# DUR Board Meeting
# September 8, 2008
# Heritage Center

# 1pm

**North Dakota Medicaid**
**DUR Board Meeting**
**Agenda**
**Heritage Center**
**September 8, 2008**
**1pm**

1. Administrative items
    - Travel vouchers
    - Board Members Sign In

2. Old Business

| | |
|---|---|
| • Review and approval of minutes of 06/02/08 meeting | Chairman |
| • Budget update | Brendan |
| • Summarize Board Recommendations | Brendan |
| • Second review of Chantix | HID |
| • Second review of Carisoprodol | HID |

3. New Business

| | |
|---|---|
| • Review 5-Hydroxytryptamine Receptor Agonists (Triptans) | HID |
| • Review Intranasal Corticosteroids | HID |
| • Review Vusion | HID |
| • Yearly PA Review | HID |
| o Growth Hormone/IGF-1 Products | |
| o ARBs/Renin Inhibitor | |
| o Brand Medically Necessary | |
| o Amrix | |
| o Xenical | |
| • Criteria Recommendations | Brendan |
| • Upcoming meeting date/agenda | Chairman |

4. Adjourn — Chairman

**Please remember to turn all cellular phones and pagers to silent mode during the meeting.**

**Drug Utilization Review (DUR) Meeting Minutes**
**June 2, 2008**

**Members Present:** Patricia Churchill, Cheryl Huber, Norman Byers, Carrie Sorenson, Greg Pfister, Bob Treitline, Kim Krohn, Jeffrey Hostetter, John Savageau, Scott Setzepfandt, and Leeann Ness.
**Medicaid Pharmacy Department:** Brendan Joyce, Gary Betting
**HID Staff Present:** Candace Rieth
**Members Absent:** Carlotta McCleary and Todd Twogood

Chairman, C. Huber, called the meeting to order at 1:00pm. C. Huber asked for a motion to approve the minutes from the April meeting. K. Krohn moved that the minutes be approved and B. Treitline seconded the motion. Chair, C. Huber, called for a voice vote to approve the minutes, which passed with no audible dissent.

**Budget Update**
B. Joyce had no new information to present regarding the budget.

**Anticonvulsant Review**
The board requested additional information at the April meeting regarding anticonvulsants. This information included which agents are going generic in the future, providers prescribing this class of medications, and examples of changes that have been made in other states. B. Joyce reviewed this information with the Board. There was no public comment. B. Joyce explained to the Board that if no recommendation is made regarding anticonvulsants, the Department will recommend to the legislature that the law does not need to exist. C. Huber spoke on behalf of the Board by stating that the Board has no recommendation at this time, related to the class of anticonvulsants.

**Summary of Board Recommendations to Legislative Counsel**
Previous board recommendations on HIV/AIDS, Oncology, ADHD, Antidepressants, and Antipsychotics were reviewed. G. Pfister asked for clarification of the wording on the Antidepressant recommendation. The correct wording will be: Antidepressants-DUR Board recommended placing **certain** SSRI medications on prior authorization and therefore removing the exemption for the antidepressant class of medications.

**Review of Chantix**
Biron Baker, MD, spoke on behalf of Pfizer. He recommended against placing Chantix on prior authorization. Rick Melbye spoke on behalf of Pfizer, manufacturer of Chantix. Michelle Walker spoke on behalf of the North Dakota Department of Health. Michelle is the cessation director and facilitates the North Dakota Tobacco Quitline. B. Joyce stated that the Department would consider covering Chantix for recipients willing to enroll in the Quitline. J. Hostetter made a motion requesting the Department formulate a smoking cessation plan that would cover all smoking cessation products for recipients enrolled in the ND Tobacco Quitline. C. Huber seconded the motion. This topic will be brought up again at the next Board meeting for finalization.

**Review of Soma 250**
B. Joyce reviewed carisoprodol utilization with Board members. There was no public comment. Soma 250mg is a new to market strength of carisoprodol that currently has no generic alternative. N. Byers made a motion to prior authorize Soma 250mg. P. Churchill seconded the motion. This topic will be brought up again at the next Board meeting for finalization.

B. Joyce stated that carisoprodol is indicated for short term use and the Department would like to restrict chronic use of this agent. The Board asked that more information be presented at the September meeting, including tapering information, quantity for scripts, and age/gender for

patients. G. Pfister made a motion that all new prescriptions for carisoprodol be limited to 3 weeks supply with one refill per year. B. Treitline seconded the motion. This topic will be brought up again at the next Board meeting for finalization.

**Yearly PA Review**
The Board reviews products annually that have previously been placed on prior authorization. This allows the Board a chance to update the prior authorization forms and criteria. Sedative/Hypnotics, Qualaquin, ACE-Is, and Synagis were reviewed. P. MacDonald spoke on behalf of MedImmune, manufacturer of Synagis. K. Brown, MD, spoke regarding Synagis utilization at St. Alexius. The board recommended that Altace generic be included on the ACE-I form as an available generic. No other changes were made to the forms and criteria for these agents.

**Criteria Recommendations**
The recommended RDUR criteria enclosed in the packet were developed from product information provided by the manufacturers and usually are consistent with new indications, new drugs added, new warnings, etc. These proposed criteria will be added to the current set of criteria, and will be used in future DUR cycles. R. Treitline moved to approve the new criteria and G. Pfister seconded the motion. C. Huber called for a voice vote and the motion passed with no audible dissent.

**Board Member Resignation**
B. Treitline submitted a letter of resignation effective July 1, 2008.

**Election of Chair and Vice-Chair**
B. Treitline made a motion that Carrie Sorenson be considered as the new Chair of the DUR Board. G. Pfister seconded the motion. Chair, C. Huber called for a voice vote with no audible dissent. C. Huber made a motion that J. Hostetter be considered as the new Vice-Chair of the DUR Board. K. Krohn seconded the motion. Chair, C. Huber called for a voice vote with no audible dissent. C. Sorenson and J. Hostetter will serve as the new Chair and Vice-Chair, respectively.

**Board Member Honorarium**
A motion was made by C. Huber to increase the DUR Board member honorarium to one hundred dollars per meeting. B. Treitline seconded the motion. Chair, C. Huber called for a voice vote with no audible dissent.

The next DUR board meeting will be held September 8, 2008. C. Huber made a motion to adjourn the meeting and R. Treitline seconded. Chair C. Huber adjourned the meeting at 3:40 pm.

**North Dakota Medicaid**
**Drug Utilization Review Committee Meeting**
**Chantix®**

## I. Overview

Varenicline (Chantix®**)** is the newest smoking cessation agent approved by the FDA. Varenicline is an alpha-4 beta-2 nicotinic acetylcholine receptor agonist indicated as an aid to smoking cessation treatment in individuals older than 18 years of age.

## II. Pharmacology

Varenicline works by selectively blocking nicotine binding to alpha-4 beta-2 nicotinic acetylcholine receptors and at the same time stimulating the receptor-mediated activity at a significantly lower level than nicotine. The partial stimulation of the nicotinic receptor helps reduce the severity of the smoker's craving and withdrawal symptoms from nicotine

## III. Pharmacokinetics

- Half-life ~ 24 hours
- $C_{max}$ within 3 to 4 hours
- Steady state reached within 4 days
- Linear dose response
- Oral bioavailability unaffected by food or time-of-day dosing
- 92% of drug is excreted unchanged
- Renal elimination is primarily through glomerular filtration along with active tubular secretion
- Dose adjustments recommended in patients with severe renal impairment

## IV. Warnings/Precautions

***Neuropsychiatric Symptoms*-**serious neuropsychiatric symptoms have occurred in patients being treated with varenicline. Some cases may have been complicated by the symptoms of nicotine withdrawal in patients who stopped smoking; however, some of these symptoms have occurred in patients who continued to smoke. All patients being treated with varenicline should be observed for neuropsychiatric symptoms including changes in behavior, agitation, depressed mood, suicidal ideation and suicidal behavior. These symptoms, as well as worsening of pre-existing psychiatric illness, have been reported in patients attempting to quit smoking while taking varenicline in the post-marketing experience. Patients with serious psychiatric illness such as schizophrenia, bipolar disorder, and major depressive disorder did not participate in the pre-marketing studies of varenicline and the safety and efficacy of varenicline in such patients has not been established. Patients attempting to quit smoking with varenicline and their families and caregivers should be alerted about the need to monitor for these symptoms and to report such symptoms immediately to the patient's healthcare provider.

***General*-**Nausea was the most common adverse event associated with varenicline treatment. Incidence of nausea was dose-dependent. Initial dose-titration was beneficial in reducing the occurrence of nausea.

***Effect of smoking cessation*-**Physiological changes resulting from smoking cessation, with or without treatment with varenicline, may alter the pharmacokinetics or pharmacodynamics of some drugs, for which dosage adjustment may be necessary (examples include theophylline, warfarin and insulin).

***Pregnancy*-**Pregnancy Category C

## V. Drug Interactions

Varenicline has no clinically significant pharmacokinetic drug interactions.

## VI. Adverse Events

The most common adverse events (5% or greater) were nausea (30%), sleep disturbances, abdominal pain, constipation, flatulence, headaches, dyspepsia, dry mouth, dysgeusia, fatigue/malaise/asthenia and vomiting.

Smoking cessation, with or without treatment, is associated with nicotine withdrawal symptoms and the exacerbation of underlying psychiatric illness. Not all patients had known pre-existing psychiatric illness and not all had discontinued smoking. The role of varenicline in these reports is not known.

## VII. Dosing and Administration

The recommended dose of varenicline is 1mg twice daily following a 1-week titration as follows:

| Treatment days | Dose |
|---|---|
| Days 1 – 3: | 0.5mg once daily |
| Days 4 – 7: | 0.5mg twice daily |
| Day 8 – End of treatment | 1mg twice daily |

- Choose a quit date when the patient will stop smoking.
- Start taking varenicline 1 week before scheduled quit date.
- Varenicline should be taken after eating and with a full glass of water.
- Patients who cannot tolerate adverse effects may have the dose lowered temporarily or permanently.
- Patients should be treated for 12 weeks.
- For patients who have successfully stopped smoking at the end of 12 weeks, an additional course of 12 weeks treatment may help increase the likelihood of long-term abstinence.

## VIII. Cost

The AWP for varenicline is $112 for all strengths and packages. The AWP of varenicline is about $2 per 0.5mg or 1mg tablet.

## IX. Conclusion

Tobacco utilization is the largest cause of preventable death and diseases such as cancer, respiratory disease, and cardiovascular disease in the western world. Healthcare professionals should encourage patients who smoke to quit by utilizing resources such as counseling and pharmacotherapies.

**References:**


1. Wolters Kluwer Health, Inc. Drug Facts and Comparisons. St. Louis, MO. 2007.
2. Chantix® [prescribing information]. New York, NY: Pfizer Labs.; Jan. 2008.
3. New drug: Chantix® (varenicline). Pharmacist's Letter/Prescriber's Letter 2006;22(8):220814.

## Smoking Cessation Program

1. North Dakota Medicaid will cover select over-the-counter nicotine replacement patches and gum, generic bupropion (Zyban®) sustained-release products that are FDA approved for smoking cessation, and Varenicline (Chantix®).

2. Over-the-counter nicotine replacement patches and gum will be covered with a prior authorization for members 18 years of age or older with a diagnosis of nicotine dependence and confirmation of enrollment in the North Dakota Tobacco Quitline.

3. Maximum allowed duration of therapy for over-the-counter nicotine replacement patches and gum is 12 weeks within a 12-month period. The initial quantity limitations will be set at 14 units or 110 pieces of nicotine gum (a two week supply) to assess patient tolerance.

4. Varenicline will be covered with a prior authorization for members 18 years of age and older with a diagnosis of nicotine dependence and confirmation of enrollment in the North Dakota Tobacco Quitline.

5. Maximum allowed duration of therapy for varenicline is 6 months within a 24-month period. The initial quantity limitations will be set at a one month supply to assess patient tolerance. Evaluation of quit status will be required for continued therapy.

6. Because of concerns with toxicity and dependency, nicotine nasal spray is not a covered product in the North Dakota Smoking Cessation Program.

## 2007 Expenditures

| Drug | # of Rx's | Cost | Cost / Rx |
|---|---|---|---|
| Zyban | 28 | $ 1,465.44 | $ 52.34 |
| Patches | 520 | $ 23,159.44 | $ 44.54 |
| Gum | 30 | $ 1,001.49 | $ 33.38 |

## Efficacy

In a systematic review* of 132 trials; 111 with over 40,000 participants, it was determined that all of the commercially available forms of nicotine replacement therapy can help people who make a quit attempt to increase their chances of successfully stopping smoking. Only one study directly compared nicotine replacement therapy to another pharmacotherapy. In this study, quit rates with nicotine patch were lower than with bupropion. Nicotine replacement therapies increase the rate of quitting by 50-70%, regardless of setting.

*Cochrane Database Syst Rev. 2008 Jan 23;(1):CD000146.

# Carisoprodol Providers April 2007 – March 2008

| Prescriber | # scripts |
|---|---|
| LEE, RODNEY MD | 221 |
| BYRON, EUGENE MD | 56 |
| KIHTIR, SENA | 34 |
| PENGILLY, DAVID MD | 26 |
| TOPLEY, STUART MD | 24 |
| TORRANCE, JAMES MD | 24 |
| BEST, LYLE MD | 20 |
| OUT OF STATE DR | 20 |
| KROHN, KIMBERLY MD | 19 |
| CID, LILIA MD | 17 |
| FIELD, DAVID | 16 |
| HEBERT, BRIAN | 16 |
| MCRILL, PHILLIP | 16 |
| MADZIWA, FELISTAS MD | 15 |
| SEVERSON, SHERMAN MD | 15 |
| HOSTETTER, JEFFREY | 14 |
| IN STATE PROVIDER | 14 |
| MICKELSON, KEVIN MD | 14 |
| VETTER, RICHARD MD | 14 |
| BJERKE, GREGORY MD | 13 |
| BUHR, JAMES MD | 13 |
| GLATT, DAVID MD | 13 |
| KEMP, ROBERT MD | 13 |
| ESPEJO, NAPOLEON MD | 12 |
| GREEK, GREG MD | 11 |
| DORNACKER, ANGELA MD | 9 |
| ERICKSTAD, JOHN MD | 9 |
| MAYO, WILLIAM MD | 9 |
| QUISNO, JACQUELINE | 9 |
| KRINGLIE, ROSS MD | 8 |
| LAMPMAN, JAMES MD | 8 |
| RAJAPREYAR, INDRANEE | 8 |
| TELLO, ABEL MD | 8 |
| TEMPLETON, THOMAS MD | 8 |
| CONANT, JAMES MD | 7 |
| KOMOROWSKA, DANUTA MD | 7 |
| LILLESTOL, MIKE MD | 7 |

# Carisoprodol Providers April 2007 – March 2008

| Prescriber | # scripts |
|---|---|
| MARTIN, TRACY MD | 7 |
| PUGATCH, BRUCE MD | 7 |
| WESTBROOK, HELOISE | 7 |
| CONRADSON, LEONARD MD | 6 |
| CONSING, RAUL MD | 6 |
| GONZALES, MICHAEL | 6 |
| GREVES, DOUGLAS MD | 6 |
| HOOK, WILLIAM MD | 6 |
| LEE, KON-HWEII MD | 6 |
| LEIGH, JAMES MD | 6 |
| LINDSEY, JACQUELYN | 6 |
| PETTY, RUSSELL MD | 6 |
| SCHONEBERG, STEVEN MD | 6 |
| AKKERMAN, DAVE MD | 5 |
| FIFE, TODD | 5 |
| HUSSAIN, SHAKEEB | 5 |
| JOHNSON, ANTHONY MD | 5 |
| JOLLIFFE, RHONDA FNP | 5 |
| KILLEN, SHELLEY | 5 |
| MARTIRE, MICHAEL | 5 |
| MAYER, MONICA MD | 5 |
| RENTON, STANLEY MD | 5 |
| ZETTERMAN, DAVID | 5 |
| ARAZI, RICHARD MD | 4 |
| EICHLER, MARC MD | 4 |
| JACOBSON-BAU, ER | 4 |
| KANA, DALE MD | 4 |
| LABASH, J.D. MD | 4 |
| MANNE, HARI KRISHNA | 4 |
| PARVATHAREDD, Y VISHNUPRIY DEVI | 4 |
| REE, CHERYL MD | 4 |
| SCOTT, EARL | 4 |
| WAGNER, RONALD MD | 4 |
| BELL, L MARK DO | 3 |
| BRONSTEIN, SEYMOUR | 3 |
| CAOILI, HENRI | 3 |
| COCAL, LERDO MD | 3 |

# Carisoprodol Providers April 2007 – March 2008

| Prescriber | # scripts |
|---|---|
| DIEHL, KENT | 3 |
| GREWAL, SURINDER MD | 3 |
| HINTZ, WARREN MD | 3 |
| JOYCE, JOHN MD | 3 |
| KENNINGER, RANDALL MD | 3 |
| LEINGANG, GORDON MD | 3 |
| MUHS, DAVID MD | 3 |
| NELLES, RACHEL NP | 3 |
| NYHUS, CURTIS MD | 3 |
| OMOTUNDE, JOSHUA MD | 3 |
| OSTMO, ROBERT MD | 3 |
| SIKKINK, KARI MD | 3 |
| SMITH, JEFFREY MD | 3 |
| SMOTHERS, JOE DO | 3 |
| WILDER, ANDREW MD | 3 |
| BELANGER, ERIC | 2 |
| JOHNSON, GARY MD | 2 |
| JOHNSON, LARRY MD | 2 |
| MAHONEY, TIMOTHY MD | 2 |
| NAGALA, VANI MD | 2 |
| PAGE, MIKE MD | 2 |
| PETERSON, KIRSTEN DAWN | 2 |
| PFENNING, STACEY | 2 |
| QUESTELL, MICHAEL | 2 |
| SCHOCK, JOEL MD | 2 |
| SHERMAN, KAMILLE | 2 |
| STAYMAN, MATHEW MD | 2 |
| UTHUS, DAVID MD | 2 |
| WAGNER, RONALD MD | 2 |
| YOUNG, MARCEL MD | 2 |
| BERGE, CHERI | 1 |
| BRAUNAGEL, BRADLEY MD | 1 |
| CHIEN, TONY | 1 |
| CLAIRMONT, LISA NP | 1 |
| COX, AMY FNP | 1 |
| FERNANDEZ, OSCAR | 1 |
| FETTERLY, PAUL MD | 1 |

# Carisoprodol Providers April 2007 – March 2008

| Prescriber | # scripts |
|---|---|
| FUNK, PETER MD | 1 |
| HALVORSON, LARRY MD | 1 |
| HANISCH, STEFANIE | 1 |
| HAUER, DARKO | 1 |
| HORDVIK, MARIT MD | 1 |
| HUSHKA, DOUGLAS MD | 1 |
| HUSS, LINDA NP | 1 |
| HUTCHISON, JOHN MD | 1 |
| JACOBSON, DAVID MD | 1 |
| LO, SHOUA DPM | 1 |
| LUITHLE, TIM MD | 1 |
| MAGILL, THOMAS | 1 |
| MATHISON, SUSAN D | 1 |
| MAXSON, JANET | 1 |
| MENDEZ, ALEJANDRO | 1 |
| MOE, JASON MD | 1 |
| MONASKY, MARK MD | 1 |
| MUTCHLER, MICHAEL | 1 |
| NELSON, SUSAN MD | 1 |
| NYGAARD, ANNE FNP | 1 |
| NYHUS, CHARLES MD | 1 |
| PHILPOT, HEIDI J L MD | 1 |
| QUASCHNICK, MARIE NP | 1 |
| RAMAGE, GARY MD | 1 |
| RATHGEBER, CORY | 1 |
| RAU, KEITH MD | 1 |
| ROLLER, BENEDICT MD | 1 |
| SAURBORN, DANIEL MD | 1 |
| SCHMELKA, DANIEL MD | 1 |
| SEE, JAY KWAN MD | 1 |
| SEIFERT, SHELLY MD | 1 |
| STEPHENSON, DANIEL | 1 |
| TESKE, OWEN MD | 1 |
| WOLF, DENNIS MD | 1 |
| WOLF, TERRY | 1 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 47 | F | 24 |
| 38 | F | 17 |
| 30 | F | 17 |
| 35 | F | 16 |
| 21 | M | 16 |
| 51 | M | 14 |
| 50 | F | 14 |
| 46 | M | 14 |
| 44 | F | 14 |
| 39 | F | 14 |
| 32 | F | 14 |
| 53 | M | 13 |
| 53 | F | 13 |
| 47 | F | 13 |
| 46 | F | 13 |
| 45 | F | 13 |
| 45 | F | 13 |
| 44 | F | 13 |
| 27 | F | 13 |
| 57 | M | 12 |
| 56 | F | 12 |
| 51 | F | 12 |
| 51 | F | 12 |
| 47 | F | 12 |
| 41 | F | 12 |
| 29 | F | 12 |
| 21 | M | 12 |
| 48 | F | 11 |
| 35 | F | 11 |
| 24 | F | 11 |
| 57 | M | 10 |
| 49 | F | 10 |
| 50 | F | 9 |
| 49 | F | 9 |
| 47 | F | 9 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 42 | F | 9 |
| 38 | F | 9 |
| 34 | F | 9 |
| 34 | F | 9 |
| 30 | F | 9 |
| 26 | M | 9 |
| 20 | F | 9 |
| 57 | F | 8 |
| 56 | M | 8 |
| 50 | F | 8 |
| 50 | F | 8 |
| 47 | M | 8 |
| 43 | F | 8 |
| 37 | F | 8 |
| 32 | F | 8 |
| 52 | F | 7 |
| 48 | M | 7 |
| 47 | F | 7 |
| 47 | M | 7 |
| 46 | F | 7 |
| 41 | F | 7 |
| 41 | F | 7 |
| 29 | M | 7 |
| 60 | M | 6 |
| 57 | M | 6 |
| 53 | M | 6 |
| 52 | F | 6 |
| 48 | M | 6 |
| 47 | F | 6 |
| 47 | F | 6 |
| 43 | F | 6 |
| 42 | F | 6 |
| 40 | F | 6 |
| 36 | F | 6 |
| 28 | F | 6 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 28 | F | 6 |
| 24 | M | 6 |
| 59 | F | 5 |
| 54 | F | 5 |
| 50 | F | 5 |
| 46 | F | 5 |
| 44 | M | 5 |
| 35 | F | 5 |
| 33 | F | 5 |
| 33 | F | 5 |
| 31 | F | 5 |
| 47 | F | 4 |
| 45 | F | 4 |
| 44 | M | 4 |
| 32 | F | 4 |
| 31 | F | 4 |
| 27 | F | 4 |
| 24 | F | 4 |
| 22 | F | 4 |
| 60 | F | 3 |
| 47 | F | 3 |
| 45 | F | 3 |
| 43 | F | 3 |
| 43 | F | 3 |
| 42 | F | 3 |
| 37 | M | 3 |
| 36 | F | 3 |
| 35 | F | 3 |
| 32 | F | 3 |
| 32 | F | 3 |
| 32 | F | 3 |
| 31 | F | 3 |
| 30 | F | 3 |
| 30 | M | 3 |
| 26 | F | 3 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 24 | F | 3 |
| 22 | M | 3 |
| 21 | M | 3 |
| 55 | F | 2 |
| 54 | M | 2 |
| 52 | M | 2 |
| 51 | M | 2 |
| 51 | M | 2 |
| 49 | M | 2 |
| 49 | M | 2 |
| 48 | M | 2 |
| 48 | F | 2 |
| 48 | F | 2 |
| 44 | M | 2 |
| 44 | F | 2 |
| 41 | F | 2 |
| 41 | F | 2 |
| 39 | F | 2 |
| 38 | F | 2 |
| 38 | F | 2 |
| 38 | F | 2 |
| 37 | F | 2 |
| 36 | F | 2 |
| 35 | F | 2 |
| 35 | M | 2 |
| 35 | F | 2 |
| 34 | F | 2 |
| 33 | F | 2 |
| 32 | M | 2 |
| 32 | F | 2 |
| 31 | M | 2 |
| 31 | F | 2 |
| 28 | F | 2 |
| 27 | F | 2 |
| 26 | F | 2 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 26 | M | 2 |
| 25 | F | 2 |
| 24 | F | 2 |
| 23 | F | 2 |
| 22 | F | 2 |
| 21 | F | 2 |
| 20 | F | 2 |
| 19 | F | 2 |
| 17 | M | 2 |
| 64 | F | 1 |
| 63 | M | 1 |
| 62 | M | 1 |
| 62 | M | 1 |
| 59 | M | 1 |
| 58 | F | 1 |
| 58 | F | 1 |
| 56 | F | 1 |
| 54 | F | 1 |
| 53 | F | 1 |
| 52 | F | 1 |
| 52 | F | 1 |
| 52 | F | 1 |
| 52 | F | 1 |
| 52 | F | 1 |
| 51 | F | 1 |
| 50 | F | 1 |
| 50 | F | 1 |
| 50 | F | 1 |
| 49 | M | 1 |
| 49 | F | 1 |
| 49 | F | 1 |
| 48 | F | 1 |
| 48 | F | 1 |
| 48 | F | 1 |
| 48 | F | 1 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 48 | F | 1 |
| 47 | M | 1 |
| 47 | F | 1 |
| 47 | F | 1 |
| 46 | F | 1 |
| 43 | F | 1 |
| 42 | F | 1 |
| 42 | F | 1 |
| 42 | F | 1 |
| 41 | F | 1 |
| 41 | M | 1 |
| 41 | F | 1 |
| 41 | F | 1 |
| 41 | M | 1 |
| 40 | F | 1 |
| 40 | F | 1 |
| 40 | F | 1 |
| 39 | F | 1 |
| 39 | F | 1 |
| 38 | F | 1 |
| 38 | F | 1 |
| 38 | F | 1 |
| 38 | F | 1 |
| 37 | F | 1 |
| 37 | F | 1 |
| 37 | F | 1 |
| 37 | F | 1 |
| 37 | F | 1 |
| 37 | M | 1 |
| 36 | F | 1 |
| 35 | F | 1 |
| 34 | F | 1 |
| 34 | M | 1 |
| 34 | M | 1 |
| 34 | F | 1 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 34 | F | 1 |
| 34 | F | 1 |
| 33 | F | 1 |
| 33 | F | 1 |
| 32 | M | 1 |
| 32 | F | 1 |
| 32 | F | 1 |
| 32 | F | 1 |
| 32 | F | 1 |
| 32 | F | 1 |
| 31 | M | 1 |
| 31 | F | 1 |
| 31 | F | 1 |
| 30 | F | 1 |
| 30 | F | 1 |
| 30 | F | 1 |
| 30 | F | 1 |
| 30 | F | 1 |
| 29 | F | 1 |
| 29 | F | 1 |
| 29 | F | 1 |
| 29 | F | 1 |
| 28 | M | 1 |
| 28 | F | 1 |
| 28 | F | 1 |
| 28 | F | 1 |
| 28 | F | 1 |
| 28 | M | 1 |
| 27 | F | 1 |
| 27 | F | 1 |
| 27 | F | 1 |
| 27 | F | 1 |
| 27 | F | 1 |
| 27 | F | 1 |
| 26 | F | 1 |

HEALTH INFORMATION DESIGNS

# Age and Gender of Patients Using Carisoprodol
## April 2007 - March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 26 | M | 1 |
| 26 | F | 1 |
| 26 | F | 1 |
| 26 | F | 1 |
| 26 | F | 1 |
| 25 | F | 1 |
| 25 | F | 1 |
| 25 | F | 1 |
| 25 | F | 1 |
| 25 | F | 1 |
| 25 | M | 1 |
| 24 | F | 1 |
| 24 | F | 1 |
| 24 | M | 1 |
| 24 | F | 1 |
| 24 | M | 1 |
| 23 | F | 1 |
| 23 | F | 1 |
| 23 | F | 1 |
| 23 | F | 1 |
| 22 | M | 1 |
| 22 | F | 1 |
| 22 | F | 1 |
| 22 | F | 1 |
| 21 | F | 1 |
| 20 | F | 1 |
| 19 | M | 1 |
| 18 | M | 1 |
| 18 | M | 1 |
| 17 | F | 1 |
| 17 | F | 1 |
| 16 | F | 1 |
| 16 | F | 1 |
| 14 | M | 1 |

# Number of Tablets per Prescription

| Count of prescriptions | Number of tablets |
|---|---|
| 177 | 120 |
| 8 | 112 |
| 11 | 100 |
| 126 | 90 |
| 1 | 84 |
| 3 | 75 |
| 9 | 63 |
| 226 | 60 |
| 4 | 56 |
| 6 | 50 |
| 1 | 48 |
| 3 | 45 |
| 1 | 44 |
| 43 | 42 |
| 50 | 40 |
| 1 | 38 |
| 3 | 36 |
| 2 | 35 |
| 1 | 32 |
| 168 | 30 |
| 43 | 28 |
| 1 | 26 |
| 3 | 25 |
| 6 | 24 |
| 22 | 21 |
| 83 | 20 |
| 1 | 19 |
| 1 | 18 |
| 3 | 16 |
| 32 | 15 |
| 5 | 14 |
| 6 | 12 |
| 9 | 10 |
| 2 | 9 |
| 3 | 5 |
| 3 | 4 |
| Average Number of Tablets/Script | 59.3 |

# Carisoprodol Edits in other State Medicaid Programs

**Iowa**

Iowa made both brand and generic nonpreferred and put a quantity limit in place.

Prior authorization is required for non-preferred muscle relaxants. Payment for non-preferred muscle relaxants will be authorized only for cases in which there is documentation of previous trials and therapy failures with at least three preferred muscle relaxants.

**Wyoming**

Claims for carisoprodol will be approved if:

- Client is at least twelve years old, AND
- Claim is for less than or equal to 84 (350 mg) tablets.

One course of treatment (up to 84 tablets) will be approved every 365 days. Additional courses will require prior authorization.

For clients who have been using carisoprodol chronically, 18 tablets will be authorized for a 9 day taper.

**Texas**

Carisoprodol does not exceed the following:

- Carisoprodol 350mg ≤ 4 tablets per day
- Carisoprodol compound ≤ 8 tablets per day or,
- History of carisoprodol prescribed by no more than 2 prescribers within the last 60 days.

**Mississippi**

MS is implementing PA criteria effective July 1, 2008.
A maximum of 84 tabs for 21 days.
Can only get 1 fill every 6 months.

**Montana...Mark**

Dosage Limits: Max 350mg QID, avail. 250mg (brand only) & 350mg for 2-3 wks

Age Restrictions: No peds.

Criteria: Prior authorization requires failure on 2 other centrally acting muscle relaxants (methocarbamol, tizanidine, cyclobenzaprine, orphenadrine, chlorzoxazone, or metaxalone). Prior authorization will be granted for a maximum of 84 tablets in a 6 month time period (beginning from the date of the last prescription filled under Medicaid). Prior authorization will be granted to wean patients currently on chronic carisoprodol (this pertains only to patients new to Medicaid since all current Medicaid patients have now been weaned off carisoprodol). Generic required, brand only authorized upon failure of generic.

# Carisoprodol Edits in other State Medicaid Programs

**Montana (cont'd)**
General Requirements: Soma not allowed for patients currently on or previously prior authorized for Suboxone treatment.

**Alaska's limits and criteria follow:**

CRITERIA FOR APPROVAL:
1. The patient is being treated for the relief of discomfort associated with acute, painful musculoskeletal conditions; AND
2. The patient is at least 12 years of age.

CRITERIA CAUSING DENIAL:
1. The patient is on any other muscle relaxant.

DISPENSING LIMIT:
1. The dispensing limit is 56 tablets per 14 days.
2. Medication may be approved for 14 days only. No refills will be authorized and a new PA must be requested for each 14 day supply.

**Vermont**

All carisoprodol products (alone or combination, brand or generic) have been PA required since 11/01/06. Our utilization has dropped dramatically. A patient would have had to have had a side effect, allergy, or treatment failure with 2 different skeletal muscle relaxants before approval of carisoprodol. We did not grandfather current users but sent a mailing to prescribers with their patients advising of the need for PA for therapy to continue. Once approved, there are no quantity limits. Approval is for one year.

**Louisiana**

Allows for 1400mg (4 tabs) daily. There are no override provisions for prescriptions for carisoprodol to be filled early or above maximum dose.

**Tennessee**

Has a quantity limit of 4/day, PLUS we have both brand and generic non-preferred on our PDL.

**Illinois**

The Department has made a change to the PDL for Skeletal Muscle Relaxants. Due to the potential for abuse, products containing carisoprodol (Soma, Soma Compound, and Soma Compound with Codeine) will require prior authorization.

**Background**
Soma (carisoprodol) is FDA-approved for *acute*, painful musculoskeletal disorders. It has not been shown to be superior in efficacy to any other drugs in the same class. The active metabolite of carisoprodol is

**Illinois (cont'd)**
meprobamate (Miltown and various combination products), which is a schedule IV controlled substance with a history of abuse (similar to barbiturates).

**Action**

- Prior authorization requests for *new* prescriptions will only be approved for *acute* musculoskeletal disorders upon receipt of a letter of medical necessity after a patient has failed on other agents in this class. Approval will be limited to a one-month supply for a maximum of 120 tablets.
- *Renewal* requests will be approved for *one month (maximum 120 tablets)* to allow for a taper regimen (see caution below).

**Preferred Products**
Most of the other skeletal muscle relaxants are available without prior authorization and are preferred since they do not have the same abuse potential.
chlorzoxazone (Parafon)
cyclobenzaprine (Flexeril)
diazepam (Valium)
methocarbamol (Robaxin)
orphenadrine (Norflex)

**Caution**
Carisoprodol should not be abruptly discontinued in patients who have been taking it for an extended duration, since withdrawal symptoms such as anxiety, tremors, insomnia, hallucinations and seizures may occur. Physicians should consider a tapering regimen for these patients or consult an addiction specialist.

**Oklahoma**

Carisoprodol is a controlled substance in Oklahoma (C-IV). We cover per the criteria listed:

PA Criteria:

A cumulative 90 therapy day window per 365 days will be in place for carisoprodol-containing products, further approval will be based on the following:
An additional approval for 1 month will be granted to allow titration or change to a Tier 1 muscle relaxant. Further authorizations will not be granted.

Clinical exceptions may be made for members with the following diagnosis and approvals will be granted for the duration of one year:
Multiple Sclerosis
Cerebral Palsy
Muscular Dystrophy
Paralysis

A quantity limit of 120 per 30 days will also apply for the carisoprodol and carisoprodol combination products.

# Carisoprodol Edits in other State Medicaid Programs

**Oklahoma (cont'd)**
Soma 250 Approval for coverage is based on the following criteria:

Documentation regarding member's inability to use other skeletal muscle relaxants including carisoprodol 350 mg, and specific reason member cannot be drowsy for even a short time period. Member must not have other sedating medications in current claims history. A diagnosis of acute musculoskeletal pain, in which case, the approval will be for 14 days per 365 day period. Conditions requiring chronic use will not be approved.

**Arkansas**

Carisoprodol has been moved to the non-preferred list on the PDL which means it requires a PA.

**Michigan**

Michigan does not cover this drug.

**West Virginia**

A 30-day trial of all generics and Skelaxin (no generic available) is required before carisoprodol or any of the brand name agents will be approved.

Agents requiring approval are:
Amrix®15 and 30 mg.(cyclobenzaprine ER)
Fexmid 7.5 mg. (cyclobenzaprine)
Zanaflex® Capsules-
Soma® 250mg
Carisoprodol 350 mg.

**North Carolina**

No limitations

**Colorado**

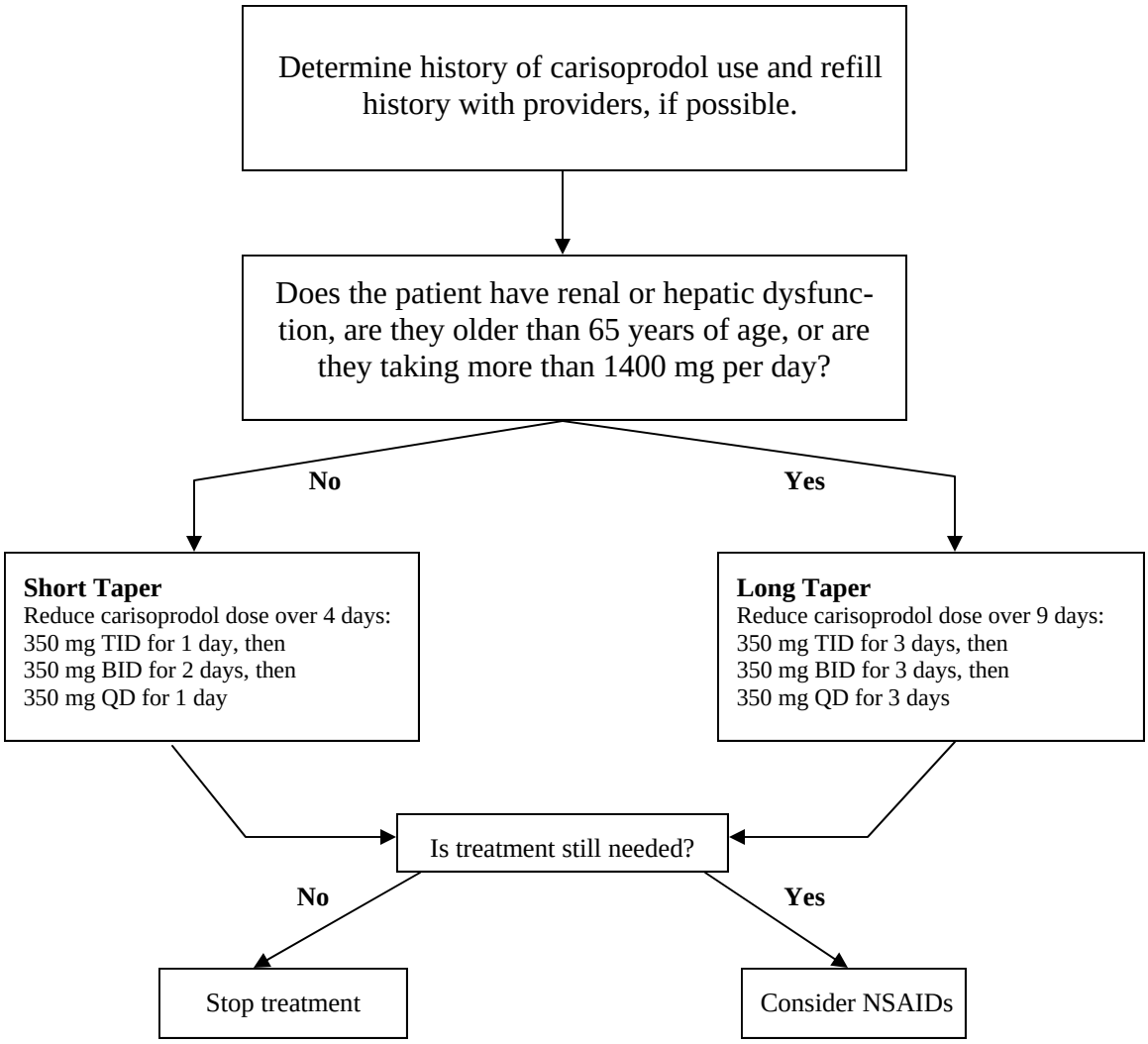
Prior Authorization
Beginning July 1, 2008, non-preferred skeletal muscle relaxants will be approved for clients who have documented failure with two preferred products in the last 6 months. (Failure is defined as: lack of efficacy, allergy, intolerable side effects, or significant drug-drug interactions)

Beginning July 1, 2008, authorization for carisoprodol will be given for a maximum of three weeks for clients with acute, painful musculoskeletal conditions who have failed two preferred products.

Tapering
Due to potential withdrawal symptoms, tapering is recommended when discontinuing high doses of carisoprodol. A one month approval will be granted for clients tapering off of carisoprodol.

# Tapering Carisoprodol (Soma®)

Due to potential dependence, upon discontinuation of high doses of carisoprodol, patients may suffer withdrawal symptoms such as body aches, increased perspiration, anxiety and insomnia. To assist prescribers who wish to discontinue carisoprodol (Soma®), carisoprodol with aspirin (Soma® Compound), and carisoprodol with aspirin and codeine (Soma® Compound with Codeine), the following tapering schedule is available.




Tapering schedule developed by the Department of Veterans Affairs Medical Center, Portland, Oregon, as published in the Oregon DUR Board Newsletter. Oregon DUR Board Newsletter. 2002; 4:1. 28 December 2005. Reproduced by permission from the Oregon State University College of Pharmacy Department of Drug Use Research and Management.

## SOMA 250mg PA FORM


Prior Authorization Vendor for ND Medicaid

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

ND Medicaid requires that patients using brand name Soma 250mg must use generic carisoprodol 350mg first line.

***Note: The PA will be approved if recipient fails a trial of carisoprodol 350mg.**

**Part I: TO BE COMPLETED BY PHYSICIAN**

| Recipient Name | Recipient Date of Birth | Recipient Medicaid ID Number | |
|---|---|---|---|
| Physician Name | | | |
| Physician Medicaid Provider Number | Telephone Number | Fax Number | |
| Address | City | State | Zip Code |
| **Requested Drug and Dosage:**<br>□ SOMA 250MG | **Diagnosis for this request:** | | |

**Qualifications for coverage:**

| □ Failed skeletal muscle relaxant therapy | Start Date | End Date | Dose | Frequency |
|---|---|---|---|---|

□ *I confirm that I have considered a generic or other alternative and that the requested drug is expected to result in the successful medical management of the recipient.*

| Physician Signature | Date |
|---|---|

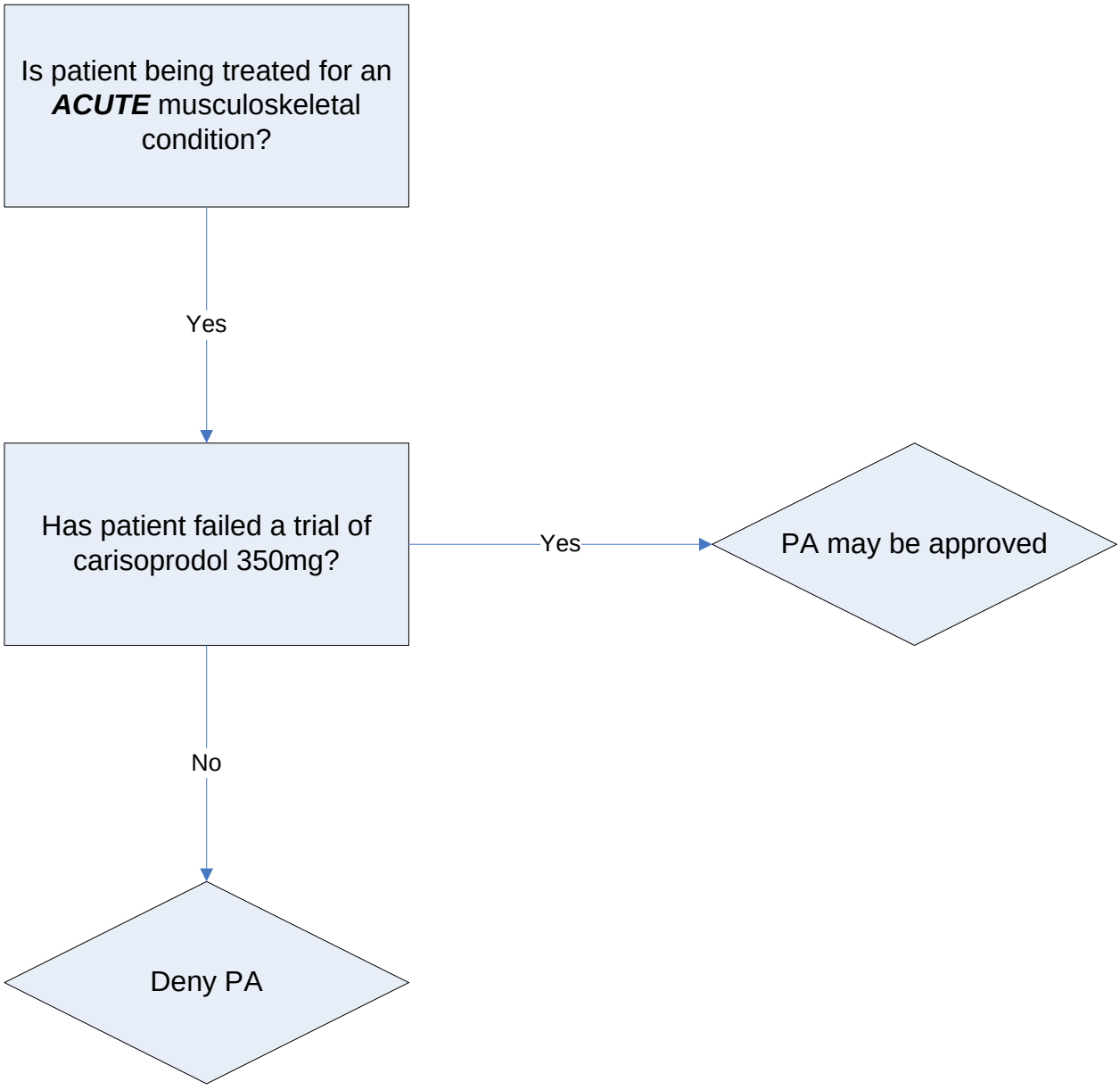
**Part II: TO BE COMPLETED BY PHARMACY**

| PHARMACY NAME: | | | ND MEDICAID PROVIDER NUMBER: |
|---|---|---|---|
| TELEPHONE NUMBER | FAX NUMBER | DRUG | NDC # |

**Part III: FOR OFFICIAL USE ONLY**

| Date Received | Initials: |
|---|---|
| Approved -<br>Effective dates of PA: From: / / To: / / | Approved by: |
| Denied: (Reasons) | |

# North Dakota Department of Human Services
# Soma 250mg Authorization Algorithm



**North Dakota Department of Human Services**
**DUR Board Meeting**
**5-HT$_1$ Receptor Agonists (Triptans) Review**

## Overview

In the United States, migraine is the most common cause of recurrent moderate to severe headache, with lifetime prevalence of 18 percent in women and six percent in men. It most commonly begins during puberty or young adulthood, waxing and waning in frequency and severity over the ensuing years and usually diminishing after age 50. Studies show familial aggregation of migraine.

Migraine is thought to be a neurovascular pain syndrome with altered central neuronal processing (activation of brain stem nuclei, cortical hyperexcitability, and spreading cortical depression) and involvement of the trigeminovascular system (triggering neuropeptide release, which produces painful inflammation in cranial vessels and the dura mater). Classical features of a migraine include an intense pulsing or throbbing pain in one area of the head that can last up to 24 hours; it is often accompanied by nausea, photophobia, lightheadedness, and vomiting.

The triggering mechanism for specific attacks is often unclear. However, many potential migraine triggers have been identified and include ingestion of red wine, skipping meals, excessive afferent stimuli (e.g. flashing lights, strong odors), weather changes, sleep deprivation, stress, and hormonal factors. Head trauma, neck pain, or temporomandibular joint dysfunction sometimes triggers or exacerbates migraine.

Table 1 lists the Triptans included in this review.

**Table 1. Triptans Included in this Review**

| Generic Name | Brand Name |
|---|---|
| Almotriptan | Axert® |
| Eletriptan | Relpax® |
| Frovatriptan | Frova® |
| Naratriptan | Amerge® |
| Rizatriptan | Maxalt® |
| Sumatriptan | Imitrex® |
| Sumatriptan/Naproxen | Treximet® |
| Zolmitriptan | Zomig® |

## Current Treatment Guidelines

Table 2 lists the current treatment guidelines for migraines.

**Table 2. Current Treatment Guidelines**

| Clinical Guideline | Recommendation |
|---|---|
| Institute for Clinical Systems Improvement (ICSI): **Diagnosis and Treatment of headache**. | • **Mild**-APAP/ASA/Caffeine, ASA, Lidocaine nasal, Midrin, NSAIDs, Triptans.<br>• **Moderate**-DHE, Ergotamine tartrate, Lidocaine nasal, Midrin, NSAIDs, Triptans.<br>• **Severe**-Prochlorperazine, Chlorpromazine, DHE, Ketorolac IM, Magnesium Sulfate IV, Triptans.<br>• Adjunctive therapies with mild, moderate and severe migraine types include rest, IV rehydration, antiemetics, and caffeine. |
| National Headache Foundation: **Treatment of Primary Headache Acute Migraine Treatment.** | • NSAIDs are among the most commonly prescribed medications in the world and should be considered a first-line option for migraine treatment.<br>• Opioids should be reserved for patients with moderate to severe pain that does not respond to nonopioid agents.<br>• Opioids are also appropriate for acute treatment of migraine headaches in patients who cannot tolerate, or have contraindications to, other migraine drugs or who are pregnant.<br>• Ergotamine is an appropriate choice for patients who have moderate to severe migraine that does not respond to analgesics or who experience significant side effects from other migraine medications.<br>• Triptans should be considered first-line treatment for most migraine attacks, other than for those that respond to analgesics or combination agents.<br>• Triptans should not be considered for patients with a history of significant ischemic heart disease, Prinzmetal's angina, uncontrolled hypertension, or strictly basilar or hemiplegic migraine. |
| American Academy of Neurology: **Practice Parameter: Evidence-Based Guidelines for Migraine Headache.** | • Use migraine-specific agents (triptans, dihydroergotamine [DHE]) in patients with moderate or severe migraine or whose mild-to-moderate headaches respond poorly to nonsteroidal anti- |

| Clinical Guideline | Recommendation |
|---|---|
| | inflammatory drugs (NSAIDs) or combinations such as aspirin plus acetaminophen plus caffeine.<br>• Select a non-oral route of administration for patients with migraine associated with severe nausea or vomiting.<br>• Consider a self-administered rescue medication for patients with severe migraine who do not respond to (or fail) other treatments.<br>• Guard against medication-overuse headache ('rebound headache' or drug-induced headache'). |
| American Academy of Neurology/Child Neurology Society: **Practice Parameter: Pharmacological Treatment of Migraine Headache in Children and Adolescents.** | • Ibuprofen is effective and should be considered for the acute treatment of migraine in children.<br>• Acetaminophen is probably effective and should be considered for the acute treatment of migraine in children.<br>• Sumatriptan nasal spray is effective and should be considered for the acute treatment of migraine in adolescents.<br>• There are no data to support or refute use of any oral triptan preparations in children or adolescents. |

**FDA Approved Indications**

Table 3 lists the FDA approved indications and age guidelines as outlined by the FDA.

**Table 3. FDA Approved Indications for the Triptans**

| Generic Name | FDA Approved Indications |
|---|---|
| Almotriptan | • For the acute treatment of migraine with or without aura in adults.<br>• Not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic or basilar migraine.<br>• Safety and effectiveness have not been established for cluster headache, which is present in an older, predominantly male population. |
| Eletriptan | • For the acute treatment of migraine with or without aura in adults.<br>• Not intended for the prophylactic therapy of migraine or for use in hemiplegic or basilar migraine.<br>• Safety and effectiveness have not been established for cluster |

| Generic Name | FDA Approved Indications |
|---|---|
| | headache, which is present in an older, predominantly male population. |
| Frovatriptan | • For the acute treatment of migraine attacks with or without aura in adults.<br>• Not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic or basilar migraine.<br>• Safety and effectiveness have not been established for cluster headache, which is present in an older, predominantly male population. |
| Naratriptan | • For the acute treatment of migraine attacks with or without aura in adults.<br>• Not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic or basilar migraine.<br>• Safety and effectiveness have not been established for cluster headache, which is present in an older, predominantly male population. |
| Rizatriptan | • For the acute treatment of migraine attacks with or without aura in adults.<br>• Not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic or basilar migraine.<br>• Safety and effectiveness have not been established for cluster headache, which is present in an older, predominantly male population. |
| Sumatriptan | • For the acute treatment of migraine attacks with or without aura in adults.<br>• Subcutaneous formulation also approved for the acute treatment of cluster headache episodes.<br>• Not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic or basilar migraine.<br>• Safety and effectiveness have not been established for cluster headache, which is present in an older, predominantly male population. |
| Sumatriptan/Naproxen | • For the acute treatment of migraine attacks with or without aura in adults. Carefully consider the potential benefits and risks, and other treatment options when deciding to use Treximet.<br>• Not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic or basilar migraine.<br>• Safety and effectiveness have not been established for cluster headache. |
| Zolmitriptan | • For the acute treatment of migraine attacks with or without aura in adults.<br>• Not intended for the prophylactic therapy of migraine or for use in the management of hemiplegic or basilar migraine. |

| Generic Name | FDA Approved Indications |
|---|---|
| | • Safety and effectiveness have not been established for cluster headache; present in an older, predominantly male population. |

## Pharmacokinetics

**Table 4. Pharmacokinetic Parameters of the Triptans Included in this Review**

| Drug | Bioavailability (%) | Volume of Distribution | Protein Binding (%) | Metabolites | Excretion | Serum Half-Life (hours) |
|---|---|---|---|---|---|---|
| Almotriptan | 70 | 180-200 L | 35 | Inactive metabolites | 40% (urine)<br><br>13% (feces) | 3-4 |
| Eletriptan | 50 | 138 L | 85 | N-demethylated metabolite (active) | 90% (Non-renal clearance) | 4 |
| Frovatriptan | 20 (males)<br><br>30 (females) | 4.2 L/kg (males)<br><br>3.0 L/kg (females) | 15 | Desmethyl frovatriptan (lower affinity for 5-$HT_{1B/1D}$ receptors compared to the parent compound<br><br>N-acetyl desmethyl metabolite (no significant affinity for 5-HT receptors) | 32% (urine)<br><br>62% (feces) | 26 |
| Naratriptan | 70 | 170 L | 28-31 | Inactive metabolites | 50% (unchanged in urine)<br><br>30% (urine metabolite) | 6 |
| Rizatriptan | 45 | 140 L (males)<br><br>110 L (females) | 14 | Indole acetic acid metabolite (inactive)<br><br>N-mono-desmethyl-rizatriptan | 82% (urine)<br><br>12% (feces) | 2-3 |
| Sumatriptan | 15 | 2.4 L/kg | 14-21 | Indole acetic acid | 60% (urine) | 2.5 |

| Drug | Bioavailability (%) | Volume of Distribution | Protein Binding (%) | Metabolites | Excretion | Serum Half-Life (hours) |
|---|---|---|---|---|---|---|
| | | | | (inactive) | 40% (feces) | |
| Sumatriptan/ Naproxen | 15 (sumatriptan)<br><br>95 (naproxen) | 2.4 L/kg (sumatriptan)<br><br>0.16 L/kg (naproxen) | 14-21 (suma-triptan)<br><br>99 (na-proxen) | Indole acetic acid (sumatriptan-inactive)<br><br>6-0-desmethyl naproxen | 60% (suma-triptan-urine)<br><br>40% (suma-triptan-feces)<br><br>95% (naproxen-urine) | 2 (suma-triptan)<br><br>19 (naproxen) |
| Zolmitriptan | 40 | 7 L/kg | 25 | N-desmethyl metabolite (active) | 65% (urine)<br><br>30% (feces) | 3 |

## Drug Interactions

**Table 5. Drug Interactions of the Triptans Included in this Review**

| Serotonin 5-$HT_1$ Receptor Agonist Drug Interactions | | | |
|---|---|---|---|
| Cimetidine | Zolmitriptan | ↑ | Following coadministration with cimetidine, the half life and AUC of a 5 mg dose of Zolmitriptan and its active metabolite were approximately doubled. |
| Ergot alkaloids | 5-$HT_1$ agonists | ↑↓ | The risk of vasospastic reactions may be increased. Use of 5-$HT_1$ agonists within 24 hours of treatment with an ergot-containing medication is contraindicated. The AUC and $C_{max}$ of frovatriptan (2 X 2.5 mg dose) were reduced by approximately 25% when coadministered with ergotamine tartrate. |
| Azole antifungals/CYP3A4 inhibitors (e.g., ketoconazole, itraconazole, nefazodone, troleandomycin, clarithromycin, ritonavir, nelfinavir) | Almotriptan<br>Eletriptan | ↑ | Coadministration of almotriptan and ketoconazole (400 mg/day for 3 days) resulted in an approximately 60% increase in AUC and maximal plasma concentration of almotriptan. The AUC and $C_{max}$ of eletriptan are increased with coadministration. Do not use eletriptan within 72 hours of treatment with a potent CYP3A4 inhibitor. |
| 5-$HT_1$ agonists | 5-$HT_1$ agonists | ↑ | The risk of vasospastic reactions may be increased. Coadministration of two 5-$HT_1$ agonists within 24 hours of each other is contraindicated. |
| MAOIs | Almotriptan<br>Rizatriptan<br>Sumatriptan | ↑ | Use of certain 5-$HT_1$ agonists concomitantly with or within 2 weeks following the discontinuation of an MAOI is contraindicated. If it is necessary to |

| Serotonin 5-HT$_1$ Receptor Agonist Drug Interactions | | | |
|---|---|---|---|
| | Zolmitriptan | | use such agents together, naratriptan, eletriptan, and frovatriptan appear to be less likely to interact with MAOIs. |
| Oral contraceptives | Frovatriptan | ↑ | Mean $C_{max}$ and AUC of frovatriptan are 30% higher in those subjects taking oral contraceptives compared with those not taking oral contraceptives. |
| Propranolol | Zolmitriptan | ↔ | $C_{max}$ and AUC of Zolmitriptan increased 1.5-fold but decreased for the N-desmethyl metabolite by 30% and 15%, respectively. No effects on blood pressure or pulse rate were observed. |
| | Rizatriptan | ↑ | In a study of coadministration of 240 mg/day propranolol and a single dose of 10 mg rizatriptan in healthy subjects, mean plasma AUC for rizatriptan was increased by 70% during propranolol administration and a 4-fold increase was observed in 1 subject. |
| | Frovatriptan | ↑ | Propranolol increased the AUC of 2.5 mg frovatriptan in males by 60% and in females by 29%. The $C_{max}$ of frovatriptan was increased 23% in males and 16% in females in the presence of propranolol. |
| | Eletriptan | ↑ | $C_{max}$ and AUC of eletriptan were increased by 10% and 33%, respectively, in the presence of propranolol. No interactive increases in blood pressure were observed. |
| Sibutramine | Naratriptan<br>Rizatriptan<br>Sumatriptan<br>Zolmitriptan | ↑ | A 'serotonin syndrome,' including CNS irritability, motor weakness, shivering, myoclonus, and altered consciousness may occur. Coadministration is not recommended. Monitor the patient for adverse effects if concurrent use cannot be avoided. |
| Almotriptan<br>Frovatriptan<br>Naratriptan<br>Rizatriptan<br>Sumatriptan<br>Zolmitriptan | SSRIs<br>Citalopram<br>Fluoxetine<br>Fluvoxamine<br>Nefazodone<br>Paroxetine<br>Sertraline<br>Venlafaxine | ↑ | There have been rare reports of weakness, hyperreflexia, and incoordination with combined use of SSRIs. If concomitant treatment is clinically warranted, observe the patient carefully. No interaction was observed when rizatriptan was administered with paroxetine. Fluoxetine had no effect on almotriptan clearance, but $C_{max}$ increased 18%. |

## Warnings/Precautions

**Risk of myocardial ischemia or MI and other adverse cardiac events:**
Because of the potential of this class of compounds to cause coronary vasospasm, do not give these agents to patients with documented ischemic or vasospastic coronary artery disease. It is strongly recommended that 5-HT$_1$ agonists not be given to patients in whom unrecognized coronary artery disease (CAD) is predicted by the presence of risk factors (e.g., hypertension, hypercholesterolemia, smoking, obesity, diabetes, strong family history of CAD, female with surgical or physiological menopause, or male older than 40 years of age) unless a cardiovascular evaluation provides satisfactory clinical evidence that

the patient is reasonably free of coronary artery and ischemic myocardial disease or other significant underlying cardiovascular disease. For patients with risk factors predictive of CAD who are determined to have satisfactory cardiovascular evaluation, it is strongly recommended that administration of the first dose take place in the setting of a physician's office or similar medically staffed and equipped facility, unless the patient has previously received 5-$HT_1$ agonists. Because cardiac ischemia can occur in the absence of clinical symptoms, consider obtaining an ECG during the interval immediately following the first use in a patient with risk factors.

**Cardiac events and fatalities associated with 5-$HT_1$agonists:**
Serious adverse cardiac events, including acute MI, life-threatening disturbances of cardiac rhythm, and death have been reported within a few hours following the administration of 5-$HT_1$ agonists. Considering the extent of use of 5-$HT_1$ agonists in patients with migraine, the incidence of these events is extremely low.

**Cerebrovascular events and fatalities with 5-$HT_1$ agonists:**
Cerebral hemorrhage, subarachnoid hemorrhage, stroke, and other cerebrovascular events have been reported in patients treated with 5-$HT_1$ agonists, and some have resulted in fatalities. In a number of cases, it appears possible that the cerebrovascular events were primary, the agonist having been administered in the incorrect belief that the symptoms experienced were a consequence of migraine, when they were not. It should be noted that patients with migraine may be at increased risk of certain cerebrovascular events (e.g., stroke, hemorrhage, TIA).

**Other vasospasm-related events:**
5-$HT_1$ agonists may cause vasospastic reactions other than coronary artery vasospasm. Peripheral vascular ischemia and colonic ischemia with abdominal pain and bloody diarrhea have been reported with 5-$HT_1$ agonists.

**Increases in blood pressure:**
Significant elevations in systemic blood pressure, including hypertensive crisis, have been reported on rare occasions in patients with and without a history of hypertension treated with 5-$HT_1$ agonists. 5-$HT_1$ agonists are contraindicated in patients with uncontrolled hypertension.

**Local irritation:**
Approximately 5% of patients noted irritation in the nose and throat after using sumatriptan nasal spray. Irritative symptoms such as burning, numbness, paresthesia, discharge, and pain or soreness were noted to be severe in approximately 1% of patients treated. The symptoms were transient and, in approximately 60% of the cases, resolved in less than 2 hours. Limited examinations of the nose and throat did not reveal any clinically noticeable injury in these patients. Adverse events of any kind perceived in the nasopharynx were severe in approximately 1% of patients, and approximately 60% resolved in 1

hour. Nasopharyngeal examinations failed to demonstrate any clinically significant changes with repeated use of sumatriptan nasal spray.

**Chest, jaw, or neck tightness:**

Chest, jaw, or neck tightness have occurred after 5-$HT_1$ agonist administration, and atypical sensations over the precordium (pain, tightness, pressure, heaviness) have occurred, but these rarely have been associated with arrhythmias or ischemic ECG changes. Evaluate patients who experience signs or symptoms suggestive of angina for the presence of CAD or a predisposition to Prinzmetal variant angina before receiving additional doses. Monitor ECG if dosing is resumed and similar symptoms recur.

Similarly, patients who experience other symptoms or signs suggestive of decreased arterial flow, such as ischemic bowel syndrome or Raynaud syndrome, following the use of any 5-$HT_1$ agonist are candidates for further evaluation.

**Seizures:**

There have been rare reports of seizures following sumatriptan use.

**Ophthalmic effects:**

**Binding to melanin-containing tissues**: Because 5-$HT_1$ agonists bind to melanin, accumulation in melanin-rich tissues (e.g., the eye) could occur over time, raising the possibility of toxicity in these tissues after extended use. Be aware of the possibility of long-term ophthalmologic effects.

**Corneal effects**: Sumatriptan, naratriptan, and almotriptan cause corneal opacities and defects dogs; naratriptan also caused transient changes in precorneal tear film. These changes may occur in humans. Eletriptan caused transient corneal opacities in dogs receiving 5mg/kg and above.

**Phenylketonurics:**

Inform phenylketonuric patients that rizatriptan and Zolmitriptan orally-disintegrating tablets contain phenylalanine (a component of aspartame).

**Hypersensitivity reactions:**

Hypersensitivity reactions have occurred on rare occasions, and severe anaphylaxis/anaphylactoid reactions have occurred. Such reactions can be life-threatening or fatal.

**Renal function impairment:**

Use rizatriptan and sumatriptan with caution in dialysis patients because of a decrease in the clearance.

**Hepatic function impairment:**

Administer with caution to patients with diseases that may alter the absorption, metabolism, or excretion of drugs.

## Adverse Events

**Table 5. Common Adverse Events Reported in at Least 1% of Patients**

| Adverse Event(s) | Almotriptan | Eletriptan | Frovatriptan | Naratriptan | Rizatriptan | Sumatriptan | Sumatriptan/ Naproxen | Zolmitriptan |
|---|---|---|---|---|---|---|---|---|
| **Atypical sensations** | | | | | | | | |
| Cold sensation | - | - | - | - | - | 1 (injection) | - | - |
| Hot/Cold sensation | - | - | 3 | - | - | - | - | - |
| Hyperesthesia | - | - | - | - | - | - | - | 1-2 (oral)<br>5 (nasal) |
| Miscellaneous sensations | - | - | - | 2-4 | 4-5 | - | - | - |
| Paresthesia | 1 | 3-4 | 4 | 1-2 | 3-4 | 3-5 (oral)<br>14 (injection) | 2 | 5-9 (oral)<br>10 (nasal) |
| Warm/Cold sensation | - | - | - | - | - | 2-3 (oral) | - | - |
| Warm/Hot sensation | - | 2 | - | - | - | 11 (injection) | - | 5-7 |
| **CNS** | | | | | | | | |
| Anxiety | - | - | - | - | - | 1 (injection) | - | - |
| Asthenia | - | 4-10 | - | - | - | - | - | 3-9 (oral)<br>3 (nasal) |

| Adverse Event(s) | Almotriptan | Eletriptan | Frovatriptan | Naratriptan | Rizatriptan | Sumatriptan | Sumatriptan/ Naproxen | Zolmitriptan |
|---|---|---|---|---|---|---|---|---|
| Burning | - | - | - | - | - | 1 (oral)<br>7 (injection) | - | - |
| Dizziness | 1 | 3-7 | 8 | 1-2 | 4-9 | >1 (oral)<br>1-2 (nasal)<br>12 (injection) | 4 | 6-10 (oral)<br>3 (nasal) |
| Drowsiness | - | - | - | 1-2 | - | >1 (oral)<br>3 (injection) | - | - |
| Fatigue | - | - | 5 | 2 | 4-7 | 2-3 (oral)<br>1 (injection) | - | - |
| Headache | 1 | 3-4 | 4 | - | 2 | >1 (oral)<br>2 (injection) | - | 1-2 |
| Hearing loss | - | - | - | - | - | 1 (oral) | - | - |
| Myasthenia | - | - | - | - | - | - | - | 0-2 |
| Somnolence | 1 | 3-7 | - | - | 4-8 | >1 (oral) | 3 | 5-8 (oral)<br>4 (nasal) |
| Vertigo | - | - | - | - | - | 0-2 | - | 1-2 |
| Miscellaneous CNS effects | - | - | - | 4-7 | 14-20 | - | - | - |
| Weakness | - | - | - | - | - | 5 (injection) | - | - |

| Adverse Event(s) | Almotriptan | Eletriptan | Frovatriptan | Naratriptan | Rizatriptan | Sumatriptan | Sumatriptan/ Naproxen | Zolmitriptan |
|---|---|---|---|---|---|---|---|---|
| **GI** | | | | | | | | |
| Abdominal pain/discomfort/ stomach pain/ cramps/pressure | - | 1-2 | - | - | - | 1 (injection) | - | 1-2 |
| Diarrhea | - | - | - | - | - | 1 (oral) | - | - |
| Dry mouth | 1 | 2-4 | 3 | - | 3 | >1 | 2 | 3-5 |
| Dyspepsia | - | 1-2 | 2 | - | - | - | 2 | 1-3 |
| Dysphasia (including throat tightness/difficulty swallowing) | - | 1-2 | - | - | - | 1 (injection) | - | 1-2 (oral)<br>2 (nasal) |
| Miscellaneous GI effects | - | - | - | 6-7 | 9-13 | - | - | - |
| Nausea | 1-2 | 4-8 | - | 4-5 | 4-6 | >1 (oral)<br>11-13 (nasal) | 3 | 4-8 |
| Vomiting | - | - | - | - | - | >1 (oral)<br>11-13 (nasal) | - | 1-2 |
| **Pain/Pressure sensations** | | | | | | | | |
| Chest tightness pressure and/or heaviness | - | 1-4 | 2 | - | 2-3 | 1-2 (oral)<br>2-3 (injection) | 3 | 2-4 |

| Adverse Event(s) | Almotriptan | Eletriptan | Frovatriptan | Naratriptan | Rizatriptan | Sumatriptan | Sumatriptan/ Naproxen | Zolmitriptan |
|---|---|---|---|---|---|---|---|---|
| Neck/Throat/Jaw | - | - | - | 1-2 | 2 | 2-3 (oral)<br>1-2 (nasal)<br>2-5 (injection) | 3 | 4-10 |
| Pain injection site | - | - | - | - | - | 59 (injection) | - | - |
| Pain, location specified/unspecified | - | - | - | 2-4 | 6-9 | 1-2 (oral) | - | 2-3 (oral)<br>4 (nasal) |
| Pressure | - | - | - | - | - | 1-3 (oral)<br>7 (injection) | - | - |
| Regional pain | - | - | - | - | 1-2 | - | - | - |
| Tightness | - | - | - | - | - | 5 (injection) | - | - |
| Skeletal | - | - | 3 | - | - | - | - | - |
| **Miscellaneous** | | | | | | | | |
| Amnesia | - | - | - | - | - | 1 (injection) | - | - |
| Disorder/discomfort of nasal cavity | - | - | - | - | - | - | - | 3 (nasal) |
| Feeling strange | - | - | - | - | - | 2 (injection) | - | - |

| Adverse Event(s) | Almotriptan | Eletriptan | Frovatriptan | Naratriptan | Rizatriptan | Sumatriptan | Sumatriptan/ Naproxen | Zolmitriptan |
|---|---|---|---|---|---|---|---|---|
| Flushing | - | - | 4 | - | - | 7 (injection) | - | - |
| Hypertension | - | - | - | - | - | 1 (oral and injection) | - | - |
| Hypotension | - | - | - | - | - | 1 (oral and injection) | - | - |
| Mouth/tongue discomfort | - | - | - | - | - | 5 (injection) | - | - |
| Myalgia | - | - | - | - | - | 1 (oral)<br>2 (injection) | - | 1-2 |
| Nasal disorder/ discomfort | - | - | - | - | - | 2 (injection)<br>2-4 (nasal) | - | - |
| Numbness | - | - | - | - | - | 1 (oral)<br>5 (injection) | - | - |
| Palpitations | - | - | - | - | - | 1 (oral) | - | 1-2 |
| Sweating | - | - | - | - | - | 2 (injection) | - | 1-3 |
| Unusual taste | - | - | - | - | - | 13-24 (nasal) | - | 21 (nasal) |

## Dosing and Administration

Table 5 outlines the dosing recommendations for the Triptans included in this review.

**Table 5. Dosing and Administration Guidelines of the Triptans**

| Drug | Dosing and Administration | Availability |
|---|---|---|
| Almotriptan | • In controlled clinical trials, single doses of 6.25mg and 12.5mg were effective for the acute treatment of migraines in adults, with the 12.5mg dose tending to be a more effective dose.<br>• If the headache returns, the dose may be repeated after 2 hours, but no more than 2 doses should be given within a 24-hour period.<br>• The safety of treating an average of greater than 4 headaches in a 30-day period has not been established. | Tablets: 6.25mg, 12.5mg |
| Eletriptan | • In controlled clinical trials, single doses of 20mg and 40mg were effective for the acute treatment of migraine in adults. A greater portion of patients had a response following a 40mg dose than following a 20mg dose. An 80mg dose was associated with an increased incidence of adverse events; therefore, the maximum recommended single dose is 40mg.<br>• If after the initial dose, headache improves but then returns, a repeat dose may be beneficial.<br>• If the initial dose is ineffective, controlled clinical trials have not show a benefit of a second dose to treat the same attack.<br>• The safety of treating an average of greater than 4 headaches in a 30-day period has not been established. | Tablets: 20mg, 40mg |
| Frovatriptan | • The recommended dose is a single 2.5mg tablet taken orally with | Tablets: 2.5mg |

| Drug | Dosing and Administration | Availability |
|---|---|---|
| | fluids.<br>• If the headache recurs after initial relief, a second tablet may be taken, providing there is an interval of at least 2 hours between doses. The total daily dose should not exceed 7.5mg per day.<br>• There is no evidence that a second dose is effective in patients who do not respond to a first dose of the drug for the same headache.<br>• The safety of treating an average of more than 4 migraine attacks in a 30-day period has not been established. | |
| Naratriptan | • In controlled clinical trials, single doses of 1 and 2.5mg taken with fluid were effective for the acute treatment of migraines in adults. A greater proportion of patients had headache response following a 2.5mg dose than following a 1mg dose.<br>• If the headache returns or if the patient has only partial response, the dose may be repeated once after 4 hours, for a maximum dose of 5mg in a 24 hour period. There is evidence that doses of 5mg do not provide a greater effect than 2.5mg.<br>• The safety of treating, on average, more than 4 headaches in a 30 day period has not been established. | Tablets: 1mg, 2.5mg |
| Rizatriptan | • In controlled clinical trials, single doses of 5 and 10mg were effective for the acute treatment of migraines in adults. There is evidence that the 10mg dose may provide a greater effect than the 5mg dose.<br>• Doses should be separated by at least 2 hours.<br>• No more than 30mg should be | Tablets: 5mg, 10mg<br><br>ODT: 5mg |

| Drug | Dosing and Administration | Availability |
|---|---|---|
| | taken in any 24-hour period.<br>• The safety of treating, on average, more than four headaches in a 30 day period has not been established.<br>• **Orally Disintegrating Tablets (ODT)-**Remove the blister containing the tablet from the outer aluminum pouch and peel the blister pack open with dry hands. Place the ODT on the tongue, where it will dissolve and be swallowed with saliva. | |
| Sumatriptan | • In controlled clinical trials, single doses of 25, 50, or 100mg were effective for the acute treatment of migraine in adults. There is evidence that doses of 50 and 100mg may provide greater effect than 25mg. There is also evidence that doses of 100mg do not provide a greater effect than 50mg.<br>• If the headache returns or the patient has a partial response to the initial dose, the dose may be repeated after 2 hours, not to exceed a total daily dose of 200mg.<br>• If a headache returns following an initial treatment with sumatriptan injection, additional single Sumatriptan tablets (up to 100mg/day) may be given with an interval of at least 2 hours between doses.<br>• The safety of treating an average of more than 4 headaches in a 30 day period has not been established. | Tablets: 25mg, 50mg, 100mg<br><br>Injection: 4mg, 6mg<br><br>Nasal spray: 5mg, 20mg |
| Sumatriptan/ Naproxen | • In controlled clinical trials, single doses of Treximet were effective for the acute treatment of migraine in adults.<br>• The efficacy of taking a second dose has not been established.<br>• Do not take more than 2 tablets in | Tablets: 119mg sumatriptan succinate equivalent to 85mg of sumatriptan and 500mg of naproxen sodium. |

| Drug | Dosing and Administration | Availability |
|---|---|---|
| | 24 hours.<br>• Dosing of tablets should be at least 2 hours apart.<br>• The safety of treating an average of more than 5 migraine headaches in a 30-day period has not been established. | |
| Zolmitriptan | **Tablets:**<br>• In controlled clinical trials, single doses of 1, 2.5, and 5mg were effective for the acute treatment of migraines in adults.<br>• A greater proportion of patients had headache response following a 2.5 or 5mg dose than following a 1mg dose.<br>• If the headache returns, the dose may be repeated after 2 hours, not to exceed 10mg within a 24-hour period. Controlled trials have not adequately established the effectiveness of a second dose if the initial dose is ineffective.<br>• The safety of treating an average of more than three headaches in a 30-day period has not been established.<br>**Orally Disintegrating Tablets**<br>• A single dose of 2.5mg was effective for the acute treatment of migraines in adults.<br>• If the headache returns, the dose may be repeated after 2 hours, not to exceed 10mg within a 24-hour period. Controlled trials have not adequately established the effectiveness of a second dose if the initial dose is ineffective.<br>• The safety of treating an average of more than three headaches in a 30-day period has not been established.<br>**Nasal Spray**<br>• Administer one dose of nasal spray | Tablets: 2.5mg, 5mg<br><br>Orally Disintegrating Tablets: 2.5mg, 5mg<br><br>Nasal Spray: 5mg |

| Drug | Dosing and Administration | Availability |
|---|---|---|
| | 5mg for the treatment of acute migraine.<br>• If the headache returns the dose may be repeated after 2 hours.<br>• The maximum daily dose should not exceed 10mg in any 24-hour period.<br>• The safety of treating an average of more than four headaches in a 30 day period has not been established. | |

**Conclusion**

Migraine is the most common cause of recurrent moderate to severe headaches in the United States. NSAIDs are considered first-line therapy while the selective serotonin agonists (triptans) are reserved for patients with severe migraines and in those patients whose migraines respond poorly to NSAIDs or combination analgesics.

All of the selective serotonin agonists are approved for the acute treatment of migraines, with or without aura. The subcutaneous formulation of sumatriptan is also indicated for the acute treatment of cluster headache episodes. Zolmitriptan and rizatriptan are available as orally disintegrating tablets, which dissolve rapidly without water. These products are not absorbed through the buccal mucosa so they have the same rate of absorption as the oral tablets. Zolmitriptan and sumatriptan are also available as nasal formulations.

Numerous clinical trials have been conducted comparing the safety and efficacy of the selective serotonin agonists to each other. Of the head-to-head studies that demonstrate statistically significant differences in headache response rates, the statistical difference tends to be less than 10%, and thus the clinical significance is unknown. There is insufficient evidence that one serotonin agonist is more effective or safer than another when administered at equivalent doses.

**References**


1. Wolters Kluwer Health, Inc, ed. Drugs Facts & Comparisons. St. Louis, MO. 2008.
2. Institute for Clinical Systems Improvement (ICSI). Diagnosis and Treatment of headache. Bloomington (MN): Institute for Clinical Systems Improvement;2007 Jan.
3. Adelman JU, Adelman RD. Current options for the prevention and treatment of migraine. Clin Ther. 2001;23(6):772-788.
4. Landy S, Smith T. Treatment of primary headache: acute migraine treatment. Standards of care for headache diagnosis and treatment. Chicago (IL): National Headache Foundation; 2004. p. 27-39.
5. Silberstein S. Practice parameter: Evidence-based guidelines for migraine headache. Report of the quality standards subcommittee of the American Academy of Neurology. Neurology 2000;55:754-763.
6. Frova® Prescribing Information, April 2007, Endo Pharmaceuticals.
7. Relpax® Prescribing Information, May 2008, Pfizer.
8. Maxalt® Prescribing Information, February 2008, Merck.
9. Amerge® Prescribing Information, October 2007, GlaxoSmithKline.
10. Imitrex® Prescribing Information, October 2007, GlaxoSmithKline.
11. Treximet® Prescribing Information, April 2008, GlaxoSmithKline.
12. Zomig® Prescribing Information, January 2007, AstraZeneca.
13. Axert® Prescribing Information, May 2007, Ortho-McNeil.

## North Dakota Medicaid Triptan Utilization April 2007 - May 2008

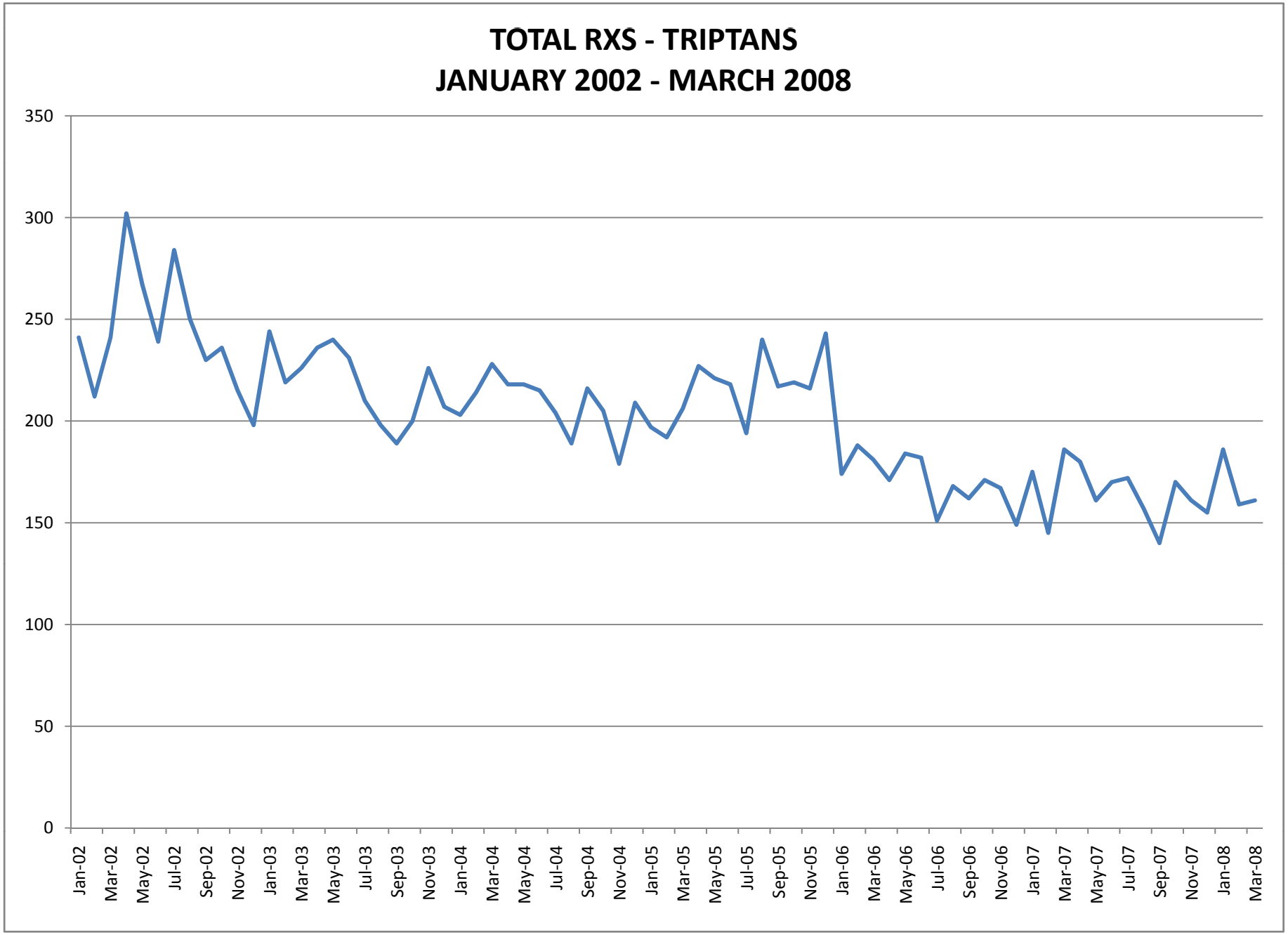
| Label Name | Rx Num | Total Reimb Amt | Average Cost per script |
|---|---|---|---|
| IMITREX 25 MG TABLET | 68 | $17,560.75 | $258.25 |
| IMITREX 6 MG/0.5 ML KIT REFLL | 66 | $16,793.47 | $254.45 |
| AMERGE 2.5 MG TABLET | 7 | $1,459.46 | $208.49 |
| MAXALT 10 MG TABLET | 122 | $24,346.16 | $199.56 |
| IMITREX 5 MG NASAL SPRAY | 11 | $2,128.65 | $193.51 |
| IMITREX 100 MG TABLET | 478 | $91,975.49 | $192.42 |
| IMITREX 20 MG NASAL SPRAY | 36 | $6,838.23 | $189.95 |
| AXERT 12.5 MG TABLET | 22 | $4,163.13 | $189.23 |
| FROVA 2.5 MG TABLET | 27 | $4,820.10 | $178.52 |
| IMITREX 50 MG TABLET | 238 | $42,365.42 | $178.01 |
| ZOMIG 5 MG TABLET | 86 | $14,872.06 | $172.93 |
| MAXALT 5 MG TABLET | 8 | $1,354.83 | $169.35 |
| IMITREX 6 MG/0.5 ML SYRNG KIT | 38 | $6,359.06 | $167.34 |
| MAXALT MLT 5 MG TABLET | 6 | $956.26 | $159.38 |
| ZOMIG 5 MG NASAL SPRAY | 9 | $1,341.00 | $149.00 |
| ZOMIG ZMT 2.5 MG TABLET | 4 | $570.93 | $142.73 |
| RELPAX 40 MG TABLET | 341 | $44,738.87 | $131.20 |
| ZOMIG 2.5 MG TABLET | 24 | $3,036.96 | $126.54 |
| RELPAX 20 MG TABLET | 40 | $4,995.95 | $124.90 |
| MAXALT MLT 10 MG TABLET | 86 | $10,726.02 | $124.72 |
| ZOMIG ZMT 5 MG TABLET | 14 | $1,114.37 | $79.60 |
| IMITREX 4 MG/0.5 ML SYRNG KIT | 1 | $38.32 | $38.32 |
| Total | 1732 | $302,555.49 | 570 Recipients |

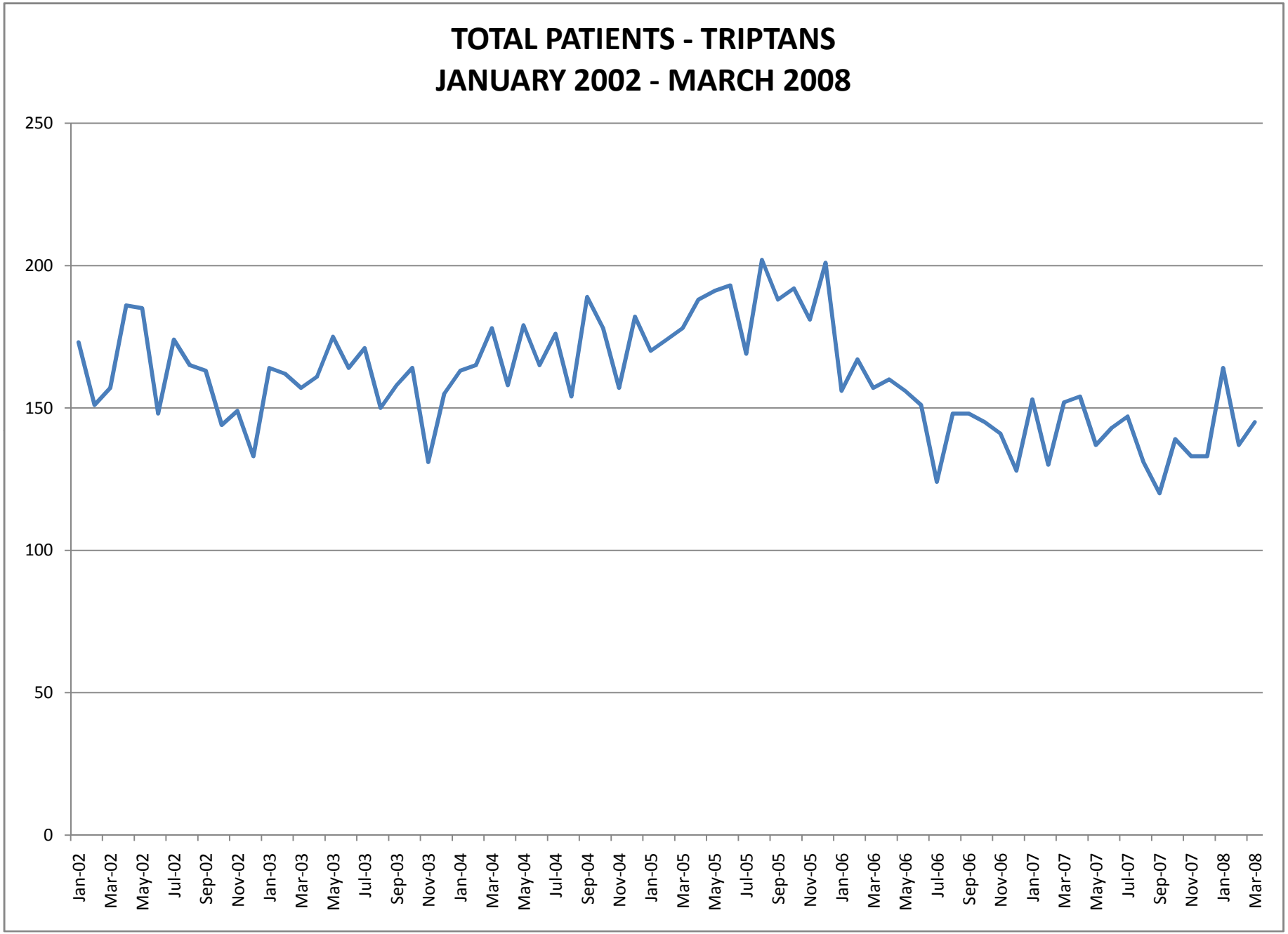
## North Dakota Medicaid Triptan Utilization

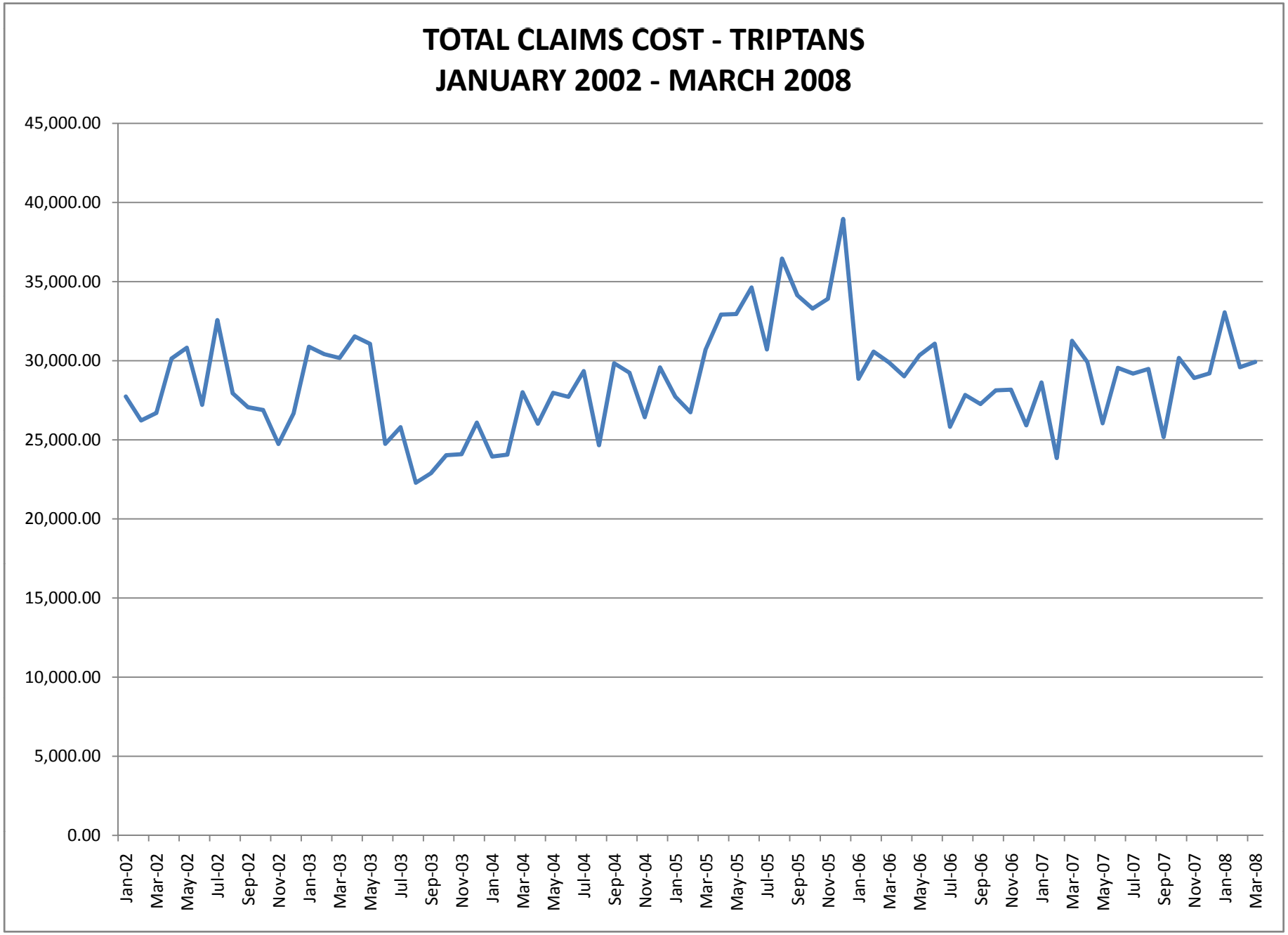
## Patients Receiving 12 prescriptions or more

## April 2007 – March 2008

| Age | Sex | Rx Count |
|---|---|---|
| 44 | F | 31 |
| 32 | F | 26 |
| 60 | F | 24 |
| 47 | F | 22 |
| 50 | F | 20 |
| 21 | F | 18 |
| 32 | F | 17 |
| 19 | F | 16 |
| 34 | F | 14 |
| 24 | F | 14 |
| 27 | F | 14 |
| 30 | F | 13 |
| 53 | F | 13 |
| 59 | F | 13 |
| 22 | F | 13 |
| 28 | F | 13 |
| 48 | F | 13 |
| 16 | M | 13 |
| 53 | F | 12 |
| 42 | F | 12 |
| 34 | F | 12 |
| 32 | F | 12 |


TOTAL RXS - TRIPTANS
JANUARY 2002 - MARCH 2008
350
300
250
200
150
100
50
0
Jan-02
Mar-02
May-02
Jul-02
Sep-02
Nov-02
Jan-03
Mar-03
May-03
Jul-03
Sep-03
Nov-03
Jan-04
Mar-04
May-04
Jul-04
Sep-04
Nov-04
Jan-05
Mar-05
May-05
Jul-05
Sep-05
Nov-05
Jan-06
Mar-06
May-06
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08


TOTAL PATIENTS - TRIPTANS
JANUARY 2002 - MARCH 2008
250
200
150
100
50
0
Jan-02
Mar-02
May-02
Jul-02
Sep-02
Nov-02
Jan-03
Mar-03
May-03
Jul-03
Sep-03
Nov-03
Jan-04
Mar-04
May-04
Jul-04
Sep-04
Nov-04
Jan-05
Mar-05
May-05
Jul-05
Sep-05
Nov-05
Jan-06
Mar-06
May-06
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08


TOTAL CLAIMS COST - TRIPTANS
JANUARY 2002 - MARCH 2008
45,000.00
40,000.00
35,000.00
30,000.00
25,000.00
20,000.00
15,000.00
10,000.00
5,000.00
0.00
Jan-02
Mar-02
May-02
Jul-02
Sep-02
Nov-02
Jan-03
Mar-03
May-03
Jul-03
Sep-03
Nov-03
Jan-04
Mar-04
May-04
Jul-04
Sep-04
Nov-04
Jan-05
Mar-05
May-05
Jul-05
Sep-05
Nov-05
Jan-06
Mar-06
May-06
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08

# Serotonin (5-HT$_1$) Receptor Agonists - Triptan PA FORM

HEALTH INFORMATION DESIGNS

Prior Authorization Vendor for ND Medicaid

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

ND Medicaid requires that patients receiving a new prescription for Trexima, Maxalt MLT, and Zomig ZMT must try 2 other oral **Serotonin (5-HT$_1$) Receptor Agonists** as first line therapy.

***Note: Amerge, Axert, Frova, Imitrex tablets, Maxalt tablets, Relpax and Zomig tablets do not require a PA.**

**Part I: TO BE COMPLETED BY PHYSICIAN**

| Recipient Name | Recipient Date of Birth | Recipient Medicaid ID Number | |
|---|---|---|---|
| Physician Name | | | |
| Physician Medicaid Provider Number | Telephone Number | Fax Number | |
| Address | City | State | Zip Code |
| **Requested Drug and Dosage:**<br>□ TREXIMA<br>□ ZOMIG-ZMT<br>□ MAXALT-MLT | **Diagnosis for this request:** | | |

**Qualifications for coverage:**

| | | | | |
|---|---|---|---|---|
| □ Failed oral triptan therapy<br>Name of medication failed:<br>_____ | Start Date | End Date | Dose | Frequency |
| □ Failed oral triptan therapy<br>Name of medication failed:<br>_____ | Start Date | End Date | Dose | Frequency |

□ *I confirm that I have considered a generic or other alternative and that the requested drug is expected to result in the successful medical management of the recipient.*

| Physician Signature | Date |
|---|---|
| | |

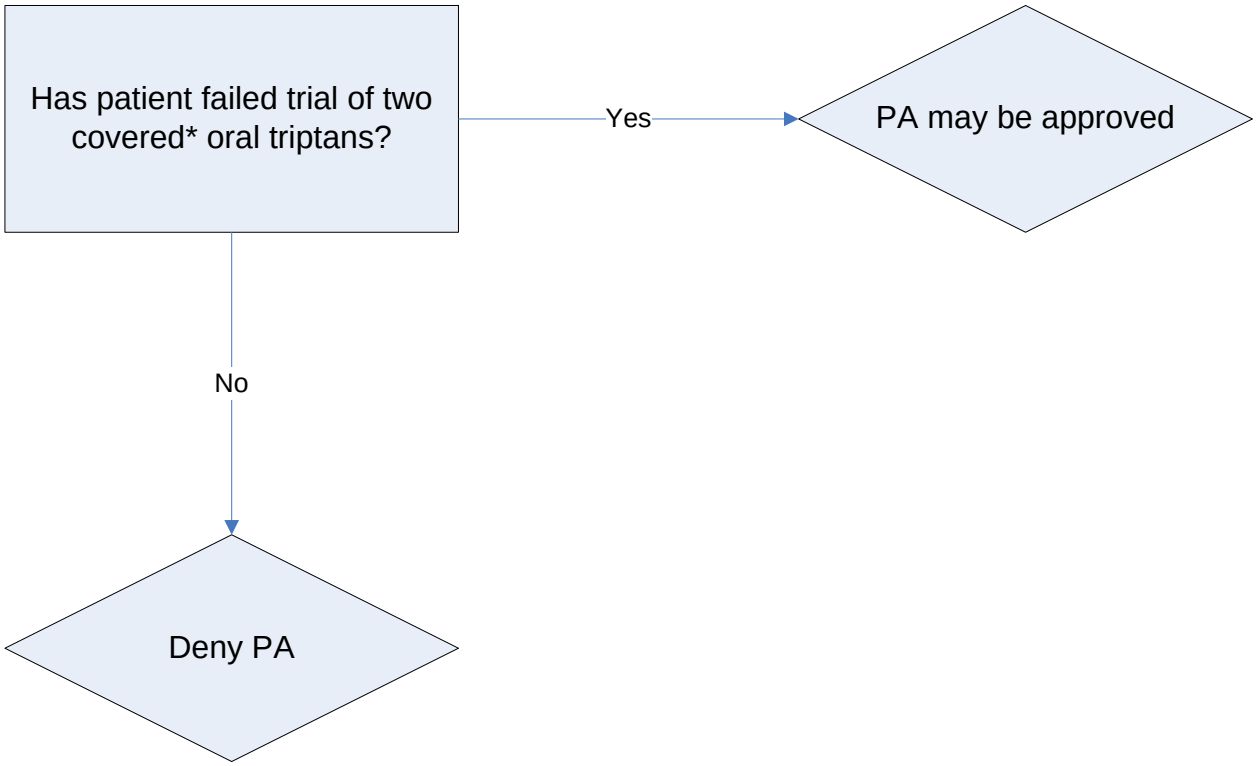
**Part II: TO BE COMPLETED BY PHARMACY**

| PHARMACY NAME: | | | ND MEDICAID PROVIDER NUMBER: |
|---|---|---|---|
| TELEPHONE NUMBER | FAX NUMBER | DRUG | NDC # |

**Part III: FOR OFFICIAL USE ONLY**

| Date Received | Initials: |
|---|---|
| Approved -<br>Effective dates of PA: From: / / To: / / | Approved by: |
| Denied: (Reasons) | |

# North Dakota Department of Human Services
# Serotonin (5-$HT_1$) Receptor Agonists
# Triptan Prior Authorization Algorithm




*Amerge, Axert, Frova, Imitrex tablets, Maxalt tablets, Relpax and Zomig tablets do not require a PA

**North Dakota Department of Human Services**
**DUR Board Meeting**
**Intranasal Corticosteroid Review**

## Overview

More than 50 million people in the United States suffer from allergic rhinitis. It is the most prevalent chronic condition in patients under the age of 18. In one study, 42 percent of children had physician-diagnosed allergic rhinitis by age 6.

The common signs and symptoms of allergic rhinitis include runny/itchy nose, sneezing, and congestion. Less common symptoms may include headache, impaired smell and itchy, watery eyes. Although generally thought to be a mildly disturbing malady, allergic rhinitis can actually have a significant impact on the quality of life for both adults and children, resulting in school absenteeism and decreased work productivity. Additionally, untreated or poorly controlled allergic rhinitis can lead to increased prevalence of several comorbidities. These include worsening asthma, sinusitis, otitis media, sleep disorders, and nasal polyps. It is estimated that allergic rhinitis is responsible for 16.7 million physician visits per year and results in 5.9 billion dollars annually in expenditures.

The pathophysiology of allergic rhinitis involves a complex inflammatory response; including both early- and late-phase responses. Within minutes after exposure to an allergen, the early-phase response starts. The allergen interacts with the T- and B-cell lymphocytes and produces IgE antibodies. These antibodies attach to mast cells and basophils so that upon re-exposure to the same allergen, preformed mediators (histamine, leukotrienes, prostaglandin, and bradykinin) will be released. This causes the runny nose, sneezing, itching, and congestion. Several hours later, the late-phase response will occur, whereby the inflammatory cells (eosinophils, neutrophils, macrophages, basophils, and monocytes) migrate, causing a renewal of symptoms, especially nasal secretions and congestion.

Treatment of allergic and non-allergic rhinitis includes trigger avoidance, environmental modification, and pharmacologic therapy. Medication management may target symptom relief or the underlying inflammatory response. Treatment options include oral antihistamines, intranasal corticosteroids, intranasal antihistamines, oral decongestants, oral corticosteroids, intranasal cromolyn sodium, oral anti-leukotriene agents, and intranasal ipratropium bromide. Patients with severe rhinitis may benefit from allergen immunotherapy.

Intranasal corticosteroids are one of the most effective medications used to treat allergic rhinitis. These agents produce direct local anti-inflammatory effects with minimal systemic side effects, when used within recommended dosing guidelines.

Table 1 lists the intranasal corticosteroids included in this review.

**Table 1. Intranasal Corticosteroids Included in this Review**

| Generic Name | Brand Name |
|---|---|
| Beclomethasone | Beconase AQ® |
| Budesonide | Rhinocort Aqua® |
| Ciclesonide | Omnaris® |
| Flunisolide | Nasarel®** |
| Fluticasone furoate | Veramyst® |
| Fluticasone propionate | Flonase®** |
| Mometasone | Nasonex® |
| Triamcinolone | Nasacort AQ® |

**Available generically.

## Current Treatment Guidelines

Table 2 lists the current treatment guidelines for rhinitis.

**Table 2. Current Treatment Guidelines**

| Clinical Guideline | Recommendation |
|---|---|
| Institute for Clinical Systems Improvement (ICSI): **Rhinitis, 2008.** | **Treatment of Allergic Rhinitis:**<br>• With the exception of systemic corticosteroids, intranasal corticosteroids are the most effective single agents for controlling the spectrum of allergic rhinitis symptoms, and should be considered first line therapy in patients with moderate to severe symptoms.<br>• Regular daily use of intranasal corticosteroids is required to achieve optimal results.<br>• Start intranasal corticosteroids one week prior to the beginning of the allergy season for prophylactic use.<br>• Oral antihistamines are an effective alternative in patients who cannot use or prefer not to use intranasal corticosteroids.<br>• Oral antihistamines can be added to intranasal corticosteroid as adjunctive agents.<br>• Antihistamines or antihistamine/decongestant combinations can be used to treat mild or episodic disease, particularly when rapid onset of symptom relief is desired.<br>• Topical cromolyn is less effective than intranasal corticosteroids.<br>• Decongestants, anticholinergics and eye drops are effective for targeted symptoms and can be used in combination.<br>• Second-generation antihistamines are less sedating and cause less central nervous system impairment. |

| Clinical Guideline | Recommendation |
|---|---|
| | • Several studies show antileukotriene drugs are effective as second-generation antihistamines for treating symptoms of allergic rhinitis.<br>• Oral steroids should be reserved for refractory or severe cases only.<br>• Injectable steroids are not generally recommended.<br>**Treatment of non-allergic rhinitis:**<br>• Symptomatic nasal obstruction due to non-allergic rhinitis can be treated with azelastine nasal spray, intranasal corticosteroids, oral decongestants, oral antihistamines, Breathe Right® nasal strips, and topical antihistamines.<br>• Symptomatic nonpurulent chronic posterior nasal drainage (postnasal drip) can be treated with intranasal corticosteroids.<br>• Symptomatic bilateral chronic anterior rhinorrhea due to non-allergic rhinitis can be treated with intranasal corticosteroids, ipratropium spray, and nasal saline. |
| University of Michigan Health System: **Allergic Rhinitis, 2007.** | • Avoidance of allergens is the first step.<br>• Over-the-counter (OTC), non-sedating antihistamine loratadine (Claritin) should be tried initially.<br>• If symptoms persist, consider intranasal corticosteroids, oral non-sedating antihistamines, oral decongestants, leukotriene inhibitors, intranasal cromolyn, intranasal antihistamines and ocular preparations. |
| Joint Task Force on Practice Parameters in Allergy, Asthma and Immunology: **Diagnosis and Management of Rhinitis.** | • Intranasal corticosteroids are the most effective medication class for the treatment of allergic rhinitis.<br>• Systemic side effects associated with intranasal corticosteroids are rare.<br>• Local side effects are minimal, but nasal irritation and bleeding may occur.<br>• Intranasal corticosteroids should be considered before systemic corticosteroids are used for the treatment of severe rhinitis. |

## FDA Approved Indications

Table 3 lists the FDA approved indications and age guidelines as outlined by the FDA.

**Table 3. FDA Approved Indications for the Intranasal Corticosteroids**

| Generic Name | FDA Approved Indications |
|---|---|
| Beclomethasone | Seasonal or perennial allergic and nonallergic rhinitis in patients 6 years of age and older; Prevention of recurrence of nasal polyps following surgical removal. |
| Budesonide | Seasonal or perennial allergic rhinitis in patients 6 years of age and older. |
| Ciclesonide | Seasonal allergic rhinitis in adults and children 6 years of age and older. Perennial allergic rhinitis in adults and adolescents 12 years of age and older. |
| Flunisolide | Seasonal or perennial allergic rhinitis in patients 6 years of age and older. |
| Fluticasone Furoate | Seasonal or perennial allergic rhinitis in patients 2 years of age and older. |
| Fluticasone Propionate | Seasonal and perennial allergic and nonallergic rhinitis in patients 4 years of age and older. |
| Mometasone | Seasonal allergic or perennial allergic rhinitis in patients 2 years of age and older; May be used as prophylaxis of seasonal allergic rhinitis in patients 12 years of age and older; Treatment of nasal polyps in patients 18 years of age and older. |
| Triamcinolone | Seasonal or perennial allergic rhinitis in patients 6 years of age and older. |

## Pharmacology

The intranasal corticosteroids have potent glucocorticoid activity and weak mineralocorticoid activity. The exact mechanisms of action of these drugs in the nasal mucosa is unknown, however, these drugs have inhibitory actions on many different types of cells (e.g., mast cells, eosinophils, neutrophils, macrophages, lymphocytes) and mediators (e.g., histamine, eicosanoids, leukotrienes, cytokines) involved in allergic and nonallergic/irritant-mediated inflammation. These agents, when administered topically in recommended doses, exert direct local anti-inflammatory effects with minimal systemic effects. Exceeding the recommended dose may result in systemic effects, including hypothalamic-pituitary-adrenal (HPA) function suppression.

## Pharmacokinetics

**Table 4. Pharmacokinetic Parameters of the Intranasal Corticosteroids Included in this Review**

| Drug | Bioavailability (%) | Volume of Distribution | Protein Binding (%) | Site of Metabolism | Metabolites | Excretion | Serum Half-Life (hours) |
|---|---|---|---|---|---|---|---|
| Beclomethasone | 44 | 20L, 424L* | 87 | Tissue esterases and liver | 17-mono-propionate (active), free beclomethasone (very weak; Prodrug) | Feces (60%), urine (12%) | 0.5, 2.7* |

| Drug | Bioavailability (%) | Volume of Distribution | Protein Binding (%) | Site of Metabolism | Metabolites | Excretion | Serum Half-Life (hours) |
|---|---|---|---|---|---|---|---|
| Budesonide | 34 | 2 to 3 L/kg | 85-90 | Liver (CYP3A) | 16 alpha-hydroxy-prednisolone and 6 beta-hydroxy-budesonide (<1% of parent) | Feces, urine (66%) | 2-3 |
| Ciclesonide | <1 | 2.9 L/kg, 12.1 L/kg* | 99 | Nasal mucosa, Liver | Des-ciclesonide | Feces (66%) urine (20) | NA |
| Flunisolide | 50 | NA | NA | Liver | NA | Feces (50%), urine (50%) | 1-2 |
| Fluticasone propionate | <2 | 4.2 L/kg | 91 | Liver (CYP3A4) | 17 beta-carboxylic acid (inactive) | Feces (>95%), urine (<5%) | 7.8 |
| Fluticasone furoate | 0.5% | 608L | >99% | Liver (CYP3A4) | 17 beta-carboxylic acid (inactive) | Feces (99%), Urine (1%) | 15.1 |
| Mometasone | Virtually undetectable | NA | 98-99 | Liver (CYP3A4) | 6 beta-hydroxy-mometasone furoate | Feces, urine (% not specified) | 5.8 |
| Triamcinolone | Minimal | 99.5L | NA | Liver | 6 beta-hydroxy-triamcinolone acetonide, 21-carboxy-triamcinolone acetonide, and 21-carboxy-6 beta-hydroxy-triamcinolone acetonide (substantially < parent) | Feces (60%), urine (40%) | 3.1 |

* Value for metabolite

## Drug Interactions

Drug interactions with the inhaled nasal corticosteroids are limited due to the route of administration and the relatively low systemic bioavailability. There are no clinically significant drug interactions reported with beclomethasone, flunisolide, mometasone, and triamcinolone. Since budesonide and fluticasone are primarily metabolized in the liver by the CYP3A4 isoenzyme system, potential drug interactions may be observed with drugs that inhibit this pathway.

Concomitant administration of budesonide or fluticasone with inhibitors of CYP3A4 (e.g. ketoconazole, itraconazole, clarithromycin, erythromycin, cimetidine, ritonavir) may increase the intranasal corticosteroid plasma concentration and cause a decrease in plasma cortisol, resulting in adrenal suppression.

Concomitant administration of budesonide and cimetidine may cause a slight decrease in budesonide clearance and a corresponding increase in its oral bioavailability.

## Warnings/Precautions

**Children**: Controlled clinical studies have shown that intranasal corticosteroids may cause a reduction in growth velocity in pediatric patients. The long-term effects of this reduction in growth velocity are unknown. Routinely monitor the growth of pediatric patients receiving intranasal corticosteroids. Weigh the potential growth effects of prolonged treatment against the clinical benefits obtained and the risks/benefits of treatment alternatives. To minimize the systemic effects of intranasal corticosteroids, titrate each patient to the lowest dose that effectively controls symptoms.

**Pregnancy:** With the exception of budesonide, which is rated as pregnancy category B, all the intranasal corticosteroids are classified as pregnancy category C. Adrenal insufficiencies may occur in the neonates. Potential benefits should be weighed against the potential risk to the fetus.

## Adverse Events

**Table 5. Common Adverse Events (%) Reported with the Agents Included in this Review[a]**

| Adverse Event(s) | Beclomethasone | Budesonide | Ciclesonide | Flunisolide (solution) | Flunisolide (spray) | Fluticasone | Mometasone | Triamcinolone |
|---|---|---|---|---|---|---|---|---|
| **CNS** | | | | | | | | |
| Dizziness | - | - | - | - | - | 1 to 3 | - | - |
| Headache | < 5 | - | 6 | ≤ 5 | - | 7 to 16 | 17 to 26 | ≥ 2 |
| Lightheadedness | < 5 | - | - | - | - | - | - | - |
| **GI** | | | | | | | | |
| Abdominal pain | - | - | - | - | - | 1 to 3 | - | - |
| Diarrhea | - | - | - | - | - | 1 to 3 | 2 to < 5 | - |
| Dyspepsia | - | - | - | - | - | - | 2 to < 5 | - |
| Nausea | < 5 | - | - | ≤ 5 | > 1 | 3 to 5 | 2 to < 5 | - |
| Vomiting | - | - | - | ≤ 5 | - | 3 to 5 | 1 to 5 | ≥ 2 |
| **Hypersensitivity Reactions** | | | | | | | | |
| Anaphylaxis | - | - | - | - | - | Rare[b] | √[b,c] | - |
| Angioedema | Rare | Rare[b] | - | - | - | Rare[b] | √[b] | - |
| Bronchospasm | Rare | - | - | - | - | Rare[b] | - | - |
| Dyspnea | - | - | - | - | - | Rare[b] | - | - |
| Edema of face/tongue | - | - | - | - | - | Rare[b] | - | - |
| Pruritus | - | - | - | - | - | Rare[b] | - | - |
| Rash | Rare | - | - | - | - | Rare[b] | - | - |

| Adverse Event(s) | Beclomethasone | Budesonide | Ciclesonide | Flunisolide (solution) | Flunisolide (spray) | Fluticasone | Mometasone | Triamcinolone |
|---|---|---|---|---|---|---|---|---|
| Wheezing | Rare | Rare | - | - | - | Rare[b] | 2 to < 5 | - |
| Urticaria | Rare | - | - | - | - | Rare[b] | - | - |
| Respiratory | | | | | | | | |
| Asthma Symptoms | - | - | - | - | - | 3 to 7 | 2 to < 5 | ≥ 2 |
| Bronchitis | - | - | - | - | - | 1 to 3 | 2 to < 5 | - |
| Bronchospasm | - | 2 | - | - | - | - | - | - |
| Cough | - | 2 | - | - | > 1 | 4 | 7 to 13 | 2 |
| Epistaxis | < 3 | 8 | 4.9 | ≤ 5[d] | 3 to 9 | 6 to 7[d] | 8 to 11[d] | 3 |
| Mild nasopharyngeal irritation | 24 | - | - | - | - | - | - | - |
| Nasal burning/stinging | - | - | - | 45 | 13 | 2 to 3 | √[b] | - |
| Nasal dryness | √ | - | - | - | > 1 | - | - | - |
| Nasal irritation | √ | 2 | - | ≤ 5 | - | 2 to 3 | 2 to < 5 | - |
| Nasal mucosal ulceration | Rare | - | - | - | - | Rare[b] | Rare | - |
| Nasal septal perforation | Rare | Rare[b] | - | Rare | Rare | Rare[b] | Rare[b] | Rare |
| Nasal stuffiness/congestion | < 3 | - | - | ≤ 5 | - | - | - | - |
| Nasopharyngitis | - | - | 3.7 | - | - | - | - | - |
| Rhinitis | - | - | - | - | - | - | 2 to < 5 | ≥ 2 |
| Pharyngitis | - | 4 | - | - | > 1 | 6 to 8 | 10 to 12 | 5 |
| Rhinorrhea | < 3 | - | - | - | - | 1 to 3 | - | - |

| Adverse Event(s) | Beclomethasone | Budesonide | Ciclesonide | Flunisolide (solution) | Flunisolide (spray) | Fluticasone | Mometasone | Triamcinolone |
|---|---|---|---|---|---|---|---|---|
| Sinusitis | - | - | - | - | ≤ 1 | - | 4 to 5 | ≥ 2 |
| Sneezing | 4 | - | - | ≤ 5 | - | - | - | - |
| Throat discomfort (burning, itching, swelling, pain) | - | Rare[b] | - | ≤ 5 | - | Rare[b] | - | - |
| Throat dryness/irritation | √ | Rare[b] | - | - | - | Rare[b] | - | - |
| Upper respiratory tract infection | - | - | - | - | - | - | 5 to 7 | - |
| Special Senses | | | | | | | | |
| Aftertaste | - | - | - | - | 17 | - | - | - |
| Blurred vision | - | - | - | - | - | √[b] | - | - |
| Cataracts | Rare | - | - | - | - | Rare[b] | - | - |
| Conjunctivitis | - | - | - | - | - | √[b] | 2 to < 5 | - |
| Dry/irritated eyes | - | - | - | - | - | √[b] | - | - |
| Earache | - | - | 2.2 | - | - | - | 2 to < 5 | - |
| Glaucoma | Rare | - | - | - | - | Rare[b] | - | - |
| Hoarseness | - | - | - | - | ≤ 1 | Rare[b] | - | - |
| Increased intraocular pressure | Rare | Rare | - | - | - | Rare[b] | Rare | - |
| Loss of taste/smell | Rare | Rare[b] | - | ≤ 5 | ≤ 1 | √[b] | Rare[b] | - |
| Otitis media | - | - | - | - | - | - | 2 to < 5 | ≥ 2 |
| Unpleasant taste/smell | √ | - | - | - | - | - | - | - |
| Watery eyes | < 3 | - | - | ≤ 5 | - | - | - | - |

| Adverse Event(s) | Beclomethasone | Budesonide | Ciclesonide | Flunisolide (solution) | Flunisolide (spray) | Fluticasone | Mometasone | Triamcinolone |
|---|---|---|---|---|---|---|---|---|
| Miscellaneous | | | | | | | | |
| Aches and pains | - | - | - | - | - | 1 to 3 | - | - |
| Arthralgia | - | - | - | - | - | - | 2 to < 5 | - |
| Chest pain | - | - | - | - | - | - | 2 to < 5 | - |
| Dysmenorrhea | - | - | - | - | - | - | 1 to 5 | - |
| Fever | - | - | - | - | - | 1 to 3 | - | - |
| Flu-like symptoms | - | - | - | - | - | 1 to 3 | 2 to < 5 | - |
| Growth suppression | √ | √ | - | - | - | √[b] | - | - |
| Infection | Rare[e] | Rare[e] | - | Rare[e] | Rare[e] | Rare[e] | Rare[e] | Rare[e] |
| Myalgia | - | - | - | - | - | - | 2 to < 5 | - |
| Palpitations | - | Rare[b] | - | - | - | - | - | - |
| Viral infection | - | - | - | - | - | - | 8 to 14 | - |
| Voice changes | - | - | - | - | - | Rare[b] | - | - |

[a]Data pooled from all age groups and from separate studies and are not necessarily comparable.
[b]Occurred during postmarketing.
[c]√ = Reported; no incidence given.
[d]Including bloody mucus.
[e]Localized infections of the nose and pharynx with *Candida albicans.*

## Dosing and Administration

Table 5 outlines the dosing recommendations for the intranasal corticosteroids included in this review.

**Table 5. Dosing and Administration Guidelines of the Intranasal Corticosteroids**

| Drug | Dosing and Administration | | | |
|---|---|---|---|---|
| | **Age** | **Recommended Daily Dose** | **Maximum Daily Dose** | **Availability** |
| Beclomethasone | ≥12 years old<br><br>6-12 years old | 1 or 2 inhalations (42 to 84 mcg) in each nostril twice a day.<br><br>1 inhalation (42 mcg) in each nostril twice a day. | 336 mcg/day<br><br>*Discontinue if no significant symptom improvement is observed within 3 weeks. | **Nasal Spray**:<br>42 mcg/spray<br>(180 metered doses) |
| Budesonide | ≥6 years old | 1 spray (32 mcg) in each nostril once daily. | **≥12 years old:**<br>256 mcg/day<br><br>**6-11 years old:**<br>128 mcg/day | **Nasal spray**:<br>32 mcg/spray<br>(120 metered sprays) |
| Ciclesonide | **Seasonal Allergic Rhinitis**:<br>≥6 years old<br><br>**Perennial Allergic Rhinitis**:<br>≥12 years old | 2 sprays (50mcg/spray) in each nostril once daily.<br><br>2 sprays (50mcg/spray) in each nostril once daily. | 200 mcg/day | **Nasal spray:**<br>50 mcg/spray<br>(120 metered sprays) |
| Flunisolide | >14 years old<br><br>6-14 years old | 2 sprays in each nostril twice a day. The dose may be increased to 2 sprays in each nostril three times a day.<br><br>1 spray in each nostril 3 times a day ***or*** 2 sprays in each nostril twice a day. | **>14 years old:** 8 sprays in each nostril daily.<br><br>**6-14 years old:** 4 sprays in each nostril daily.<br><br>*Discontinue in 3 weeks if no improvement. | **Nasal solution:**<br>25mcg/spray<br>(200 sprays)<br><br>**Nasal spray:**<br>29 mcg/spray<br>(200 sprays) |
| Fluticasone (as propionate) | Adults<br><br>≥4 years old to adult | 2 sprays in each nostril once daily or 1 spray in each nostril twice a day.<br><br>1 spray in each nostril once daily. | 200 mcg daily<br><br>*Once symptoms are adequately controlled, reduce dosage to 1 spray in each nostril once daily for maintenance therapy. | **Nasal spray:**<br>50 mcg/spray<br>(120 sprays) |

| Drug | Dosing and Administration | | | |
|---|---|---|---|---|
| | **Age** | **Recommended Daily Dose** | **Maximum Daily Dose** | **Availability** |
| Fluticasone (as furoate) | ≥12 years old<br><br>2 to 11 years old | 2 sprays in each nostril once daily.<br><br>1-2 sprays in each nostril once daily.<br><br>* When the maximum benefit has been achieved and symptoms controlled, reduce the dose to 55 mcg (1 spray in each nostril once daily) | 110 mcg daily<br><br>*Titrate an individual patient to the minimum effective dosage to reduce the possibility of adverse reactions. | **Nasal suspension:**<br>27.5 mcg/spray<br>(120 sprays) |
| Mometasone | ≥12 years old<br><br>2-11 years old<br><br>Adults 18 years of age and older | 2 sprays in each nostril once daily (200 mcg total daily dose).<br><br>1 spray in each nostril once daily (100mcg total daily dose).<br><br>2 sprays in each nostril twice daily (400mcg total daily dose). | 200 mcg daily<br><br>Nasal polyps:<br>400 mcg daily | **Nasal spray:**<br>50 mcg/spray<br>(120 sprays) |
| Triamcinolone | ≥12 years old<br><br>6-11 years old | 2 sprays in each nostril once daily.<br><br>1 spray in each nostril once daily. | 220 mcg/day | **Nasal spray:**<br>55mcg/spray<br>(30 and 120 sprays) |

## Conclusion

Intranasal corticosteroids are considered first-line agents for the treatment of allergic rhinitis. These agents are highly effective in reducing rhinitis-related nasal symptoms such as rhinorrhea, sneezing, congestion, nasal itch, and postnasal drip.

There is no substantial evidence that shows one intranasal corticosteroid to be more efficacious or safer than any other available intranasal corticosteroid. When it comes to treating allergic rhinitis, providers have many options. Since there appears to be no clinically significant differences between nasal steroid agents, cost and patient convenience should be considered when recommending these products.

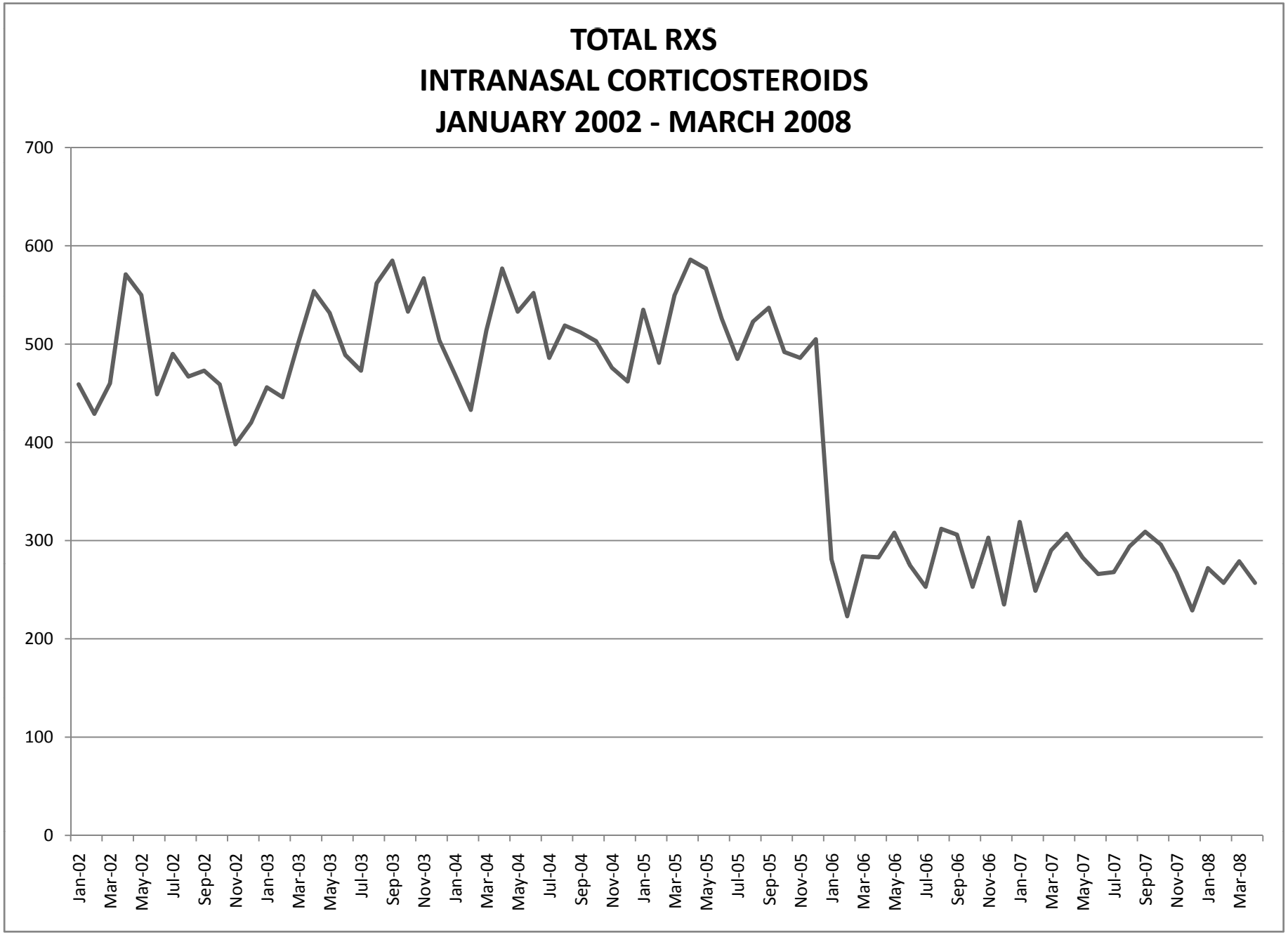
**References**


1. Wolters Kluwer Health, Inc, ed. Drugs Facts & Comparisons. St. Louis, MO. 2008.
2. Institute for Clinical Systems Improvement (ICSI). Rhinitis. Bloomington, MN: Institute for Clinical Systems Improvement (ICSI); January 2008.
3. University of Michigan Health System. Allergic rhinitis. Ann Arbor (MI): University of Michigan Health System (UMHS); 2007 Oct. 12 p.
4. Dykewicz MS, Fineman, et al. Diagnosis and management of rhinitis: Complete Guidelines of the Joint Task Force on Practice Parameters in Allergy, Asthma, and Immunology. Ann Allergy Asthma Immunol 1998; 81:478-518.
5. American College of Allergy, Asthma & Immunology. Allergists Explore Rising Prevalence and Unmet Needs Attributed to Allergic Rhinitis. Arlington Heights (IL): ACAAI Public Education; 2006 Nov.
6. New nasal steroids: Veramyst and Omnaris. Pharmacist's Letter/Prescriber's Letter 2007;23(6):230610.
7. Beconase AQ® Prescribing Information, April 2005, GlaxoSmithKline.
8. Rhinocort Aqua® Prescribing Information, January 2005, AstraZeneca.
9. Omnaris® Prescribing Information, September 2007, Sepracor.
10. Veramyst® Prescribing Information, April 2007, GlaxoSmithKline.
11. Flonase® Prescribing Information, August 2007, GlaxoSmithKline.
12. Nasonex® Prescribing Information, September 2006, Schering.
13. Nasacort AQ® Prescribing Information, September 2006, Sanofi-Aventis.

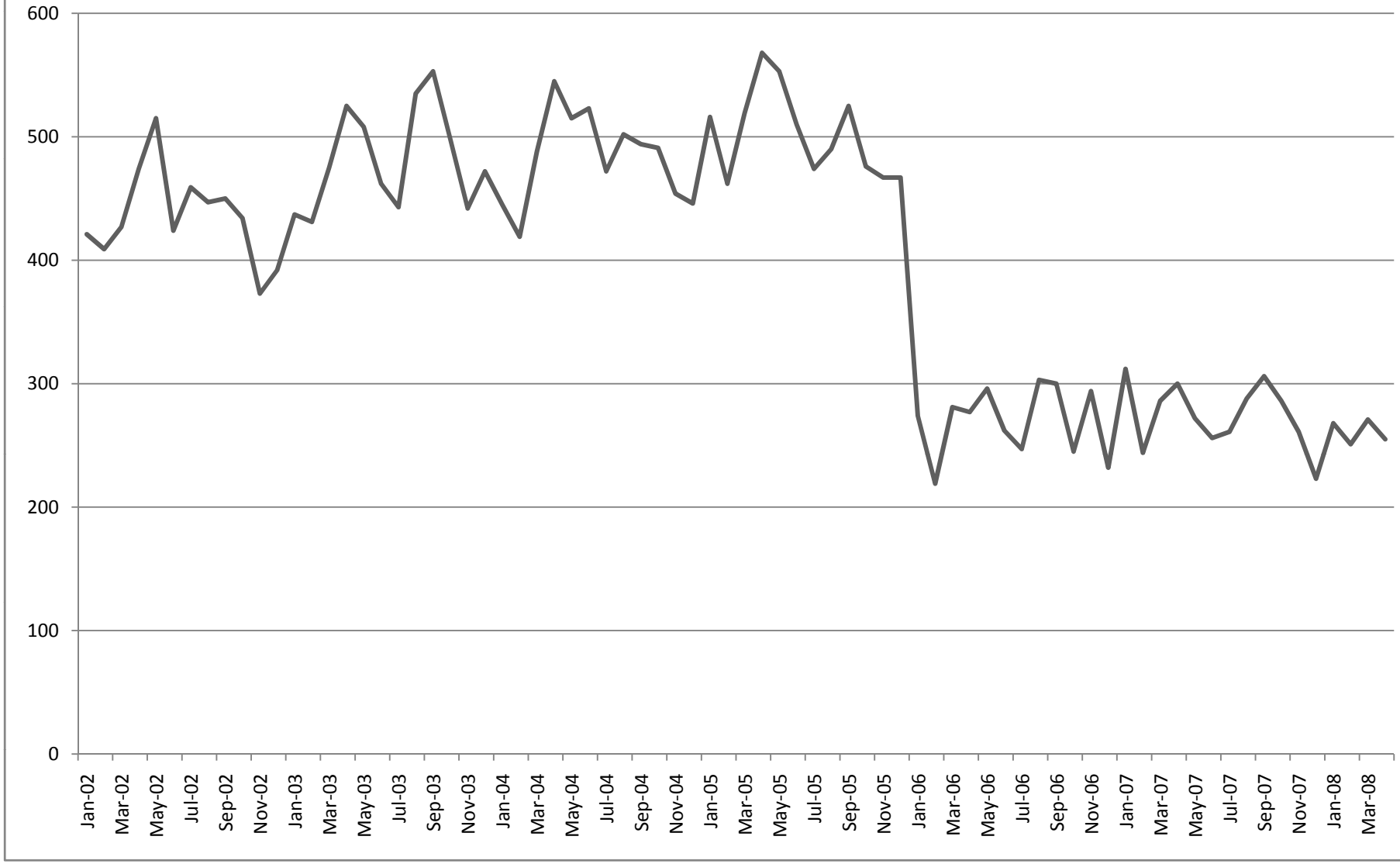
# Intranasal Corticosteroid Data

| North Dakota Medicaid Intranasal Corticosteroid Utilization by Generic Name<br>January 2007 – December 2007 | | |
|---|---|---|
| **Generic Name** | **Rx Num** | **Total Reimb Amt** |
| FLUNISOLIDE | 26 | $1,407.61 |
| BECLOMETHASONE DIPROPIONATE | 34 | $3,555.70 |
| FLUTICASONE FUROATE | 74 | $5,449.82 |
| BUDESONIDE | 330 | $25,819.22 |
| MOMETASONE FUROATE | 700 | $49,755.23 |
| TRIAMCINOLONE ACETONIDE | 732 | $57,329.01 |
| FLUTICASONE PROPIONATE | 1305 | $60,509.77 |

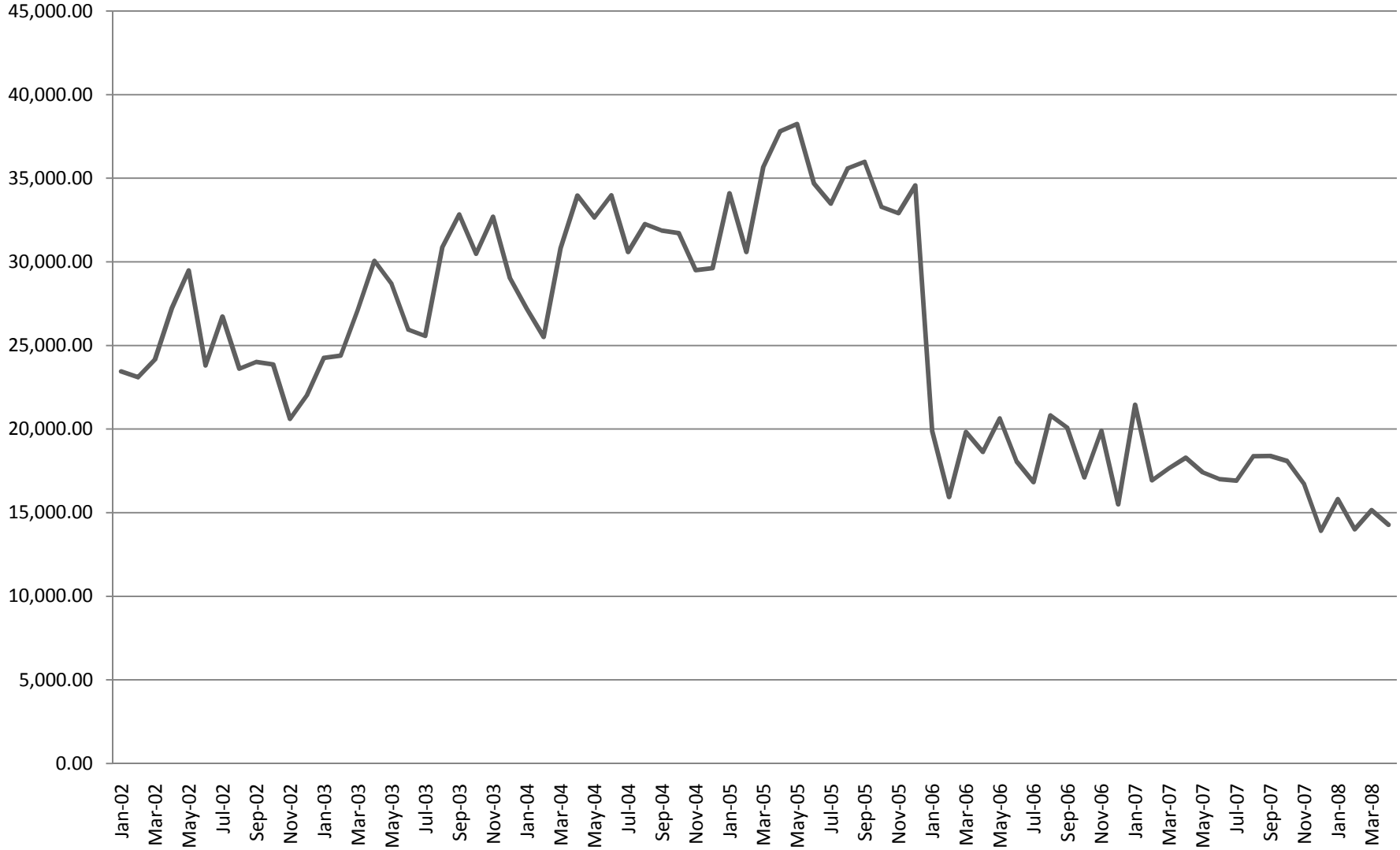
| North Dakota Medicaid Intranasal Corticosteroid Utilization by NDC<br>January 2007 – December 2007 | | | |
|---|---|---|---|
| **Label Name** | **Rx Num** | **Total Reimb Amt** | **Average Cost Per Script** |
| FLUNISOLIDE 0.025% SPRAY | 23 | $885.73 | $38.51 |
| FLUTICASONE 50 MCG NASAL SPRAY | 1301 | $60,206.45 | $46.28 |
| NASONEX 50 MCG NASAL SPRAY | 700 | $49,755.23 | $71.08 |
| VERAMYST 27.5 MCG NASAL SPRAY | 74 | $5,449.82 | $73.65 |
| FLONASE 0.05% NASAL SPRAY | 4 | $303.32 | $75.83 |
| RHINOCORT AQUA NASAL SPRAY | 330 | $25,819.22 | $78.24 |
| NASACORT AQ NASAL SPRAY | 732 | $57,329.01 | $78.32 |
| BECONASE AQ 0.042% SPRAY | 34 | $3,555.70 | $104.58 |
| NASAREL 29 MCG-0.025% SPRAY | 3 | $521.88 | $173.96 |
| Total | 3201 | $203,826.36 | 1421 Recipients |


TOTAL RXS
INTRANASAL CORTICOSTEROIDS
JANUARY 2002 - MARCH 2008
700
600
500
400
300
200
100
0
Jan-02
Mar-02
May-02
Jul-02
Sep-02
Nov-02
Jan-03
Mar-03
May-03
Jul-03
Sep-03
Nov-03
Jan-04
Mar-04
May-04
Jul-04
Sep-04
Nov-04
Jan-05
Mar-05
May-05
Jul-05
Sep-05
Nov-05
Jan-06
Mar-06
May-06
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08

# TOTAL PATIENTS
# INTRANASAL CORTICOSTEROIDS
# JANUARY 2002 - MARCH 2008



# TOTAL CLAIMS COST
# INTRANASAL CORTICOSTEROIDS
# JANUARY 2002 - MARCH 2008



# Intranasal Corticosteroid PA Form


Prior Authorization Vendor for ND Medicaid

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

ND Medicaid requires that patients receiving a new prescription for Intranasal Corticosteroids try Flunisolide or Fluticasone as first line therapy.

***Note: Fluticasone or Flunisolide does not require a prior authorization.**

**Part I: TO BE COMPLETED BY PHYSICIAN**

| Recipient Name | Recipient Date of Birth | Recipient Medicaid ID Number | |
|---|---|---|---|
| Physician Name | | | |
| Physician Medicaid Provider Number | Telephone Number | Fax Number | |
| Address | City | State | Zip Code |

| **Requested Drug and Dosage:** | **Diagnosis for this request:** |
|---|---|
| □ BECONASE AQ □ VERAMYST<br>□ RHINOCORT AQUA □ NASONEX<br>□ OMNARIS □ NASACORT AQ | |

**Qualifications for coverage:**

| □ Failed flunisolide or fluticasone therapy | Start Date | End Date | Dose | Frequency |
|---|---|---|---|---|
| | | | | |

□ *I confirm that I have considered a generic or other alternative and that the requested drug is expected to result in the successful medical management of the recipient.*

| Physician Signature | Date |
|---|---|
| | |

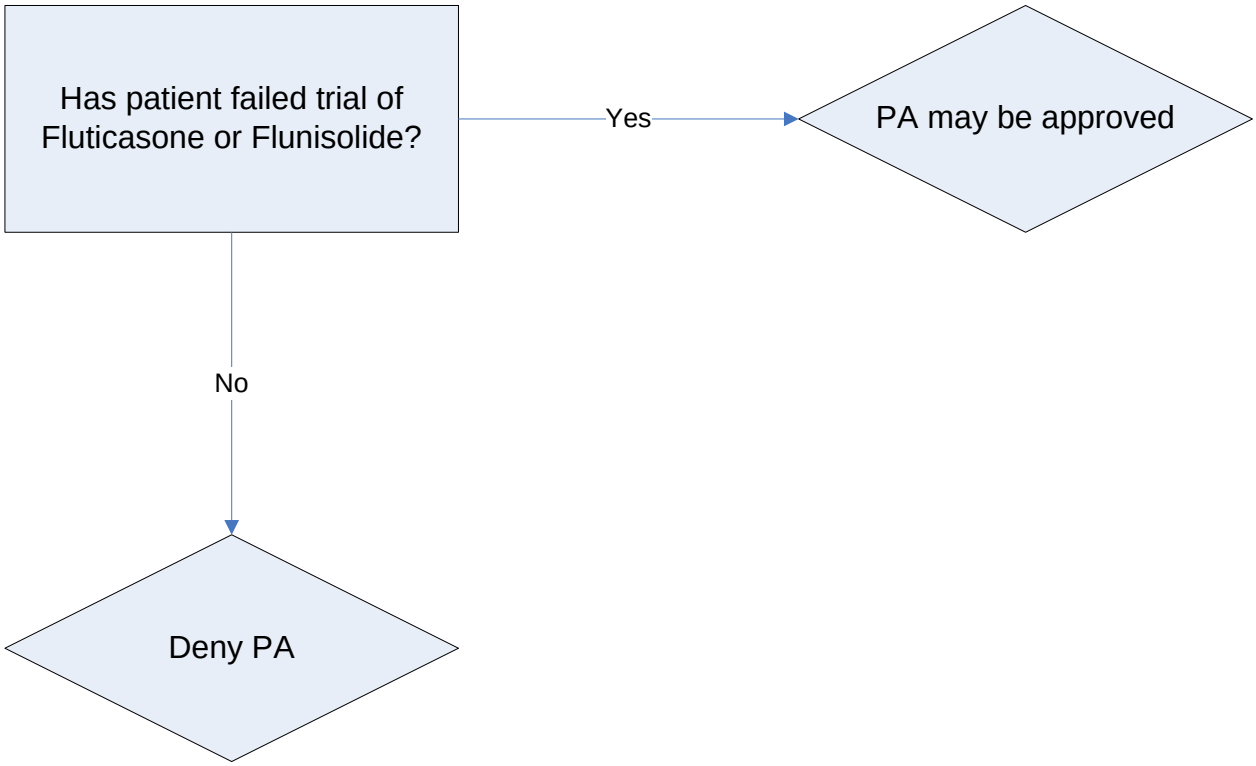
**Part II: TO BE COMPLETED BY PHARMACY**

| PHARMACY NAME: | | | ND MEDICAID PROVIDER NUMBER: |
|---|---|---|---|
| TELEPHONE NUMBER | FAX NUMBER | DRUG | NDC # |
| | | | |

**Part III: FOR OFFICIAL USE ONLY**

| Date Received | Initials: |
|---|---|
| Approved -<br>Effective dates of PA: From: / / To: / / | Approved by: |
| Denied: (Reasons) | |

# North Dakota Department of Human Services
# Intranasal Corticosteroid Authorization Algorithm



**North Dakota Department of Human Services**
**DUR Board Meeting**
**Vusion® Review**

## I. Overview

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

## II. Pharmacology

Vusion® ointment contains miconazole 0.25%, zinc oxide (15%) and white petrolatum (81.35%). Miconazole acts topically as an antifungal agent against candidiasis. The concentration of miconazole, 0.25%, is much lower than the concentration of miconazole found in over-the-counter antifungal products. This may be important since the diaper can serve as an occlusive dressing, thereby increasing the systemic absorption of miconazole. Zinc oxide and white petrolatum act as skin protectants.

## III. Warnings/Precautions

***General*** **-** If irritation occurs or if the rash worsens, use of the medication should be discontinued. Vusion® ointment is for topical use only, not for ophthalmic, oral, or intravaginal use. The safety of Vusion® ointment when used for longer than 7 days is not known.

***Immunocompromised patients*** **-** The safety and efficacy of Vusion® ointment have not been demonstrated in immunocompromised patients.

***Incontinent patients*** **-** The safety and efficacy of Vusion® ointment have not been evaluated in incontinent adult patients.

***Drug resistance*** **-** Do not use Vusion® ointment 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.

***Pregnancy*** **-** Category C

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

***Elderly*** **-** Clinical studies of Vusion® ointment did not include any subjects 65 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/white 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 |
|---|---|---|
| Vusion® ointment | Prior to application, the skin should be cleansed and dried.<br><br>The ointment should be applied to the affected area at each diaper change for 7 days. | 30gm tube, 50gm tube |

## VII. Cost Comparisons

Vusion® ointment is available as a 30 and 50 gram tube. The estimated acquisition cost is approximately $89/tube.

| North Dakota Medicaid Vusion® Utilization | | |
|---|---|---|
| **Drug** | **Qty Dispensed** | **Total Reimb Amt** |
| Vusion® Ointment | 30 | 93.63 |
| Total | 30 | 93.63 |

## 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%). 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. 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 is cost prohibitive.

**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 PA FORM

HEALTH INFORMATION DESIGNS

Prior Authorization Vendor for ND Medicaid

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

ND Medicaid requires that patients receiving a new prescription for Vusion must try other topical antifungal products as first line therapy.

***Note: Nystatin and clotrimazole do not require a prior authorization.**

**Part I: TO BE COMPLETED BY PHYSICIAN**

| Recipient Name | Recipient Date of Birth | Recipient Medicaid ID Number | |
|---|---|---|---|
| Physician Name | | | |
| Physician Medicaid Provider Number | Telephone Number | Fax Number | |
| Address | City | State | Zip Code |
| **Requested Drug and Dosage:**<br>□ VUSION | **Diagnosis for this request:** | | |

**Qualifications for coverage:**

| □ Failed antifungal therapy<br>Name of medication failed:<br>_____ | Start Date | End Date | Dose | Frequency |
|---|---|---|---|---|

□ *I confirm that I have considered a generic or other alternative and that the requested drug is expected to result in the successful medical management of the recipient.*

| Physician Signature | Date |
|---|---|

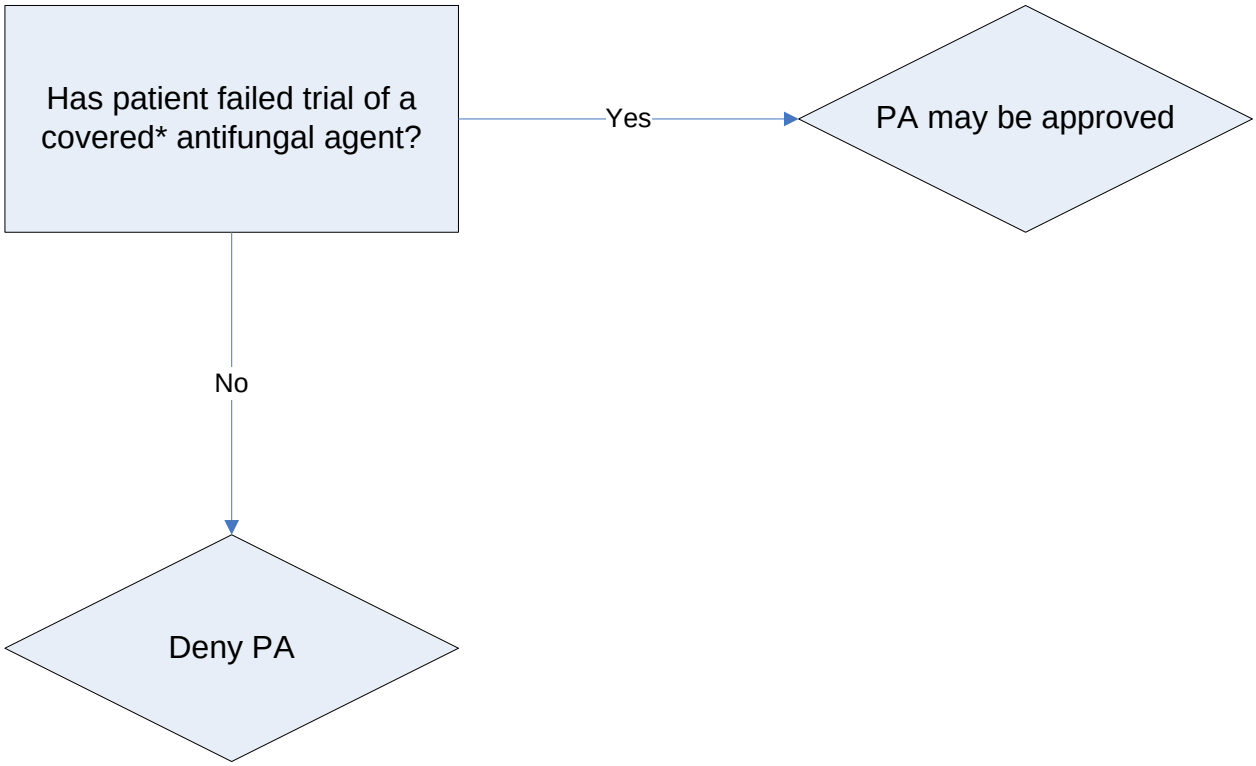
**Part II: TO BE COMPLETED BY PHARMACY**

| PHARMACY NAME: | | | ND MEDICAID PROVIDER NUMBER: |
|---|---|---|---|
| TELEPHONE NUMBER | FAX NUMBER | DRUG | NDC # |

**Part III: FOR OFFICIAL USE ONLY**

| Date Received | Initials: |
|---|---|
| Approved -<br>Effective dates of PA: From: / / To: / / | Approved by: |
| Denied: (Reasons) | |

# North Dakota Department of Human Services
# Vusion Authorization Algorithm




*Nystatin and clotrimazole do not require a PA

# Growth Hormone PRIOR AUTHORIZATION

HEALTH INFORMATION DESIGNS

Prior Authorization Vendor for ND Medicaid

Clear Fields

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

ND Medicaid requires that patients receiving Growth Hormone meet one of the criteria below:

- **Growth Hormone Deficiency in children and adults with a history of hypothalamic pituitary disease**
- **Short stature associated with chronic renal insufficiency before renal transplantation**
- **Short stature in patients with Turners Syndrome (TS) or Prader-Willi Syndrome (PWS)**
- **Human Immunodeficiency Virus (HIV) associated wasting in adults**

**Part I: TO BE COMPLETED BY PHYSICIAN**

| | |
|---|---|
| RECIPIENT NAME: | RECIPIENT MEDICAID ID NUMBER: |
| Recipient Date of birth: / / | |
| PHYSICIAN NAME: | PHYSICIAN MEDICAID ID NUMBER: |
| Address: | Phone: ( ) |
| City: | FAX: ( ) |
| State: Zip: | |
| **REQUESTED DRUG:** | **Requested Dosage:** (must be completed) |

**Qualifications for coverage:**

| | | |
|---|---|---|
| Criteria met: | Diagnosis Date:<br>Drug: | Dose:<br>Frequency: |
| Physician Signature: | | Date: |

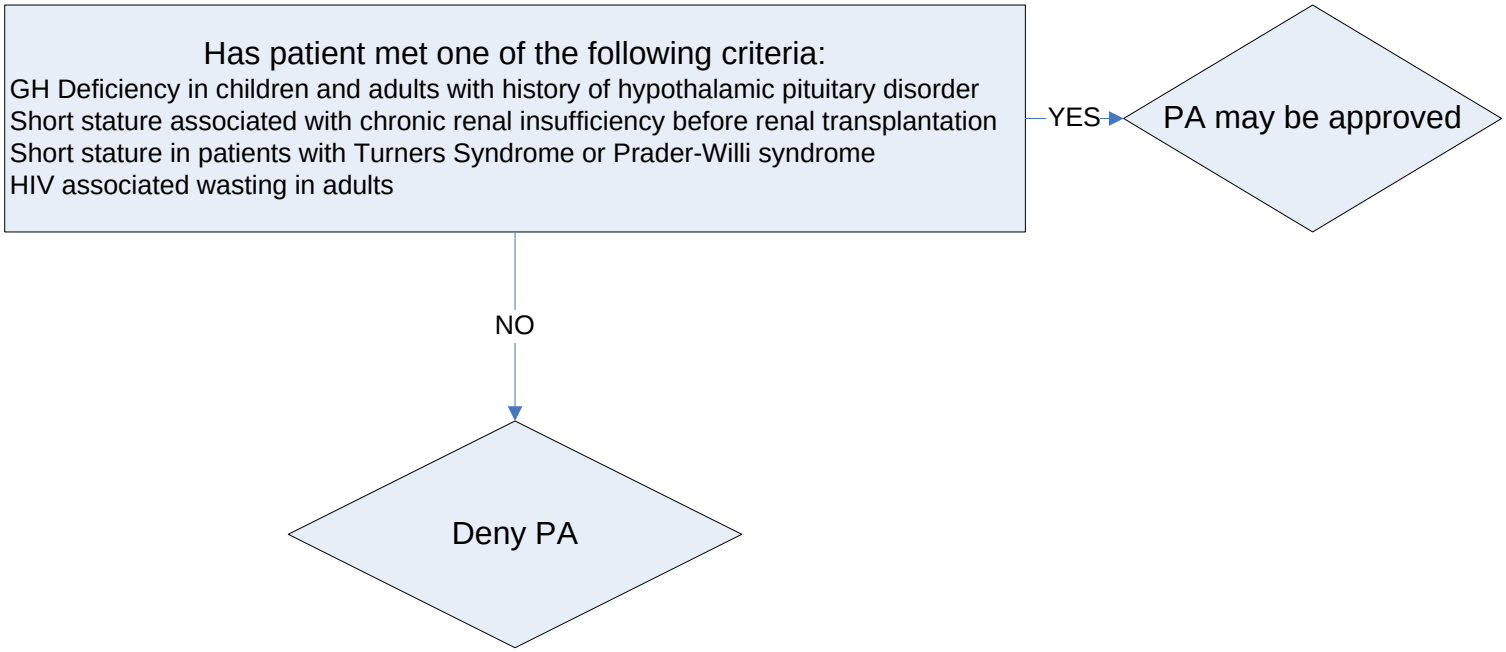
**Part II: TO BE COMPLETED BY PHARMACY**

| | |
|---|---|
| PHARMACY NAME: | ND MEDICAID PROVIDER NUMBER: |
| Phone: | FAX: |
| Drug: | NDC#: |

**Part III: FOR OFFICIAL USE ONLY**

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

# North Dakota Department of Human Services
# Growth Hormone Authorization Algorithm



| North Dakota Medicaid Growth Hormone Utilization | | |
|---|---|---|
| 04/01/07 - 03/31/08 | | |
| **Label Name** | **Rx Num** | **Total Reimb Amt** |
| GENOTROPIN MINIQUICK 2 MG | 2 | $5,590.12 |
| GENOTROPIN MINIQUICK 0.6 MG | 9 | $8,010.99 |
| GENOTROPIN 13.8 MG CARTRIDGE | 5 | $15,227.21 |
| Total 3 Recipients | 16 | $28,828.32 |

HEALTH INFORMATION DESIGNS

# ARB and Renin Inhibitor PA Form

Clear Fields

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

Prior Authorization Vendor for ND Medicaid

ND Medicaid requires that patients receiving an ARB or Renin Inhibitor, must use and fail one ACE Inhibitor.

- Angiotensin II receptor antagonists: Hyzaar, Micardis, Micardis/HCT, Teveten, Teveten/HCT, Atacand, Atacand/HCT, Avapro, Avalide, Benicar, Benicar/HCT, Cozaar, Diovan, Diovan/HCT
- Renin Inhibitor: Tekturna

**Part I: TO BE COMPLETED BY PHYSICIAN**

| | |
|---|---|
| RECIPIENT NAME: | RECIPIENT MEDICAID ID NUMBER: |
| Recipient Date of birth: / / | |
| | |
| PHYSICIAN NAME: | PHYSICIAN MEDICAID ID NUMBER: |
| Address: | Phone: ( ) |
| City: | FAX: ( ) |
| State: Zip: | |

| | |
|---|---|
| **REQUESTED DRUG:** | **Requested Dosage:** (must be completed) |
| | **Diagnosis for this request:** |

**Qualifications for coverage:**

| | | |
|---|---|---|
| ☐ Failed ACE Inhibitor | Start Date: | Dose: |
| | End Date: | Frequency: |

☐ *I confirm that I have considered a generic or other alternative and that the requested drug is expected to result in the successful medical management of the recipient.*

Physician Signature: Date:

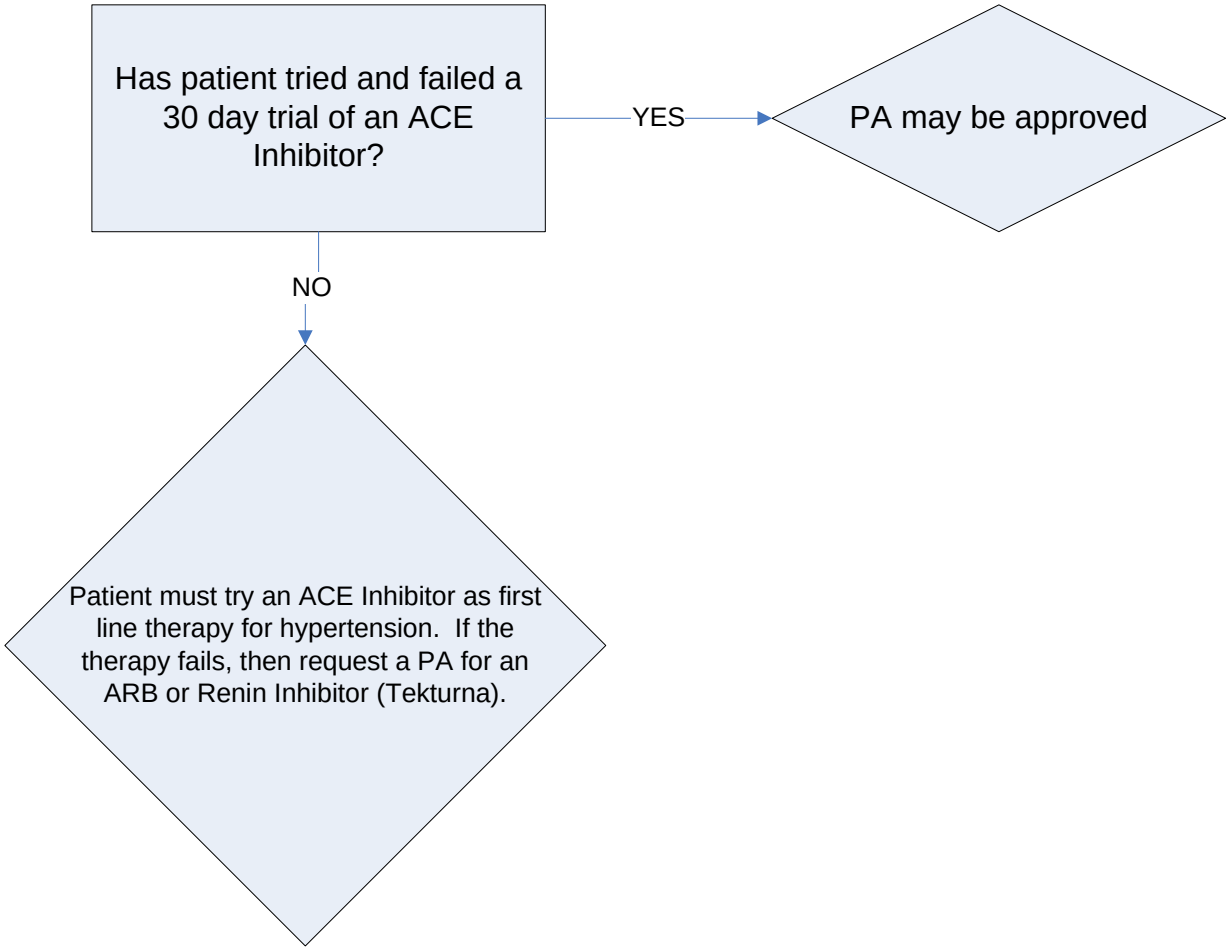
**Part II: TO BE COMPLETED BY PHARMACY**

| | |
|---|---|
| PHARMACY NAME: | ND MEDICAID PROVIDER NUMBER: |
| Phone: ( ): | FAX:: ( ) |
| Drug: | NDC#: |

**Part III: FOR OFFICIAL USE ONLY**

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

# North Dakota Department of Human Services
# ARB and Renin Inhibitor (Tekturna) Authorization Criteria Algorithm



**NORTH DAKOTA MEDICAID**
**Percentage Market Share Within Sub-Classes**
**ARBS**

| | FEB 04 | AUG 05 | MAR 08 |
|---|---|---|---|
| **All ARBS(No Subclass)** | | | |
| **ATACAND** | 12.11 | 12.05 | 9.24 |
| **ATACAND HCT** | 1.93 | 2.45 | 0.84 |
| **AVALIDE** | 1.68 | 2.04 | 0.84 |
| **AVAPRO** | 7.86 | 8.27 | 5.04 |
| **BENICAR** | 7.09 | 8.99 | 9.24 |
| **BENICAR HCT** | 1.16 | 4.19 | 9.24 |
| **COZAAR** | 26.80 | 24.51 | 21.01 |
| **DIOVAN** | 21.39 | 20.84 | 22.69 |
| **DIOVAN HCT** | 8.63 | 7.97 | 5.88 |
| **HYZAAR** | 9.66 | 5.82 | 6.72 |
| **MICARDIS** | 1.16 | 1.43 | 5.88 |
| **MICARDIS HCT** | 0.13 | 1.02 | 3.36 |
| **TEKTURNA** | 0.00 | 0.00 | 0.00 |
| **TEKTURNA HCT** | 0.00 | 0.00 | 0.00 |
| **TEVETEN** | 0.26 | 0.41 | 0.00 |
| **TEVETEN HCT** | 0.13 | 0.00 | 0.00 |

HEALTH INFORMATION DESIGNS

Prior Authorization Vendor for ND Medicaid

# Dispense As Written PA Form

Clear Fields

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this prior authorization, call**
**866-773-0695**

North Dakota Medicaid requires that patients receiving a brand name drug, when there is a generic equivalent available, must first try and fail the generic product for one of the following reasons

- **The generic product was not effective**
- **There was an adverse reaction with the generic product**

## Part I: TO BE COMPLETED BY PHYSICIAN

| Recipient Name | Recipient Date of Birth | Recipient Medicaid ID Number | |
|---|---|---|---|
| Physician Name | | | |
| Physician Medicaid Provider Number | Telephone Number | Fax Number | |
| Address | City | State | Zip Code |

| **Requested Drug** | **Requested Dosage** (must be completed) | **Diagnosis for the request** |
|---|---|---|
| | | |

## Qualifications for coverage:

| ☐ Failed generic equivalent | Start Date | End Date | Dose | Frequency |
|---|---|---|---|---|
| ☐ Adverse reaction to generic equivalent (attach FDA Medwatch form) or contraindicated (provide description): | | | | |

☐ *I confirm that I have considered a generic or other alternative and that the requested drug is expected to result in the successful medical management of the recipient.*

| Physician Signature | Date |
|---|---|
| | |

## Part II: TO BE COMPLETED BY PHARMACY

| Pharmacy Name | | | ND Medicaid Provider Number |
|---|---|---|---|
| Telephone Number | Fax Number | Drug | NDC # |

## Part III: FOR STATE USE ONLY

| Date Received | CSP MD ☐ Yes ☐ No<br>CSP Pharmacy ☐ Yes ☐ No | Daily Units<br>Bypass Units ☐ Yes ☐ No | Req App | CLM Limit |
|---|---|---|---|---|
| Approved - Effective dates of PA From: / / To: / / | | | Approved By | |
| Denied (Reasons) | | | | |

## DAW-1 Requests May 2008

| Drug | Claims |
|---|---|
| Synthroid | 4 |
| Tegretol | 4 |
| Dilantin | 2 |
| Tenex | 1 |
| Ventolin HFA | 1 |
| Adderall | 1 |
| Lexapro | 1 |
| Coumadin | 1 |
| Trileptal | 1 |
| Glucovance | 1 |
| Nortriptyline | 1 |
| Miralax powder | 1 |
| Pantoprazole | 1 |
| Oxycontin | 1 |
| Total-21 submitted | 12 approved/9denied |

**AMRIX PA Form**

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

HEALTH INFORMATION DESIGNS

Prior Authorization Vendor for ND Medicaid

ND Medicaid requires that patients try and fail generic cyclobenzaprine.
****Note:***

- **Cyclobenzaprine does not require PA**
- **Patient must fail therapy on generic cyclobenzaprine before a PA will be considered for Amrix.**

**Part I: TO BE COMPLETED BY PHYSICIAN**

| | | | |
|---|---|---|---|
| RECIPIENT NAME: | | | RECIPIENT MEDICAID ID NUMBER: |
| Recipient Date of birth: / / | | | |
| | | | |
| PHYSICIAN NAME: | | | PHYSICIAN MEDICAID ID NUMBER: |
| Address: | | | Phone: ( ) |
| City: | | | FAX: ( ) |
| State: | Zip: | | |
| **REQUESTED DRUG:** | | **Requested Dosage:** (must be completed) | |

**Qualifications for coverage:**

| | | |
|---|---|---|
| ❑ Failed cyclobenzaprine therapy | Start Date: | Dose: |
| | End Date: | Frequency: |

□ *I confirm that I have considered a generic or other alternative and that the requested drug is expected to result in the successful medical management of the recipient.*

Physician Signature: Date:

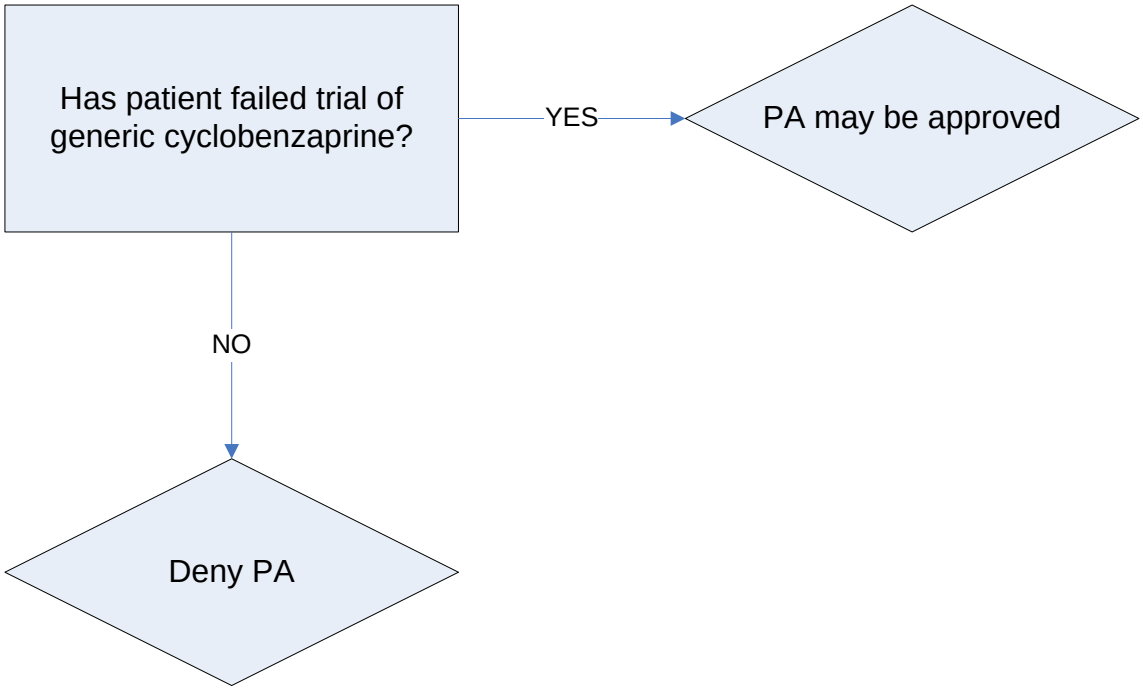
**Part II: TO BE COMPLETED BY PHARMACY**

| | | | |
|---|---|---|---|
| PHARMACY NAME: | | | ND MEDICAID PROVIDER NUMBER: |
| Phone: | | | FAX: |
| Drug: | | | NDC#: |

**Part III: FOR OFFICIAL USE ONLY**

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

# North Dakota Department of Human Services
# Amrix Authorization Algorithm



HEALTH INFORMATION DESIGNS

# Xenical Prior Authorization

Clear Fields

**Fax Completed Form to:**
**866-254-0761**
**For questions regarding this Prior authorization, call**
**866-773-0695**

Prior Authorization Vendor for ND Medicaid

| Patient's Name: Last | First | Middle | Date of Birth: | Client I.D. Number: |
|---|---|---|---|---|
| Patient's Address: | | | | |
| Patient's Residence: | ☐ NF/Swing Bed ☐ ICF/MR ☐ Basic Care ☐ Private Home | | | |

**I. TO BE COMPLETED BY PHYSICIAN**

| Item Prescribed: | Diagnosis & Prognosis: |
|---|---|
| Explanation of Medical Necessity, Duration of Need and Date of Visit: | |

☐ *I certify that the above-prescribed durable medical equipment/supplies/medication is medically necessary for this patient's well being. In my opinion, this is reasonable and necessary in conformance with accepted standards of medical practice for the treatment of this condition. This has not been prescribed as a convenience to the patient.*

| Physician's Name: (Please Print) | Provider No./UPIN: | Physician's Signature: | Date: |
|---|---|---|---|
| | | | |

**II. TO BE COMPLETED BY PROVIDER (SUPPLIER)**

| Provider's Name: | Provider's Number: | Telephone Number: | |
|---|---|---|---|
| Provider's Street Address: | City: | State: | Zip: |
| Provider Signature: | | | Date: |

| PROPOSED MEDICAL EQUIPMENT OR SUPPLIES | | | | | | STATE USE ONLY | |
|---|---|---|---|---|---|---|---|
| NDC/HCPC CODE | List: Item, make/model, units or days, quantity per case, and number of days supply hours/minutes of labor/evaluations. Continue on another page of form if necessary. | DATE(S) OF SERVICE START/STOP | CUSTOMARY OR USUAL RETAIL | ACQUISITION COST | MOS. OF RENTAL/ QTY PRESCRIBED | MAXI REIM | APPR DENY |
| | 1) | Start | | | | | |
| Comments: | | Stop | | | | | |
| | 2) | Start | | | | | |
| Comments: | | Stop | | | | | |
| | 3) | Start | | | | | |
| Comments: | | Stop | | | | | |
| | 4) | Start | | | | | |
| Comments: | | Stop | | | | | |
| | 5) | Start | | | | | |
| Comments: | | Stop | | | | | |

☐ *I acknowledge that the approval of this request does not guarantee the eligibility of the recipient nor ensure payment for services. I understand that eligibility is established by the appropriate county social service board monthly and payment is contingent upon eligibility at the time the service is provided. I also understand that payment for such services may be denied unless prior approval is obtained.*

REMARKS: (STATE USE ONLY)

DISTRIBUTION: Original - Submit to Medical Services. Upon approval, a computer printed notice with the assigned request number and approval/denial will be returned. The number must be placed on the claim form.

INSTRUCTION FOR COMPLETION:

Section I -To be completed by the prescribing physician, provider name and physician signature are required. Justification for approval or denial of the medical equipment or supplies will be based upon this information. Along with the diagnosis, a comprehensive explanation of MEDICAL NECESSITY must confirm the prescription.

Section II -To be completed by the provider (supplier) of service. Complete name, address, telephone number and provider number should be entered. The proposed medical equipment/supplies/or medication to be described and listed separately. The description must be complete enough for the Department of Human Services to verify your customary or usual retail charge; acquisition cost must be indicated for all items (See DMEOPS Manual for rental specifics.) Upon completion, provider should mail the original copy only to: Medical Services, Department of Human Services, 600 East Boulevard Avenue, Bismarck, ND 58505-0261.

PRIOR AUTHORIZATION PROCESS:

1. The Department of Human Services will review, approve/deny, and key the request. A computer generated response with an assigned prior authorization number will be returned to the provider.
2. Upon approval, HCFA 1500 billers should enter the assigned prior approval number on the claim form before submitting to Medical Services for payment. The assigned prior approval number should not be submitted on pharmacy point-of-sale claims as the claims edit process locates and inserts the prior approval number electronically. Date(s) of Service must be indicated when submitting claims to this department for payment.

The Maximum Reimbursement listed is based on North Dakota Medical Services' fee. If other payor's/insurance is involved in the settlement of this claim, the Department of Human Services will abide by other payor's/insurance adjudication and accept other payor's/insurance allowable amount if different than the amount listed and adjudicate payment of deductible(s) and coinsurance amount(s).

# North Dakota Xenical Criteria

- **Patient must be seen by Dietician**
- **Dietician evaluation (including height and weight) must be attached**
- **BMI must be equal to or greater than 40**
- **5% weight loss realized for continued approval (every 6 months)**

**North Dakota Medicaid Xenical Claims**

**April 2007 – March 2008**

| Drug | Rx Num | Total Reimb |
|---|---|---|
| Xenical 120 | 37 | $7,837.38 |
| Total-8 recipients | 37 | $7,837.38 |

| Age | Sex | Rx Count | Height | Weight | BMI | History |
|---|---|---|---|---|---|---|
| 43 | F | 5 | 65” | 240 lbs | 40 | 10/27/07 = 255lbs |
| 42 | F | 4 | 66” | 258 lbs | 41.6 | 6/15/03 = 233.5; 8/22/07 = 313(stopped smoking) |
| 44 | F | 4 | | 212 lbs | 36 | 4/03 = 230; 10/07 = 172 |
| 40 | F | 5 | 63.75” | 259 lbs | 42.18 | |
| 35 | F | 11 | 65” | 342.4 lbs | 55.3 | 10/11/07 - 304.6 lbs : 4/1/08 -283.4 lbs |
| 28 | F | 3 | | | | |
| 49 | F | 3 | 63.5” | 303 lbs | 53.67 | 3/01/00 = 340 lbs; 11/26/07 = 320lbs |
| 24 | F | 2 | | | | |

# NORTH DAKOTA MEDICAID
# RETROSPECTIVE DRUG UTILIZATION REVIEW
# CRITERIA RECOMMENDATIONS
# JULY 2008

| *Recommendations* | *Approved* | *Rejected* |
|---|---|---|

**1. Desvenlafaxine / High Dose** _____ _____

Alert Message: Pristiq (desvenlafaxine) may be over-utilized. The manufacturer's recommended maximum daily dose is 50 mg. Doses of 50 to 400 mg per day were shown to be effective but there is no evidence that doses greater than 50 mg per day confer any additional benefit.
Conflict Code: HD – High Dose
Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | | |

Max Dose: > 50 mg/day
References:
Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**2. Desvenlafaxine / Nonadherence** _____ _____

Alert Message: Pristiq (desvenlafaxine) non-adherence to the dosing regimen may result in sub-therapeutic effects, which may lead to decreased patient outcomes and additional medical cost.
Conflict Code: LR – Non-adherence
Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | | |

References:
Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**3. Desvenlafaxine / Renal Impairment Dose** _____ _____

Alert Message: The recommended maximum dose of Pristiq (desvenlafaxine) in patients with severe renal impairment or end-stage renal disease (ESRD) is 50 mg every other day. Patients with moderate renal impairment should receive a maximum daily dose of 50 mg. The dose should not be escalated in patients with moderate or severe renal impairment or ESRD.
Conflict Code: HD – High Dose
Drugs/Diseases:

| Util A | Util B | Util C (Inclusive) |
|---|---|---|
| Desvenlafaxine | | ESRD |
| | | Renal Disease Stage III, IV, V |
| | | PhosLo |
| | | Renagel |
| | | Zemplar |
| | | Fosrenol |

Max Dose: 50 mg QOD
References:
Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**4. Desvenlafaxine / MAO Inhibitors** _____ _____

Alert Message: Pristiq (desvenlafaxine) is contraindicated in patients taking a Monoamine Oxidase Inhibitor (MAOI) or in patients who have taken a MAOI within the preceding 14 days because serious, sometimes fatal, interactions may occur. Symptoms may include but are not limited to: tremor, seizures, hyperthermia with features resembling neuroleptic malignant syndrome and mental status changes. At least 7 days should be allowed after stopping desvenlafaxine before starting a MAOI.

Conflict Code: DD – Drug/Drug Interaction

Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | Phenelzine | |
| | Isocarboxazid | |
| | Tranylcypromine | |
| | Selegiline | |
| | Linezolid | |

References:

Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**5. Desvenlafaxine / Venlafaxine** _____ _____

Alert Message: Pristiq (desvenlafaxine) should not be used concurrently with venlafaxine (Effexor/Effexor XR). Desvenlafaxine is the major active metabolite of venlafaxine and concomitant use with venlafaxine may result in elevated plasma concentrations of desvenlafaxine and risk of adverse effects including serotonin syndrome (e.g., agitation, hallucinations, tachycardia, hyperthermia, hyperreflexia, nausea, vomiting).

Conflict Code: DD – Therapeutic Duplication

Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | Venlafaxine | |

References:

Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**6. Desvenlafaxine / Serotonergic Agents** _____ _____

Alert Message: Caution is advised if Pristiq (desvenlafaxine) is co-administered with other serotonergic agents (SSRIs, SNRIs, triptans). Concurrent use of serotonergic agents may result in a potentially life-threatening serotonin syndrome (e.g., agitation, hallucinations, tachycardia, hyperthermia, hyperreflexia, nausea, vomiting). If concomitant therapy is warranted, observe patient closely for adverse effects, particularly during initiation or dose increases.

Conflict Code: DD – Drug/Drug Interaction

Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | SSRIs | |
| | Duloxetine | |
| | Triptans | |

References:

Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**7. Desvenlafaxine / Aspirin & NSAIDS** _____ _____

Alert Message: The concurrent use of Pristiq (desvenlafaxine) and aspirin or NSAIDs may increase the risk of GI bleeding due to alterations in platelet hemostasis. Drugs which inhibit the reuptake of serotonin cause decreased serotonin uptake by platelets, decreasing serotonin stores and increasing bleeding time.
Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | Aspirin | |
| | NSAIDS | |

References:
Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**8. Desvenlafaxine / Warfarin** _____ _____

Alert Message: The concurrent use of Pristiq (desvenlafaxine) and warfarin may alter the anticoagulant effects of warfarin and increase the risk of bleeding. Drugs which inhibit the reuptake of serotonin cause decreased serotonin uptake by platelets, decreasing serotonin stores and increasing bleeding time. Monitor patients who are receiving warfarin therapy when desvenlafaxine is initiated or discontinued.
Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | Warfarin | |

References:
Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.

**9. Desvenlafaxine / Potent CYP 3A4 Inhibitors** _____ _____

Alert Message: Concomitant use of Pristiq (desvenlafaxine), a CYP3A4 substrate, with potent 3A4 inhibitors may result in elevated desvenlafaxine plasma concentrations. The patient may be at increased risk for desvenlafaxine adverse effects (e.g., anxiety, insomnia, dizziness, headache, and specific male sexual function disorders).
Conflict Code: DD – Drug/Drug Interaction
Drugs/Diseases:

| Util A | Util B | Util C |
|---|---|---|
| Desvenlafaxine | Ketoconazole | |
| | Ritonavir | |
| | Itraconazole | |
| | Nelfinavir | |
| | Saquinavir | |
| | Nefazodone | |
| | Clarithromycin | |
| | Telithromycin | |
| | Nefazodone | |

References:
Pristiq Prescribing Information, Feb. 2008, Wyeth Pharmaceuticals, Inc.
Facts & Comparisons, 2008 Updates.
Flockhart, DA. Drug Interactions: Cytochrome P450 Drug Interaction Table. Indiana University School of Medicine (2007). http://medicine.iupui.edu/flockhart/table.htm. Accessed 06/16/2008.

**10. Risperdal Consta / Oral Atypical Antipsychotics** _____ _____

Alert Message: Patients prescribed Risperdal Consta (risperidone injection) should receive oral antipsychotic supplementation until risperidone has achieved steady-state plasma concentrations, typically after 4 injections. The use of oral antipsychotics with risperidone injection beyond the recommended transition time period may represent an unnecessary and costly duplication of therapy.

Conflict Code: TD – Therapeutic Duplication (DD-100P)

Drugs/Disease

| Util A | Util B | Util C |
|---|---|---|
| Risperdal Consta | Clozapine | |
| | Risperidone (except Consta) | |
| | Olanzapine | |
| | Quetiapine | |
| | Ziprasidone | |
| | Aripiprazole | |
| | Paliperidone | |

References:

Risperdal Consta Prescribing Information, Sept 2007, Janssen Pharmaceuticals, Ltd.
Facts & Comparisons, 2007 Updates.
Clinical Pharmacology, Gold Standard, 2007.
Micromedex Healthcare Series, DrugDex Drug Evaluations, 2007.