Department of Defense
Pharmacoeconomic Center

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MCCS-GPE 17 May 1999

MEMORANDUM FOR Assistant Secretary of Defense (Health Affairs)

SUBJECT: Minutes of the Department of Defense (DoD) Pharmacy and Therapeutics (P&T) Committee Meeting

1. In accordance with Health Affairs policy 98-025, a meeting of the DoD P&T committee convened at 0800 hours on 14 May 1999, at the DoD Pharmacoeconomic Center (PEC), Fort Sam Houston, TX.

2. MEMBERS PRESENT:

COL Daniel D. Remund, MS	Co-chairman
CDR Terrance Egland, MC	Co-chairman
COL Rosa Stith, MC	Army
LTC Judith O'Connor, MC	Army
Danielle Doyle	Army
CDR Matt Nutaitis, MC	Navy
LCDR Denise Graham, MSC	Navy
LtCol John R. Downs, MC	Air Force
LtCol William Sykora, MC	Air Force
MAJ George Jones, BSC	Air Force
CDR Robert W. Rist	Coast Guard
LTC (P) George Crawford, MS	Joint Readiness Clinical Advisory Board
MAJ Steven Humburg, MC	Health Affairs
MAJ Mickey Bellemin BSC	Defense Supply Center Philadelphia (DSCP)
Ronald L. Mosier	Department of Veterans Affairs (alternate)
Ray Nan Berry	Foundation Health
William Hudson	Humana, Inc
Ron McDonald	Sierra Military Health Service
Gene Lakey	TriWest

3. OTHERS PRESENT:

CAPT Charlie Hostettler, MSC	DoD Pharmacy Program Director, TMA
CDR Mark Brouker, MSC	DoD Pharmacoeconomic Center
Lt Col Gary Blamire, BSC	Tricare Southwest Lead Agent
Lt Col (sel) Greg Russie, BSC	Air Force (alternate representative)
Tom Kellenberger	Merck-Medco Representative
Shelby Tanner, Jr.	Staff Judge Advocate, Fort Sam Houston
Shana Trice	DoD Pharmacoeconomic Center

4. ADMINISTRATIVE ISSUES:

   A. The minutes from the 5 February 1999 meeting were accepted as written.

   B. Committee membership: MAJ George Jones replaced Lt Col (sel) Greg Russie as the Air Force pharmacist committee member. Lt Col (sel) Russie will serve as the alternate Air Force pharmacist committee member. LCDR Denise Graham will enter a Duty Under Instruction (DUINS) Program. A Navy pharmacist has not yet been named to replace LCDR Graham on the committee. LTC Joel Schmidt, Walter Reed Army Medical Center, is the alternate Army physician member. LTC Kent Maneval, Walter Reed Army Medical Center, is the alternate Army pharmacist committee member.

5. OLD BUSINESS: Issues pending from previous meetings were addressed under new business because the committee needed to address the proposal to restructure the National Mail Order Pharmacy (NMOP) formulary as its first item of business.

6. NEW BUSINESS: Proposal to restructure the NMOP formulary.

   A. The committee approved a PEC proposal to replace the NMOP Preferred Drug List (PDL) with a restructured NMOP formulary. The restructured NMOP formulary is designed to:

      - Enable patients and providers to more easily and accurately determine the availability of medications in the NMOP.
      - Increase the use of medications that offer significant clinical or economic advantages compared to other medications.
      - Support compliance with DoD and joint VA/DoD pharmaceutical contracts.

   B. The NMOP Preferred Drug List (PDL) will be replaced by an NMOP formulary that includes specific injectable drugs and all non-injectable prescription drugs with the following exceptions or limitations:

- *Excluded drugs and drug classes:* Some drugs or classes of drugs are excluded from the NMOP formulary due to TRICARE policy or DoD P&T Committee decisions. These drugs are not available through the NMOP.
- *Drugs subject to prescribing guidelines or prior authorization:* These drugs must be dispensed in accordance with prescribing guidelines or prior authorization criteria that are established by the DoD P&T Committee.
- *Non-preferred drugs and preferred alternatives:* If the prescriber agrees that a preferred drug is clinically appropriate, a prescription for a non-preferred drug will be changed to a preferred alternative drug.
- *Covered injectable drugs:* The formulary includes selected injectable drugs that are intended for self-administration or are commonly administered in the home setting
- *Covered over-the-counter (OTC) drugs/products*: The formulary includes selected OTC drugs and products.
- *Drugs pending P&T committee review:* Drugs newly approved by the Food & Drug Administration (FDA) that are pending P&T Committee review will not be available through the NMOP until the P&T Committee completes the review and assigns the drug to the appropriate category on the NMOP formulary.

C. Appendix A identifies the drugs that are included in each formulary category in the initial edition of the NMOP formulary.

7. NEW BUSINESS: Agents considered for Basic Core Formulary and NMOP formulary status.

A. Celecoxib (Celebrex), commonly known as a COX-2 inhibitor, is indicated for relief of the symptoms of osteoarthritis and adult rheumatoid arthritis. A summary of efficacy, safety, and cost issues associated with celecoxib is provided at Appendix B. Committee decision: **Do not add to the BCF. Add to the NMOP formulary subject to a prescribing guideline/prior authorization.** Celecoxib is significantly more expensive than other non-steroidal anti-inflammatory drugs, so the prescribing guideline will be designed to target the use of celecoxib to patients who are at high risk for adverse gastrointestinal events. The committee discussed a draft prescribing guideline and provided precepts for the PEC to finalize the guideline. Celecoxib will be available through the NMOP when DSCP and Merck Medco have established procedures for implementing the prescribing guideline.

B. Brand name NSAIDS are 2 to 20 times more expensive than generic NSAIDs based on current DAPA prices. Generic NSAIDs, rather than brand name NSAIDs, should be used to the maximum extent consistent with patients' clinical needs. Committee decision: **The brand name NSAIDs listed below are designated as non-preferred drugs. The preferred alternatives are listed in Appendix 1.**

- nabumetone (Relafen)
- oxaprozin (Daypro)

- etodolac extended release (Lodine XL)
- diclofenac extended release (Voltaren XR)
- naproxen sodium extended release (Napralen)

C. Etanercept (Enbrel) is a new biotech inhibitor of tumor necrosis factor for use in patients with moderate to severe rheumatoid arthritis who have failed other agents. Discussion of a draft prescribing guideline centered on the number and identity of disease-modifying anti-rheumatoid drugs (DMARDS) that a patient must fail before receiving etanercept. The committee was also concerned that the prescribing guideline should take into account an apparent increased risk of serious infections that was recently detected through post-marketing surveillance of patients taking etanercept. The increased risk of serious infections prompted the FDA to revise the warnings section of the package insert for etanercept. The DAPA price for etanercept if $81.93 per dose, which equates to $655.44 per month of therapy. Committee decision: **Do not add to the BCF. Add to the NMOP formulary subject to prescribing guideline/prior authorization.** The committee provided precepts for the PEC to finalize the prescribing guideline. Etanercept will be available through the NMOP when DSCP and Merck Medco have established procedures for implementing the prescribing guideline. To limit the financial waste that occurs when patients discontinue the medication, the NMOP will dispense no more than a 30-day supply of etanercept (2 cartons of 4 injections).

D. Sevelamer hydrochloride (Renagel) is indicated for the reduction of serum phosphorus in patients with end-stage renal disease. It is a nonabsorbable hydrogel polymer that avoids the problems that are associated with phosphate binders containing aluminum or calcium. Aluminum-containing phosphate binders may cause aluminum toxicity resulting in osteomalacia, anemia, and dementia. Systemic absorption of calcium-containing phosphate binders may cause hypercalcemia and increased risk of metastatic calcification. Committee decision: **Do not add to BCF. Add to the NMOP formulary.**

E. Modafinil (Provigil) is used to improve wakefulness in patients with excessive daytime sleepiness associated with narcolepsy. In clinical trials modafinil showed significant improvement on objective and subjective measures of excessive daytime sleepiness compared to placebo. Direct comparisons of the efficacy of modafinil to other agents are not available. The National Transportation Safety Board has requested that the manufacturer conduct trials using modafinil in long-haul truckers to promote wakefulness. The committee expressed concern about the potential for inappropriate use of modafinil to increase alertness among patients who do not have narcolepsy. Committee decision: **Do not add to BCF. Add to the NMOP formulary and monitor usage patterns for evidence of inappropriate use.** (Note: the manufacturer estimates that only about 125,000 people suffer from narcolepsy in the United States, so usage of this drug should be minimal.)

F. Polyethylene glycol (Miralax) is an osmotic agent that is used as a laxative. Committee decision: **Do not add to the BCF. Add to the NMOP formulary.**

G. Corticosteroid oral inhalers: At the Feb 99 meeting the committee tabled action on a proposal to remove triamcinolone (Azmacort) inhaler from the BCF due to an announced DAPA price increase from $7.95 to $12.90 per inhaler. The DAPA price for Azmacort was subsequently reduced to $9.60 per inhaler. The DAPA price for beclomethasone (Vanceril) inhaler was recently increased from $3.45 to $5.75 per inhaler and Vanceril-DS inhaler went from $5.16 to $6.90 per inhaler. The cost per day for Vanceril, Vanceril-DS, and Azmacort inhalers is still less than the cost per day for other corticosteroids for oral inhalation. Committee decision: **Do not change the corticosteroid oral inhalers on the BCF, but continue to monitor price changes in this drug class. Vanceril, Vanceril-DS, and Azmacort remain on the BCF.**

H. Corticosteroid nasal inhalers: Beclomethasone 42mcg/spray (Vancenase Pockethaler) has been the only corticosteroid nasal inhaler on the BCF. The DAPA price for the Vancenase Pockethaler recently increased from $3.76 to $9.25 per inhaler. A PEC estimate of the monthly maintenance costs for various corticosteroid nasal inhalers (based on the dosing frequency and the number of sprays/puffs available in each on the inhalers) showed that the Vancenase Pockethaler no longer offers an economic advantage compared to other inhalers. Committee decision: **Remove beclomethasone 42mcg/spray (Vancenase Pockethaler) from the BCF. The BCF will state that the MTF must have a corticosteroid nasal inhaler on its formulary, but the MTF can select which one to have on its formulary.** The committee intends to review the corticosteroid nasal inhalers at the next meeting to see if a specific inhaler should be selected for the BCF in order to standardize availability across the Military Health System. (OPEN)

I. Premarin vs Ogen vaginal cream: Conjugated estrogen (Premarin) vaginal cream is currently on the BCF. An MTF requested a BCF modification that would allow the MTF to preferentially use estropipate (Ogen) vaginal cream instead of Premarin. There are no apparent differences in efficacy or safety between Premarin and Ogen vaginal creams. The DAPA price for Premarin vaginal cream is almost twice that of Ogen vaginal cream. Committee decision: **Change the BCF listing from conjugated estrogen vaginal cream to "estrogenic vaginal cream." All MTFs must include an estrogenic vaginal cream on their formularies, but the MTFs will select the specific brand.**

8. NEW BUSINESS: Other issues:

A. Fertility drugs: The TRICARE policy manual classifies noncoital reproductive technologies (artificial insemination, in vitro fertilization, gamete intrafallopian transfer, etc.) as noncovered treatments and specifies that services and supplies directly related to a noncovered procedure are not covered. Based on this policy, managed care support contractors in some TRICARE regions use prior authorization procedures to deny coverage at retail network pharmacies for fertility drugs when they are prescribed for use with noncoital reproductive technologies. Currently, the NMOP does not perform prior authorization procedures for fertility drugs. In some cases, the NMOP dispenses fertility drugs to patients who were previously denied coverage through a retail network pharmacy because the drugs were prescribed for use with noncoital reproductive technologies. The

committee concluded that this issue was too complex to be solved at the meeting. A subcommittee was appointed to investigate this issue in greater detail, obtain input from individuals outside of the P&T Committee if necessary, and recommend actions to make the coverage of fertility drugs consistent in the NMOP and the retail pharmacy networks. (OPEN)

B. Sildenafil (Viagra): The prescribing guideline that the PEC prepared for Merck Medco to fax to prescribers is still not used. The committee discussed the stipulation in the prescribing guideline that sildenafil will only be used for organic erectile dysfunction and hypothesized that provisions in the TRICARE policy manual are the basis for this stipulation. The committee reaffirmed that sildenafil should only be dispensed by the NMOP in accordance with the prescribing guideline.

C. Migraine drug usage in the NMOP: MAJ Bellemin reported that the NMOP receives very few complaints regarding the quantity limits for migraine drug therapy. Several committee members commented that the NMOP quantity limits are quite generous compared to quantity limits at MTFs or in other managed care settings. A subcommittee was appointed to review quantity limits for migraine drugs and submit recommendations to the P&T committee at the next meeting. (OPEN)

D. Niacin for antilipemic therapy: The committee reaffirmed its position that the NMOP should provide niacin (in both OTC and prescription forms) for antilipemic therapy. The committee does not intend that niacin should be provided for vitamin supplementation. A basis for the provision of OTC form of niacin may exist in the TRICARE final rule that established requirements and procedures for implementation of the TRICARE program. The TRICARE final rule allows the establishment of "other procedures for the effective operation of the pharmacy programs" to include drug formularies. While drug formularies are often viewed as a means to limit the availability of medications, the NMOP formulary could also be used to expand the availability of medications to include OTC forms of niacin for antilipemic therapy. The restructured NMOP formulary automatically includes prescription forms of niacin. Committee decision: **Add over-the-counter (OTC) forms of niacin prescribed for antilipemic therapy to the list of OTC items that are covered by the NMOP. Implementation is contingent on TMA West policy review.**

E. The discussion of OTC niacin led to a suggestion that needles, syringes, alcohol pads, and lancet should also be provided through the NMOP. Some committee members expressed concern that when co-pays and dispensing fees are taken into account, the beneficiaries would obtain very little benefit and the government would incur a substantial increase in cost. Other members suggested that costs to the government or the managed care support contractor are much higher if the beneficiary obtains such supplies through home health providers. Committee decision: **The NMOP should supply needles, syringes, and alcohol pads when a medication is dispensed for home injection. The NMOP should also supply alcohol pads and lancets for diabetic patients.** The provision of these items through the NMOP is contingent upon the ability of the NMOP COTR and

contracting officer identify methods by which these items can be provided at a reasonable cost.

F. Handling of high dollar items in the NMOP: The committee tabled this issue at the last meeting and asked the NMOP COTR, the PEC, and the MCS contractors to work out a draft design of an NMOP prior authorization process that the committee could review. This issue is resolved by the restructuring of the NMOP formulary, which includes a category of drugs that are subject to prescribing guidelines/prior authorization.

G. NMOP quantity limitations for ophthalmics and topicals (specifically urea 40% cream): The subcommittee that was appointed to review quantity limitations for migraine drugs will also develop recommendations for the P&T committee regarding quantity limitations for ophthalmics and topicals. (OPEN)

9. NEW BUSINESS: Contracting update

A. Insulin: Pre-solicitation conferences with the pharmaceutical companies are scheduled for 18 and 20 May 99. The solicitation will probably be issued within a week to 10 days after pre-solicitation conferences are completed. This is a joint VA/DoD contracting initiative.

B. Statins: DSCP recently completed discussions with the offerors. The deadline for final proposal revisions is 21 May 99. Target date for awarding the contract is 11 Jun 99.

C. Proton pump inhibitors: The solicitation was issued on 7 May 99 and closes on 10 Jun 99.

D. Lisinopril: The solicitation closes on 21 May 99.

E. Blood glucose test strips: The PEC recommends discontinuation of the current contracting initiative to select a single blood glucose test strip for a closed class on the BCF. Contracting initiatives are taking much longer to complete than originally anticipated. Some MTFs are reluctant to adopt the test strip that is currently on the BCF (Precision QID) because they do not want to switch patients twice in the event that a contract is awarded for a different test strip. Given the number of contracting initiatives that DSCP is already working on, a contract for blood glucose test strips would very likely take 8 to 12 months to complete. It is unreasonable to hold up MTF formulary decisions for that length of time. Committee decision: **Discontinue the current blood glucose test strip contracting initiative. Precision QID remains as the blood glucose test strip in an open class on the BCF.**

F. Selective serotonin reuptake inhibitors (SSRIs): At the Nov 98 meeting the committee concurred with a proposal to select one SSRI for an open class on the BCF. It was anticipated that blanket purchase agreements or DAPA incentive agreements would be established to facilitate the selection of an SSRI for an open class on the BCF, but such

agreements have not been established. The committee intends to select one SSRI for an open class on the BCF at the Aug 99 meeting.

G. Warfarin: At the Nov 98 meeting the committee removed the Coumadin brand only designation from the BCF with the intent of pursuing a sole source contract for a single brand of warfarin. Price competition appears to be increasing in the warfarin market. Increased price competition may diminish the need to pursue a sole source contract.

10. ADJOURNMENT: The meeting adjourned at 1400 hours. The next meeting will be held on 13 August 1999 at the DoD Pharmacoeconomic Center, Fort Sam Houston, Texas, beginning at 0800 hours. All agenda items are to be submitted to the DoD PEC no later than 16 July 1999.

<signed>	<signed>
DANIEL D. REMUND COL, MS, USA Co-chairman	TERRANCE EGLAND CDR, MC, USN Co-chairman

Appendix A: NMOP Formulary

Drugs that are covered:

- All non-injectable prescription drugs that are *not* excluded. (Excluded drugs are listed in the Excluded Drugs category.)
- Injectable drugs listed in the Covered Injectable Drugs category
- Non-prescription drugs or products listed in the Covered OTC Drugs/Products category

Excluded Drugs

Drug Classes Excluded for Active Duty Members Only:

- Amphetamines
- CNS stimulants
- Controlled substances in Schedules II, III, IV, V

Excluded Drug Classes:

- Anabolic steroids
- Contraceptive creams, foams, implants, injections, jellies
- Immune globulins
- Immunizations
- Injectable drugs (unless listed in the Covered Injectable Drug category)
- Legend prenatal vitamins for males, and females age 46 and over
- Legend vitamins
- Over-the-counter (OTC) drugs (unless listed in the Covered OTC Drugs/Products category)
- Smoking deterrents
- Vaccines

Exclusions by Drug Use:

- Drugs for cosmetic use as a result of the aging process (e.g., tretinoin cream (Renova)) or whose sole use is to stimulate hair growth [e.g., topical minoxidil (Rogaine), finasteride (Propecia)].
- Drugs for investigational use
- Drugs for obesity and/or weight reduction

Specific Drug Exclusions:

- Clozapine (Clozaril)
- Enoxaparin (Lovenox)
- Quinine
- Thalidomide (Thalomid)
- Tretinoin (Retin-A) age 36 and over

New FDA-approved drugs:

- Excluded until reviewed by the DoD P&T Committee (will be listed in the Drugs Pending P&T Committee review category—to be updated as new drugs are approved by the FDA)

Drugs Pending P&T Committee Review

- Cilostazol (Pletal)

Covered Injectable Drugs*

- Alprostadil (Caverject, Muse) intracavernosal injection
- Antihemophilic Factor VIII
- Antihemophilic Factor IX Complex
- Calcitonin salmon injection
- Cyanocobalamin injection
- Epoetin alfa, recombinant (Epogen, Procrit)
- Filgrastim (Neupogen) injection
- Glatiramer acetate (Copaxone) injection
- Glucagon
- Goserelin acetate (Zoladex) implant syringe
- Insect Sting Treatment Kit
- Insulin
- Insulin analog (Humalog) injection
- Interferon Alpha (Infergen, Roferon-A, Intron A, Rebetron)
- Interferon Beta (Avonex, Betaseron)
- Interferon Gamma-1b (Actimmune)
- Leuprolide (Lupron) depot and subcutaneous injections
- Menotropins (Repronex) injection
- Octreotide (Sandostatin) injection
- Sargramostim (Leukine) injection
- Somatrem (Protropin)
- Somatropin (Humatrope)
- Sumatriptan (Imitrex) injection
- Urofollitropin (Fertinex) injection

**** many of these agents currently have quantity restrictions***

Covered OTC Drugs/Products

- Glucose Test Strips
- Insulin and Insulin syringes
- Lancets
- Niacin (for antilipemic therapy)
- Alcohol swabs, needles and syringes (for injectable drugs dispensed for home injection only)

Drugs Subject to Practice Guidelines/Prior Authorization
• Celecoxib (Celebrex) • Etanercept (Enbrel) • Sildenafil (Viagra)

Non-Preferred Drugs and Preferred Alternatives	
Non-Preferred	**Preferred**
Astemizole (Hismanal)	➢ **Cetirizine (Zyrtec)** **Fexofenadine (Allegra)** **Loratadine (Claritin)**
Diclofenac extended release (ER) (Voltaren XR)	➢ **Diclofenac (generic)** **Naproxen (generic)** **Ibuprofen (generic)** **Salsalate (generic)** **Piroxicam (generic)**
Diltiazem ER (Cardizem CD) Diltiazem ER (Dilacor XR) Diltiazem ER (Diltia XT) Diltiazem ER (Diltiazem XR)	➢ **Diltiazem ER (Tiazac)**
Etodolac ER (Lodine XL)	➢ **Etodolac (generic)** **Ibuprofen (generic)** **Naproxen (generic)** **Sulindac (generic)** **Piroxicam (generic)**
Famciclovir (Famvir)	➢ **Acyclovir (generic)**
Nabumetone (Relafen)	➢ **Salsalate (generic)** **Naproxen (generic)** **Ibuprofen (generic)** **Sulindac (generic)** **Piroxicam (generic)**
Naproxen sodium ER (Naprelan)	➢ **Naproxen (generic)** **Ibuprofen (generic)** **Salsalate (generic)** **Sulindac (generic)** **Piroxicam (generic)**
Nifedipine ER (Procardia XL)	➢ **Nifedipine ER (Adalat CC)**
Oxaprozin (Daypro)	➢ **Salsalate (generic)** **Naproxen (generic)** **Ibuprofen (generic)** **Sulindac (generic)** **Piroxicam (generic)**
Oxybutynin ER (Ditropan XL)	➢ **Oxybutynin (generic)**
Tolterodine (Detrol)	➢ **Oxybutynin (generic)**
Valacyclovir (Valtrex)	➢ **Acyclovir (generic)**
Zileuton (Zyflo)	➢ **Montelukast (Singulair)**

	Zafirlukast (Accolate)

Appendix B: Summary of efficacy, safety and cost issues associated with celecoxib (Celebrex; Searle/Pfizer)

1. Celecoxib does not appear to be any more or any less effective than other non-steroidal anti-inflammatory drugs (NSAIDs) in treating the symptoms of osteoarthritis (OA) or rheumatoid arthritis (RA).
2. The potential benefit of a cyclooxygenase-2 (COX-2) inhibitor such as celecoxib is primarily due to the lack of inhibition of cyclooxygenase-1 (COX-1) at therapeutic doses. Lack of COX-1 inhibition is mechanistically related to a potential decrease in the risk of GI adverse events (ulceration, bleeding, and perforation). Celecoxib lacks the platelet effects associated with other NSAIDs. Celecoxib does not appear to differ from other NSAIDs in terms of renal adverse effects or use during pregnancy.
3. Labeling for celecoxib includes the same warnings about increased risk of adverse gastrointestinal (GI) events as other NSAIDs. During its first three months on the market, 10 deaths and 11 serious gastrointestinal events (bleeding or ulcer) were reported in patients receiving celecoxib. This must be considered in the context of the number of patients who have been exposed to celecoxib during this period, as well as the expected background rate of adverse GI events in patients not exposed to NSAIDs.
4. Trials with celecoxib have shown a significant reduction in the incidence of endoscopically detected ulcerations compared to other NSAIDs. The correlation between endoscopic ulcers and actual GI adverse events is unclear. Premarketing trials with celecoxib were not designed to collect outcomes data on actual events, and no firm conclusions can be drawn from these results.
5. Overall, about 10% of patients (20.7 million) in the U.S. have OA; about 1% (2.1 million) have RA. Patients with RA are at greater risk for NSAID-induced adverse events because they are older, receive higher NSAID doses, and are more likely to be receiving other medications that increase risk.
6. For patients with rheumatoid arthritis (RA), the annual rate of GI hospitalizations is about 1.46% in patients taking NSAIDs compared to 0.27% in patients not taking NSAIDs. Number-needed-to-harm (NNH) = 84. For patients with osteoarthritis (OA), the annual rate of GI hospitalizations is about 0.73% in patients taking NSAIDs compared to 0.29% in patients not taking NSAIDs. NNH = 227.
7. *If the assumption is made that the rate of GI adverse events in patients receiving celecoxib is equal to the rate in patients not receiving NSAIDs*, 84 RA patients or 227 OA patients (or an even greater number of patients in the general patient population) would have to be treated with celecoxib for 1 year in order to avert 1 GI hospitalization. Treating 84 RA patients with celecoxib would increase annual drug costs by approximately $41,403 compared to treatment with conventional NSAIDs. Treating 227 OA patients with celecoxib would increase annual drug costs by approximately $111,888 compared to treatment with conventional NSAIDs. (Note: these estimates are based on the mean daily cost for NSAIDs in the National Mail Order Pharmacy (NMOP) program during calendar year 1998 (about $0.71) and an estimated daily cost for celecoxib of $2.06. Facilities with a lower mean daily cost for NSAIDs would experience greater increases in drug costs if patients were switched from current NSAID therapy to celecoxib.)
8. Use of COX-2 inhibitors such as celecoxib may decrease costs by reducing the number of patients who require concomitant treatment with misoprostol, H2 blockers, or proton pump inhibitors (PPIs). It is difficult to quantify the number of patients who could successfully be taken off H2 blockers or PPIs, since patients may require treatment with such agents for conditions that are independent of NSAID use.
9. Risk factors for increased risk of NSAID-induced GI adverse events include previous history of GI complications, age, concomitant use of corticosteroids and anticoagulants, high doses of NSAIDs, and general health status.
10. A prescribing guideline designed to target the use of celecoxib to patients at high risk for a GI adverse event would minimize the number of patients who must be treated to avert such an event and maximize the *potential* safety benefit associated with celecoxib. It must be noted that an actual reduction in the rate of GI adverse events with celecoxib has not yet been demonstrated in clinical trials. Outcomes studies to address this question are currently in progress.