregabalin patients) had lost therapeutic response. Most adverse effects were mild or moderate in intensity.
Pregabalin versus placebo	Fibromyalgia	14 weeks	745 patients were randomized and had a baseline mean pain score=6.7. Differences from placebo in mean change from baseline to endpoint in pain score were: 300 mg/d, -0.71 (*P*=.0009); 450 mg/d, -0.98, 600 mg/d, -1.00 (each *P*<.0001). On the PGIC, 68% of 300-mg/d, 78% of 450-mg/d, and 66% of 600-mg/d patients reported at least minimal improvement *vs* 48% of placebo patients, representing a statistically significant superiority. Pregabalin 450 and 600 mg/d were associated with statistically significant improvements in total FIQ score: mean differences from placebo at endpoint were: 450 mg/d, -5.24 (*P*=.0041); 600 mg/d, -5.34 (*P*=.0034). Incidence of AEs increased with dosage.

Drug	Condition	Duration	Methods/Results/Conclusions
			The most common AEs were dizziness (pregabalin, 35.8%; placebo, 7.6%) and somnolence (pregabalin, 18.0%; placebo, 3.8%).

IX. Conclusion

Choosing therapy for neuropathic pain can be challenging because of the large number of medications available to treat this condition. Based on a review of evidence comparing pregabalin and gabapentin to placebo, both agents were consistently more effective than placebo for pain relief and/or improvement in function. Further head to head trials are needed to provide evidence supporting the use of pregabalin over gabapentin in the treatment of neuropathic pain.

HID recommendation: It is recommended that a prior authorization be placed on pregabalin based on the lack of clinical evidence comparing pregabalin to gabapentin for patients with neuropathic pain. It is further recommended that if a patient fails a course of gabapentin, the provider may request a prior authorization for pregabalin.

References:

1. Wolters Kluwer Health, Inc. Drug Facts and Comparisons. St. Louis, MO. 2008.
2. Lyrica® [package insert]. New York, NY; Pfizer Pharmaceuticals; 2007.
3. Crofford LJ, Rowbotham MC, et al. Pregabalin for the treatment of fibromyalgia syndrome: results of a randomized, double-blind, placebo-controlled trial. Arthritis Rheum. 2005 Apr;52(4):1264-73.
4. Crofford LJ, Simpson S, et al. A Six-month, Double-blind, Placebo-controlled, Durability of Effect Study of Pregabalin for Pain Associated With Fibromyalgia. Presentation Number L44, American College of Rheumatology Annual Scientific Meeting, November 10-15, 2006, Washington, DC.
5. Arnold LM, Russell IJ, et al. Pregabalin for Management of Fibromyalgia Syndrome (FMS): A 14-Week, Randomized, Double-Blind, Placebo-Controlled, Monotherapy Trial. [poster] Presented at the 59th Annual American Academy of Neurology, May 1-3, 2007; Boston, MA.

South Dakota Medicaid
Lyrica Utilization 05/01/07 to 04/30/08

Label Name	Rx Num	Total Reimb Amt	Average Cost per script
LYRICA 225 MG CAPSULE	1	$64.56	$64.56
LYRICA 300 MG CAPSULE	12	$1,454.46	$121.21
LYRICA 200 MG CAPSULE	24	$3,699.26	$154.14
LYRICA 25 MG CAPSULE	50	$6,192.01	$123.84
LYRICA 150 MG CAPSULE	139	$20,320.01	$146.19
LYRICA 100 MG CAPSULE	255	$39,212.22	$153.77
LYRICA 50 MG CAPSULE	463	$71,757.62	$154.98
LYRICA 75 MG CAPSULE	565	$78,069.49	$138.18
Total 394 Recipients	**1509**	**$220,769.63**	**$146.30**

Lyrica Utilization Summary by Age
05/01/2007 – 04/30/2008

Age	Recip Count	Rx Count
14	1	3
15	2	12
17	2	2
18	2	13
19	4	17
20	2	15
21	1	5
22	4	14
23	2	17
24	3	12
25	7	18
26	6	20
27	9	39
28	6	18
29	8	22
30	8	33
31	6	12
32	8	17
33	9	16
34	10	22
35	7	23
36	9	33

Age	Recip Count	Rx Count
37	8	37
38	13	21
39	14	62
40	12	48
41	6	33
42	8	24
43	17	50
44	16	49
45	14	54
46	12	53
47	14	33
48	12	47
49	7	47
50	15	58
51	16	71
52	14	82
53	4	16
54	10	51
55	9	41
56	10	35
57	9	49
58	5	35

Age	Recip Count	Rx Count
59	7	21
60	7	29
61	6	24
62	1	9
63	7	31
64	4	10
65	1	6

South Dakota Medicaid
Gabapentin Utilization 05/01/07 to 04/30/08

Label Name	Rx Num	Total Reimb Amt	Average Cost per script
GABAPENTIN 100 MG CAPSULE	428	$7,271.70	$16.99
GABAPENTIN 300 MG CAPSULE	1202	$33,566.78	$27.93
GABAPENTIN 400 MG CAPSULE	162	$5,373.77	$33.17
GABAPENTIN 600 MG TABLET	460	$29,848.33	$64.89
GABAPENTIN 800 MG TABLET	171	$12,880.39	$75.32
NEURONTIN 100 MG CAPSULE	13	$1,078.53	$82.96
NEURONTIN 250 MG/5 ML SOLN	33	$3,762.07	$114.00
NEURONTIN 800 MG TABLET	10	$3,865.25	$386.53
Total 504 Recipients	2479	$97,646.82	$39.39

Gabapentin Utilization Summary by Age
05/01/2007 – 04/30/2008

Age	Recip Count	Rx Count
1	1	1
3	3	25
4	1	4
6	1	1
7	2	12
8	2	15
10	2	6
11	2	10
13	2	12
14	3	7
15	2	2
16	5	18
17	9	33
18	5	17
19	7	65
20	4	21
21	3	9
22	10	55
23	6	33
24	4	4
25	8	35
26	11	61
27	3	17
28	8	30

Age	Recip Count	Rx Count
29	9	37
30	8	54
31	10	22
32	9	21
33	8	22
34	11	70
35	10	51
36	9	31
37	13	58
38	11	39
39	9	25
40	7	22
41	8	22
42	13	35
43	7	27
44	15	58
45	14	88
46	17	78
47	13	66
48	11	58
49	13	66
50	16	83
51	11	80
52	17	95

Age	Recip Count	Rx Count
53	13	65
54	9	81
55	15	88
56	7	36
57	14	79
58	10	65
59	10	51
60	11	62
61	14	76
62	9	49
63	8	44
64	6	49
65	3	25
69	1	2
76	1	6

Lyrica Recipient Count and Diagnosis
05/01/2007 - 04/30/2008

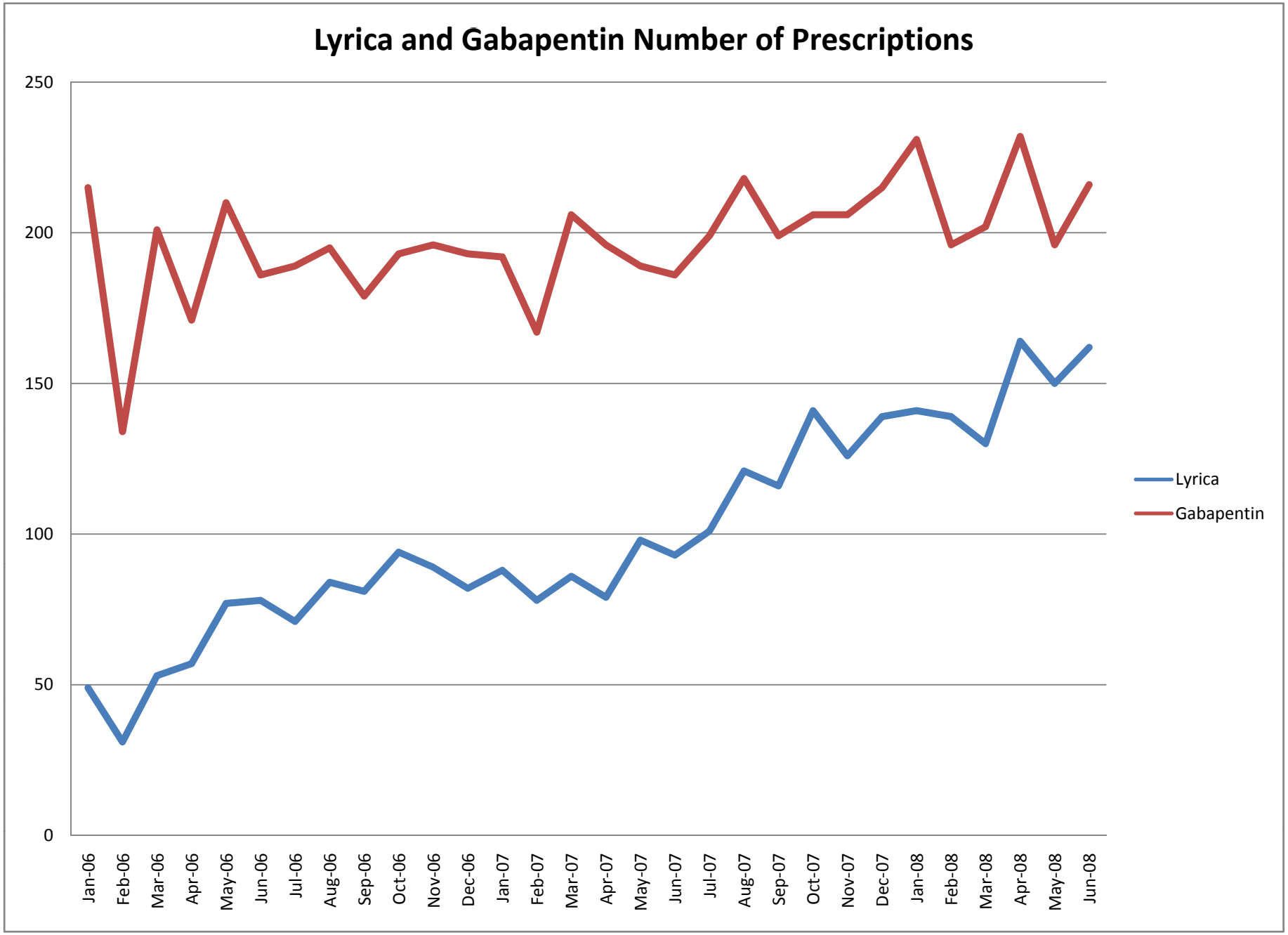
Recipient Count	Diagnosis
20	Seizure
10	Post-herpetic neuralgia
84	Neuropathic Pain
209	Myalgia/Myositis

Gabapentin Recipient Count and Diagnosis
05/01/2007 - 04/30/2008

Recipient Count	Diagnosis
57	Seizure
13	Post-herpetic neuralgia
104	Neuropathic Pain
159	Myalgia/Myositis

At the June P&T meeting, committee members asked how many patients had a prescription for gabapentin prior to using Lyrica.

05/01/07 - 04/30/08
Number of unique patients that took Lyrica: 394
Number of unique patients that took Lyrica 6 or more times during time period: 92
Number of unique patients taking gabapentin (up to 2 years) prior to taking Lyrica: 77


Lyrica and Gabapentin Number of Prescriptions
250
200
150
100
50
0
Jan-06
Feb-06
Mar-06
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Feb-07
Mar-07
Apr-07
May-07
Jun-07
Jul-07
Aug-07
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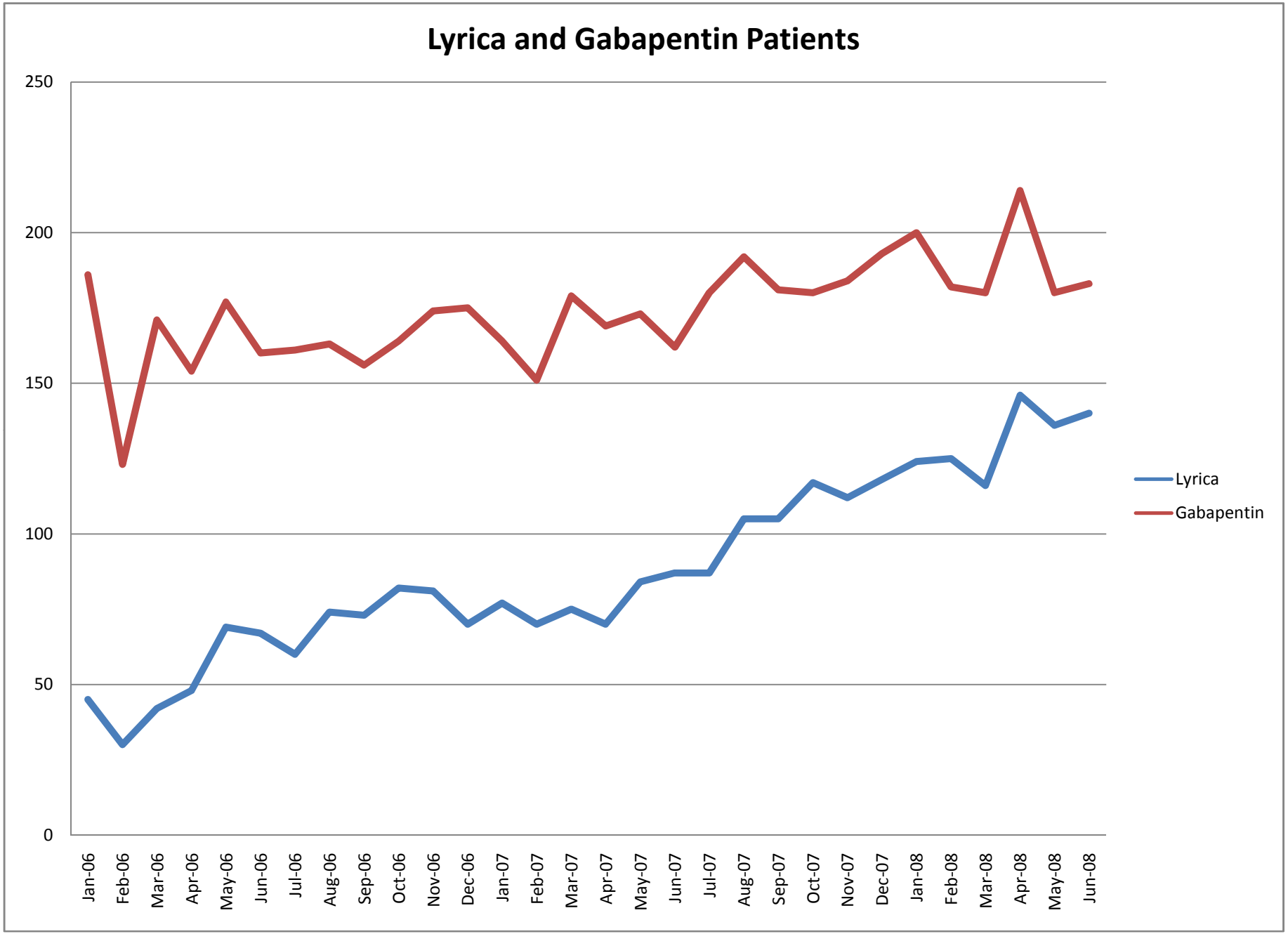
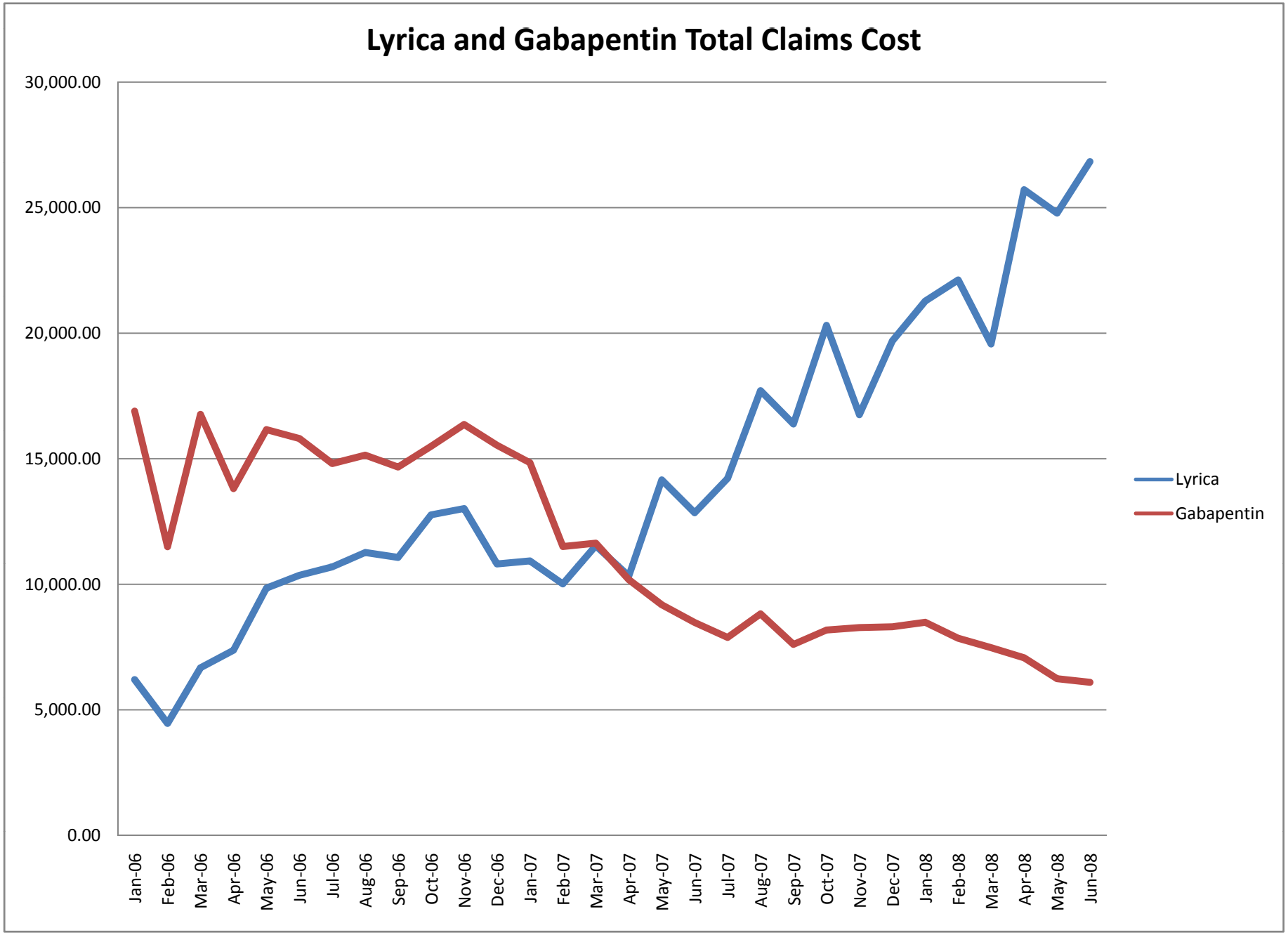
Jan-08
Feb-08
Mar-08
Apr-08
May-08
Jun-08
Lyrica
Gabapentin


Lyrica and Gabapentin Patients
250
200
150
100
50
0
Jan-06
Feb-06
Mar-06
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Feb-07
Mar-07
Apr-07
May-07
Jun-07
Jul-07
Aug-07
Sep-07
Oct-07
Nov-07
Dec-07
Jan-08
Feb-08
Mar-08
Apr-08
May-08
Jun-08
Lyrica
Gabapentin


Lyrica and Gabapentin Total Claims Cost
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Lyrica
Gabapentin

LYRICA PRIOR AUTHORIZATION
SD DEPARTMENT OF SOCIAL SERVICES
MEDICAL SERVICES DIVISION

Fax Completed Form to:
866-254-0761
For questions regarding this Prior authorization, call
866-705-5391

SD Medicaid requires that patients receiving a new prescription for Lyrica (pregabalin) must first try Gabapentin.

- **Gabapentin does not require a prior authorization.**

Part I: RECIPIENT INFORMATION (To be completed by physician's representative or pharmacy):

RECIPIENT NAME:	RECIPIENT MEDICAID ID NUMBER:
Recipient Date of birth: / /	

Part II: PHYSICIAN INFORMATION (To be completed by physician's representative or pharmacy):

PHYSICIAN NAME:		PHYSICIAN DEA NUMBER:
City:	PHONE: ( )	FAX: ( )

Part III: TO BE COMPLETED BY PHYSICIAN:

Requested Dosage: (must be completed)

Diagnosis for this request:

Qualifications for coverage:

☐ Failed / intolerant to gabapentin

Adverse Reaction (attach FDA MedWatch form) or contraindication to gabapentin: (provide description below):

Medical Justification for use of pregabalin without trial of gabapentin:

Physician Signature: Date:

Part IV: PHARMACY INFORMATION

PHARMACY NAME:	SD MEDICAID PROVIDER NUMBER:
Phone: ( ):	FAX:: ( )
Drug:	NDC#:

Part V: FOR OFFICIAL USE ONLY

Date: / /	Initials: _____
Approved - Effective dates of PA: From: / /	To: / /
Denied: (Reasons)	

South Dakota Medicaid
Opioid Utilization

Label Name	Rx Num	Total Reimb Amt	Cost per script
ACETAMINOPHEN/COD ELIXIR	1665	$12,114.90	$7.28
ACETAMINOPHEN-COD #2 TABLET	49	$356.12	$7.27
ACETAMINOPHEN-COD #3 TABLET	4066	$33,854.05	$8.33
ACETAMINOPHEN-COD #4 TABLET	44	$1,223.67	$27.81
ASCOMP WITH CODEINE CAPSULE	8	$192.45	$24.06
ASPIRIN-CODEINE 325-30 TAB	4	$89.20	$22.30
AVINZA 120 MG CAPSULE	15	$5,021.57	$334.77
AVINZA 30 MG CAPSULE	12	$1,222.75	$101.90
AVINZA 60 MG CAPSULE	1	$190.95	$190.95
AVINZA 90 MG CAPSULE	1	$280.19	$280.19
BUTALBITAL COMP/COD #3 CAP	126	$3,404.58	$27.02
BUTORPHANOL 10 MG/ML SPRAY	13	$676.20	$52.02
CODEINE SULFATE 30 MG TABLET	14	$347.81	$24.84
COMBUNOX TABLET	11	$587.36	$53.40
DARVON-N 100 MG TABLET	4	$129.11	$32.28
DILAUDID 3 MG SUPPOSITORY	6	$527.30	$87.88
DURAGESIC 100 MCG/HR PATCH	1	$200.83	$200.83
DURAGESIC 12 MCG/HR PATCH	3	$244.65	$81.55
DURAGESIC 50 MCG/HR PATCH	1	$147.25	$147.25
ENDOCET 10-325 MG TABLET	87	$10,999.63	$126.43
ENDOCET 10-650 MG TABLET	57	$4,066.15	$71.34
ENDOCET 5-325 TABLET	199	$1,876.54	$9.43
ENDOCET 7.5-325 MG TABLET	25	$2,331.47	$93.26
ENDOCET 7.5-500 MG TABLET	16	$606.22	$37.89
ENDODAN 4.88/325 TABLET	2	$123.98	$61.99
FENTANYL 100 MCG/HR PATCH	201	$58,667.29	$291.88
FENTANYL 25 MCG/HR PATCH	261	$16,650.74	$63.80
FENTANYL 50 MCG/HR PATCH	291	$33,122.51	$113.82
FENTANYL 75 MCG/HR PATCH	116	$20,177.07	$173.94
FIORICET WITH CODEINE CAPSULE	9	$651.70	$72.41
HYDROCODONE BIT-IBUPROFEN TAB	409	$11,725.41	$28.67
HYDROCODONE/APAP 5/325 TAB	1	$17.35	$17.35
HYDROCODONE/APAP 5/500 TAB	2	$25.62	$12.81
HYDROCODONE-APAP 10-325 TABLET	1042	$26,782.72	$25.70
HYDROCODONE-APAP 10-500 TABLET	959	$21,929.33	$22.87
HYDROCODONE-APAP 10-650 TABLET	664	$8,281.45	$12.47
HYDROCODONE-APAP 10-660 TABLET	15	$688.25	$45.88
HYDROCODONE-APAP 10-750 TABLET	35	$861.05	$24.60
HYDROCODONE-APAP 2.5-500 TAB	49	$613.15	$12.51
HYDROCODONE-APAP 5-325 TABLET	2064	$31,863.68	$15.44

South Dakota Medicaid
Opioid Utilization

Label Name	Rx Num	Total Reimb Amt	Cost per script
HYDROCODONE-APAP 5-500 TABLET	9176	$69,442.12	$7.57
HYDROCODONE-APAP 7.5-325 TAB	144	$3,769.98	$26.18
HYDROCODONE-APAP 7.5-500 TAB	1122	$13,703.89	$12.21
HYDROCODONE-APAP 7.5-650 TAB	16	$339.00	$21.19
HYDROCODONE-APAP 7.5-750 TAB	272	$2,402.46	$8.83
HYDROCODONE-APAP SOLUTION	678	$13,935.22	$20.55
HYDROMORPHONE 2 MG TABLET	92	$1,128.30	$12.26
HYDROMORPHONE 4 MG TABLET	63	$2,665.16	$42.30
HYDROMORPHONE HCL 8 MG TAB	1	$100.75	$100.75
KADIAN 20 MG CAPSULE SR	13	$1,511.06	$116.24
KADIAN 30 MG CAPSULE SR	35	$4,331.59	$123.76
KADIAN 50 MG CAPSULE SR	12	$1,391.14	$115.93
KADIAN 60 MG CAPSULE SR	3	$1,226.37	$408.79
LORCET 10-650 TABLET	1	$16.75	$16.75
MEPERIDINE 100 MG TABLET	1	$19.00	$19.00
MEPERIDINE 50 MG TABLET	93	$1,643.07	$17.67
METHADONE 40 MG TABLET DISPR	14	$522.18	$37.30
METHADONE HCL 10 MG TABLET	403	$10,014.54	$24.85
METHADONE HCL 5 MG TABLET	80	$804.04	$10.05
METHADOSE 10 MG TABLET	19	$606.52	$31.92
METHADOSE 40 MG TABLET DISPR	4	$93.45	$23.36
METHADOSE 5 MG TABLET	13	$314.31	$24.18
MORPHINE 15 MG SOLUBLE TABLET	3	$32.58	$10.86
MORPHINE 30 MG SOLUBLE TABLET	1	$51.61	$51.61
MORPHINE SULF 100 MG TAB SA	48	$12,856.35	$267.84
MORPHINE SULF 15 MG TAB SA	130	$4,676.38	$35.97
MORPHINE SULF 200 MG TAB SA	4	$1,669.60	$417.40
MORPHINE SULF 30 MG TAB ER	169	$12,603.56	$74.58
MORPHINE SULF 60 MG TAB SA	82	$11,697.09	$142.65
MORPHINE SULF ER 15 MG TABLET	21	$773.18	$36.82
MORPHINE SULF ER 60 MG TABLET	23	$2,930.55	$127.42
MORPHINE SULFATE 15 MG TAB	125	$1,617.93	$12.94
MORPHINE SULFATE 30 MG TAB	52	$1,321.01	$25.40
MORPHINE SULFATE IR 15 MG TB	73	$845.16	$11.58
MORPHINE SULFATE IR 30 MG TB	51	$1,415.93	$27.76
MS CONTIN 15 MG TABLET SA	2	$94.35	$47.18
MS CONTIN 30 MG TABLET SA	1	$70.75	$70.75
NORCO 5-325 TABLET	2	$28.67	$14.34
OPANA 10 MG TABLET	2	$821.08	$410.54
OPANA 5 MG TABLET	24	$3,956.63	$164.86

South Dakota Medicaid
Opioid Utilization

Label Name	Rx Num	Total Reimb Amt	Cost per script
OPANA ER 10 MG TABLET	48	$8,008.44	$166.84
OPANA ER 20 MG TABLET	62	$19,856.30	$320.26
OPANA ER 30 MG TABLET	1	$550.53	$550.53
OPANA ER 40 MG TABLET	9	$5,896.55	$655.17
OPANA ER 5 MG TABLET	14	$1,308.48	$93.46
OXYCODONE 5 MG CAPSULE	777	$16,218.50	$20.87
OXYCODONE 5 MG TABLET	660	$15,299.66	$23.18
OXYCODONE HCL 10 MG ER TABLET	276	$13,573.27	$49.18
OXYCODONE HCL 15 MG TABLET	129	$6,388.12	$49.52
OXYCODONE HCL 20 MG ER TABLET	508	$80,969.00	$159.39
OXYCODONE HCL 30 MG TABLET	68	$13,992.38	$205.77
OXYCODONE HCL 40 MG ER TABLET	352	$87,727.32	$249.23
OXYCODONE HCL CR 10 MG TABLET	219	$11,961.18	$54.62
OXYCODONE HCL CR 20 MG TABLET	264	$42,499.37	$160.98
OXYCODONE HCL CR 40 MG TABLET	179	$45,929.22	$256.59
OXYCODONE HCL CR 80 MG TABLET	196	$121,303.17	$618.89
OXYCODONE-APAP 10-325 MG TAB	195	$20,230.15	$103.74
OXYCODONE-APAP 10-650 MG TAB	48	$3,118.30	$64.96
OXYCODONE-APAP 5-325 MG TAB	4214	$41,484.95	$9.84
OXYCODONE-APAP 5-500 MG CAP	326	$3,611.96	$11.08
OXYCODONE-APAP 7.5-325 MG TAB	80	$7,658.77	$95.73
OXYCODONE-APAP 7.5-500 MG TAB	43	$1,431.25	$33.28
OXYCODONE-ASPIRIN 4.88-325 TAB	13	$672.41	$51.72
OXYCONTIN 10 MG TABLET SA	100	$12,660.43	$126.60
OXYCONTIN 20 MG TABLET SA	126	$26,319.92	$208.89
OXYCONTIN 40 MG TABLET SA	128	$50,817.35	$397.01
OXYCONTIN 80 MG TABLET SA	84	$99,370.66	$1,182.98
OXYIR 5 MG CAPSULE	4	$89.86	$22.47
PENTAZOCINE-NALOXONE TABLET	1	$19.64	$19.64
PERCOCET 10-325 MG TABLET	2	$163.45	$81.73
PERCOCET 5-325 MG TABLET	4	$993.03	$248.26
PROPOXY-N/APAP 100-650 TAB	6098	$62,051.95	$10.18
PROPOXYPHENE HCL 65 MG CAP	363	$6,793.25	$18.71
PROPOXYPHENE-APAP 50-325 MG TB	13	$220.09	$16.93
ROXICET 5-325 TABLET	164	$1,806.83	$11.02
ROXICODONE 15 MG TABLET	3	$208.05	$69.35
TRAMADOL HCL 50 MG TABLET	3409	$47,555.55	$13.95
TRAMADOL HCL-ACETAMINOPHEN TAB	530	$25,794.03	$48.67
TYLENOL WITH CODEINE #3 TABLET	2	$10.15	$5.08
TYLOX 5-500 CAPSULE	2	$80.30	$40.15

South Dakota Medicaid
Opioid Utilization

Label Name	Rx Num	Total Reimb Amt	Cost per script
ULTRACET TABLET	1	$22.75	$22.75
ULTRAM 50 MG TABLET	3	$53.10	$17.70
ULTRAM ER 100 MG TABLET	244	$30,998.32	$127.04
ULTRAM ER 200 MG TABLET	290	$42,378.97	$146.13
ULTRAM ER 300 MG TABLET	201	$40,943.92	$203.70
VICODIN 5-500 TABLET	3	$32.91	$10.97
Total Recipients 12,961	**46072**	**$1,519,389.35**	

Summary by Age
05/01/2007 – 04/30/2008

Age	Recip Count	Rx Count
14	10	13
15	142	213
16	245	384
17	271	434
18	357	589
19	340	661
20	214	429
21	216	477
22	185	385
23	155	334
24	186	552
25	159	422
26	153	583
27	151	448
28	120	347
29	119	436
30	114	377
31	109	401
32	82	353
33	89	466
34	84	343
35	79	453
36	87	444
37	98	407
38	79	423
39	67	347
40	66	434

Age	Recip Count	Rx Count
41	67	430
42	67	392
43	56	368
44	64	629
45	53	555
46	64	417
47	57	399
48	63	477
49	52	414
50	34	340
51	38	335
52	36	349
53	38	332
54	32	177
55	34	288
56	33	344
57	29	219
58	34	405
59	33	226
60	31	206
61	25	283
62	29	144
63	19	140
64	16	145
65	16	80
66	3	6
67	1	1

South Dakota Medicaid
Opioid Utilization

Summary by County
05/01/2007 – 04/30/2008

County	Recip Count	Rx Count	Total Dollars
Minnehaha	925	3517	$120,864.00
Aurora	9	18	$150.31
Beadle	84	446	$18,630.69
Bennett	109	490	$6,605.02
Bon Homme	24	57	$669.20
Brookings	71	203	$5,550.91
Brown	155	600	$26,882.92
Brule	21	30	$251.19
Buffalo	24	66	$696.57
Butte	72	183	$3,392.06
Campbell	2	19	$382.71
Charles Mix	89	336	$31,640.35
Clark	13	64	$2,812.02
Clay	72	387	$7,377.58
Codington	133	438	$10,557.13
Corson	73	348	$6,497.24
Custer	31	133	$4,606.36
Davison	145	421	$10,556.84
Day	31	99	$2,815.95
Deuel	7	28	$339.68
Dewey	109	352	$13,253.65
Douglas	9	31	$456.16
Edmunds	9	80	$5,623.65
Fall River	43	155	$5,946.17
Faulk	5	55	$3,074.72
Grant	19	47	$707.20
Gregory	34	137	$2,181.89
Haakon	7	29	$463.14
Hamlin	9	35	$828.25
Hand	7	17	$281.11
Hanson	9	31	$267.07
Harding	1	1	$6.09
Hughes	129	452	$10,773.28
Hutchinson	30	103	$7,441.11

County	Recip Count	Rx Count	Total Dollars
Hyde	4	12	$1,093.10
Jackson	41	139	$2,782.05
Jerauld	3	8	$55.88
Jones	2	2	$15.56
Kingsbury	18	42	$619.66
Lake	37	164	$6,755.61
Lawrence	98	424	$24,090.48
Lincoln	60	281	$24,427.04
Lyman	20	56	$823.62
McCook	25	92	$11,668.10
McPherson	5	16	$206.45
Marshall	15	109	$1,726.86
Meade	157	723	$32,809.41
Mellette	44	217	$4,162.41
Miner	6	7	$64.10
Moody	14	36	$329.16
Pennington	1026	4189	$158,104.07
Perkins	10	32	$1,008.83
Potter	9	23	$205.28
Roberts	75	227	$2,843.63
Sanborn	10	41	$408.65
Spink	21	82	$1,531.04
Stanley	23	67	$1,555.51
Sully	3	3	$15.87
Tripp	63	235	$6,110.23
Turner	32	76	$1,088.19
Union	31	133	$2,077.68
Walworth	41	244	$6,058.60
Yankton	139	641	$38,854.00
Ziebach	51	177	$2,340.91
Shannon	204	544	$7,624.23
Todd	204	806	$15,375.39

South Dakota Medicaid
Opioid Utilization

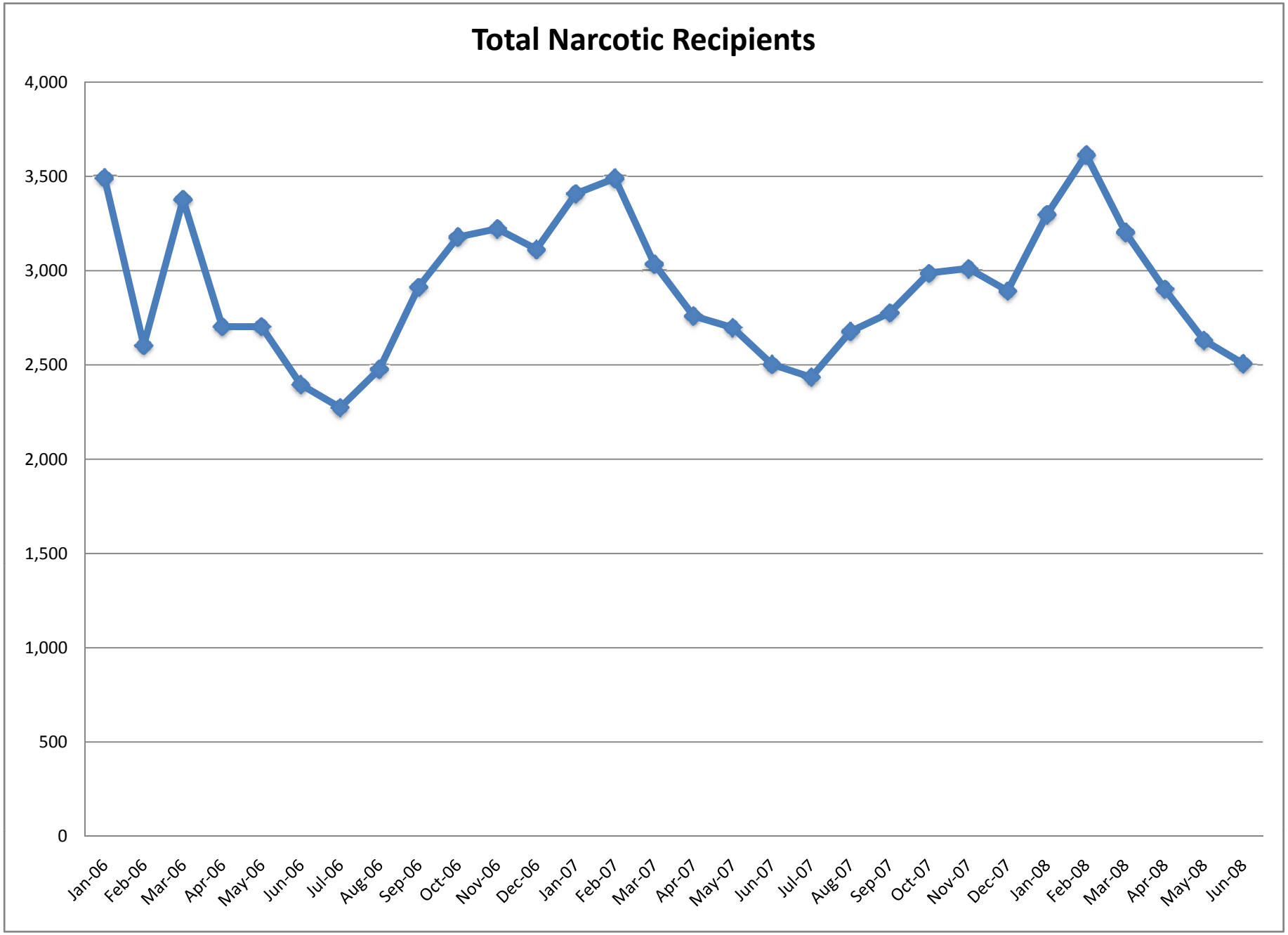
Providers prescribing ≥ 500 Prescriptions for Narcotics Annually (2007)

Rx Count	Dollar Total	Dollar/Rx
3,514	$475,189.05	$135.23
2,056	$225,314.63	$109.59
1,710	$206,803.73	$120.94
1,457	$151,060.21	$103.68
1,331	$83,739.72	$62.91
1,300	$127,446.77	$98.04
1,202	$59,905.80	$49.84
1,101	$124,151.43	$112.76
993	$43,082.88	$43.39
852	$74,777.26	$87.77
847	$55,333.93	$65.33
783	$70,641.59	$90.22
776	$106,633.35	$137.41
752	$70,740.31	$94.07
738	$63,719.81	$86.34
707	$104,666.13	$148.04
656	$76,912.52	$117.24
625	$54,253.86	$86.81
603	$24,770.15	$41.08
582	$25,882.70	$44.47
579	$63,387.58	$109.48
551	$44,704.25	$81.13
548	$14,940.32	$27.26
548	$50,304.93	$91.80
539	$35,197.34	$65.30
505	$53,422.22	$105.79

South Dakota Medicaid
Opioid Utilization

Providers with ≥ $50,000 Reimbursed for Narcotics Annually (2007)

Rx Count	Dollar Total	Dollar/Rx
3,514	$475,189.05	$135.23
2,056	$225,314.63	$109.59
1,710	$206,803.73	$120.94
1,457	$151,060.21	$103.68
1,300	$127,446.77	$98.04
1,101	$124,151.43	$112.76
776	$106,633.35	$137.41
707	$104,666.13	$148.04
1,331	$83,739.72	$62.91
656	$76,912.52	$117.24
852	$74,777.26	$87.77
752	$70,740.31	$94.07
783	$70,641.59	$90.22
738	$63,719.81	$86.34
579	$63,387.58	$109.48
1,202	$59,905.80	$49.84
847	$55,333.93	$65.33
625	$54,253.86	$86.81
505	$53,422.22	$105.79
445	$51,146.30	$114.94
548	$50,304.93	$91.80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2,500
2,000
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Jan-06
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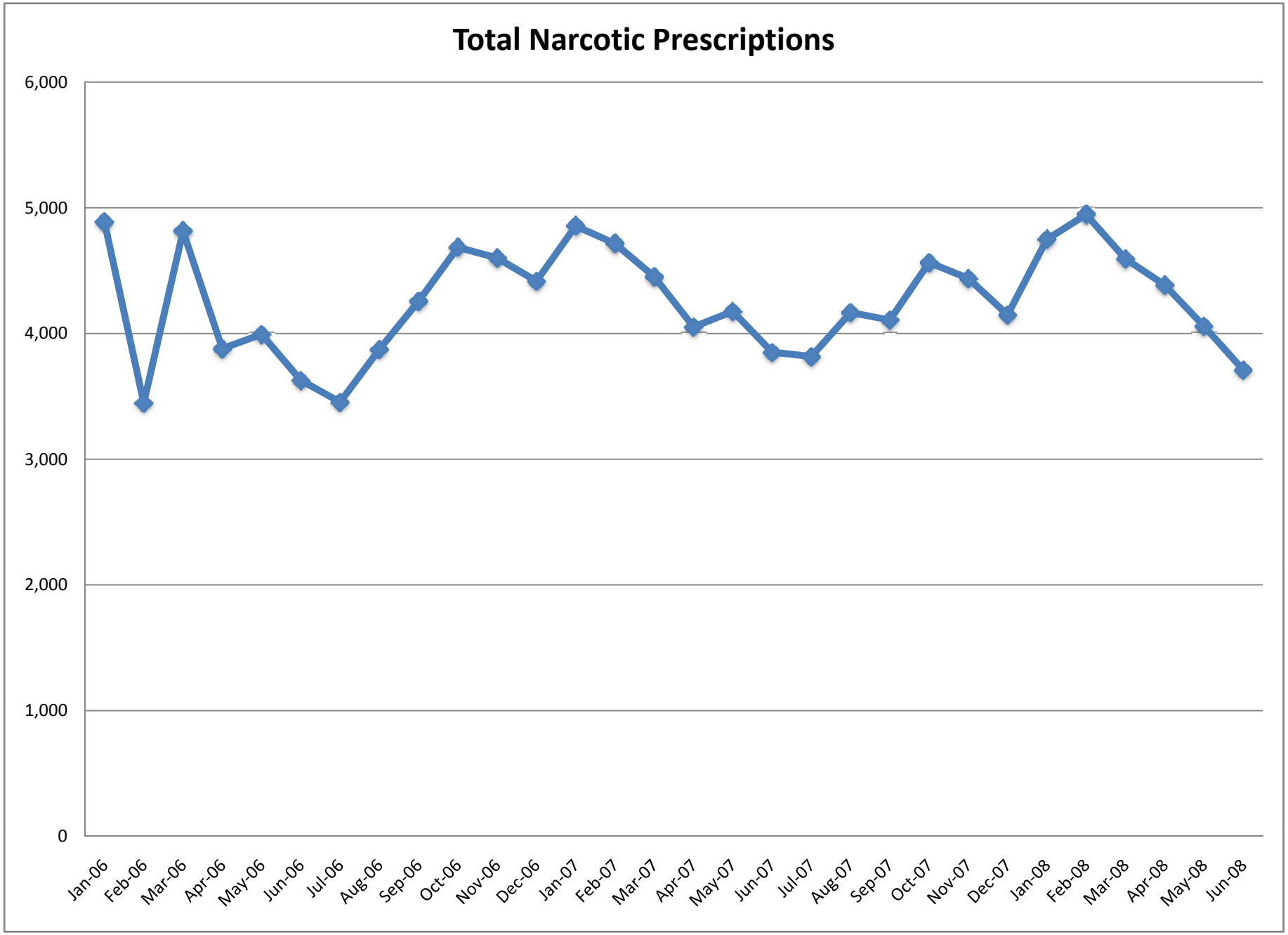
Total Narcotic Prescriptions
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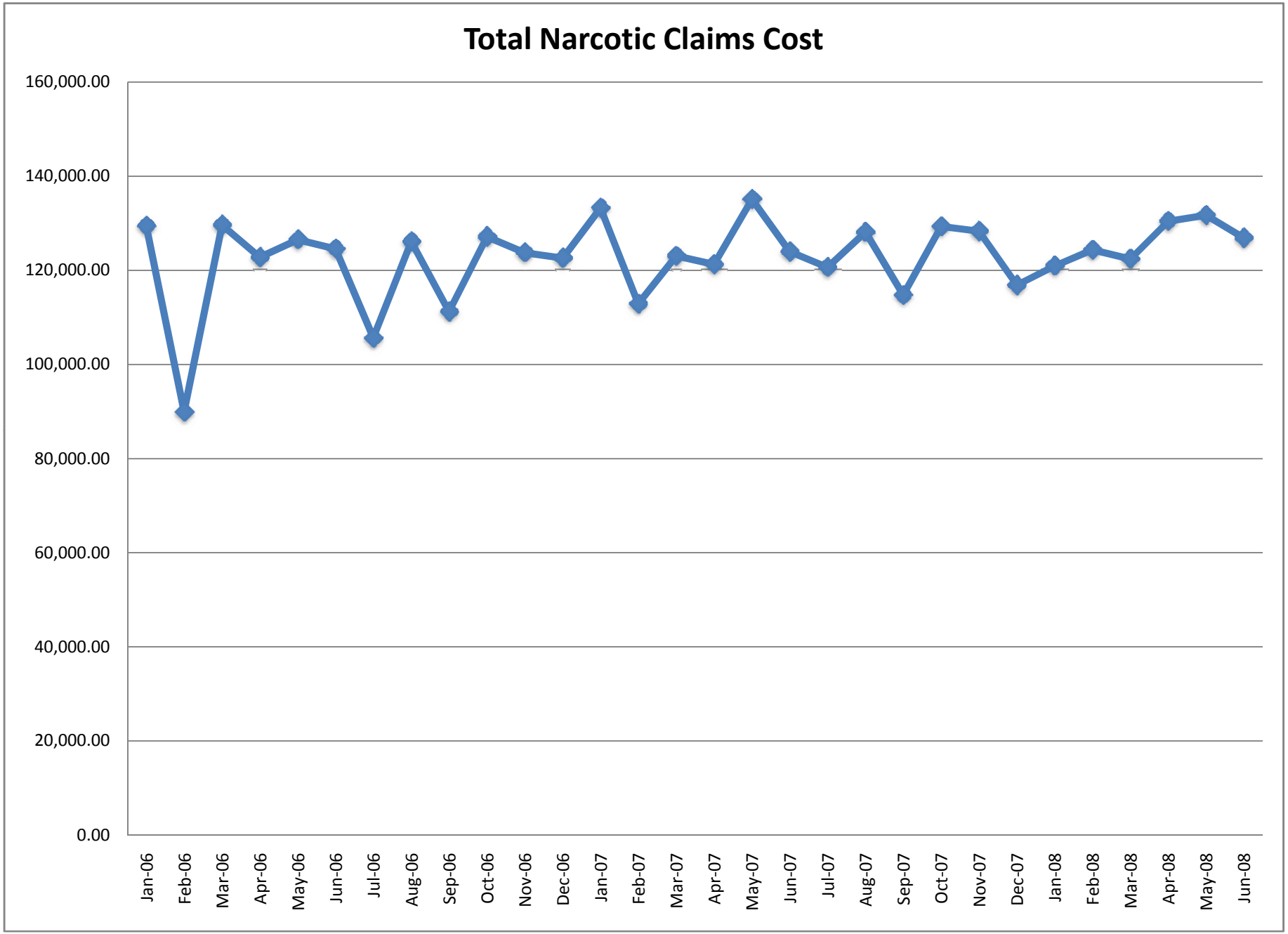
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