Oregon Health Resources Commission

SKELETAL MUSCLE RELAXANTS

Subcommittee Report

Update #2, May 2005

This report is an update of the initial Skeletal Muscle Relaxant Subcommittee Report of August 2003.
All revisions are highlighted.

Produced by:
Health Resources Commission
Kathleen Weaver, MD, Director
Office for Oregon Health Policy & Research
255 Capitol St. NE
Salem, OR 97310

Overview

The 2001 session of the Oregon Legislature passed Senate Bill 819, authorizing the creation of a Practitioner-managed Prescription Drug Plan (PMPDP) that specifically directs the Health Resources Commission (HRC) to advise the Department of Human Services (DHS) on this Plan.

In November of 2002 the Oregon Health Resources Commission (HRC) appointed a subcommittee to perform an evidence-based review of the use of skeletal muscle relaxants. Members of the subcommittee consisted of physicians, a pharmacist, other health care professionals and a consumer. The subcommittee had four meetings held in public with appropriate notice provided.

Subcommittee members worked with Oregon Health and Science University (OHSU) Evidence-based Practice Center (EPC) to develop and finalize key questions for this drug class review, specifying patient populations, medications to be studied and outcome measures for analysis, considering both effectiveness and safety. Evidence was specifically sought for subgroups of patients based on race, ethnicity and age, demographics, other medications and co-morbidities.

Using standardized methods, the EPC reviewed systematic databases, the medical literature and dossiers submitted by pharmaceutical manufacturers. Inclusion and exclusion criteria were applied to titles and abstracts, and each study was assessed for quality according to predetermined criteria.

The OHSU EPC's draft report, *Drug Class Review on Skeletal Muscle Relaxants* was completed February 14, 2003, circulated to subcommittee members and posted on the Oregon Health Policy & Research (OHPR) web site at *http://www.ohpr.state.or.us*. The subcommittee met on March 18, 2003, to review the document and additional evidence. By consensus, the subcommittee members agreed to adopt the EPC report. Time was allotted for public comment, questions and testimony. The subcommittee's final meeting was held on April 16, 2003 to accept the EPC's updated report of April 9, 2003 *Drug Class Review on Skeletal Muscle Relaxants* and review the draft subcommittee report. All available sources of information was considered from the EPC's report that included information submitted by pharmaceutical manufacturers and public testimony. The conclusions drawn by the Skeletal Muscle Relaxant Subcommittee comprise the body of this report.

The HRC appointed an update committee to perform an evidence-based review of the June 2002 *Skeletal Muscle Relaxant Subcommittee Report* for new information or changes in the FDA package inserts. Members of the Update Committee consisted of one HRC member, one OSU pharmacist, one Oregon Health Policy and Research (OHPR) physician, one OHSU-EPC pharmacist, and two Skeletal Muscle Relaxant Subcommittee members. The committee held one meeting held in public with appropriate notice provided. This report is an update of the initial April 2003 Subcommittee Report. All revisions are highlighted.

The Skeletal Muscle Relaxant Update Committee members worked with the OHSU-EPC reviewing the evidence for both effectiveness and safety. Evidence was specifically sought for differences among subgroups of patients based on race, ethnicity, age, demographics, other medications and co-morbidities.

The OHSU EPC's draft report, *Drug Class Review on Skeletal Muscle Relaxants Updated Final Report #2* was completed in April 2005, circulated to the Standing Update Committee (SUC) members. The SUC held one meeting on May 10, 2005 to review the document and additional evidence. By consensus, the committee members agreed to adopt the EPC report. Time was allotted for public comment, questions, and written and oral testimony. All available sources of information from the EPC's report that included information submitted by pharmaceutical manufacturers and public testimony, were considered.

This report is prepared to facilitate the HRC in providing recommendations to Oregon Medical assistance Program (OMAP) for the Plan Drug List (PDL). This report was presented to the HRC on May 20, 2005 at which time public testimony was heard and due consideration given. On May 20, 2005 this report was approved by the HRC and commended to OMAP.

This report does not recite or characterize all the evidence that was discussed by the OHSU EPC, the Skeletal Muscle Relaxant Subcommittee, the Update Committee or the HRC. For further information provided during the subcommittee process readers are encouraged to review the source materials on the web site.

The Standing Update Committee of the HRC, working together with the EPC, Oregon Medical Assistance Program (OMAP), and the Oregon State University (OSU) College of Pharmacy, will monitor medical evidence for new developments in this drug class. Every year emerging pharmaceuticals will be reviewed and if appropriate, a recommendation for inclusion in the PDL will be made. Significant new evidence for pharmaceuticals already on the PDL will be assessed and Federal Drug Administration (FDA) changes in indications and safety recommendations will be evaluated. The Skeletal Muscle Relaxant report will be amended if indicated. Substantive changes will be brought to the attention of the Health Resources Commission, who may choose to approve the report, or reconvene a new Skeletal Muscle Relaxant Subcommittee.

The initial and updated OHSU EPC's draft report, *Drug Class Review on Skeletal Muscle Relaxants,* are both available on the Office for Oregon Health Policy & Research, Practitioner-Managed Prescription Drug Plan website: www.oregonrx.org. Information regarding the Oregon Health Resources Commission and its subcommittee policy and process can be found on the Office for Oregon Health Policy & Research website: http://www.ohpr.state.or.us/DAS/OHPPR/ORRX/HRC/evidence_based_reports.shtml

You may also request more information including copies of the draft report, minutes and tapes from:

Kathleen Weaver, MD
Director, Health Resources Commission
Office for Oregon Health Policy & Research
255 Capitol St. NE, 5th Floor
Salem, Oregon 97310
Phone: 503-378-2422 ext. 406
Fax: 503-378-5511
Email: kathy.weaver@state.or.us

Information dossiers submitted by pharmaceutical manufacturers are available upon request from the OHSU - Center for Evidence-based Policy by contacting:

John Santa, MD
Assistant Director for Health Projects
OHSU - Center for Evidence-based Policy
2611 SW 3rd Avenue, MQ 280
Portland, OR 97201-4950
Phone: 503-494-3094
Email: santaj@ohsu.edu

There will be a charge for copying and handling in providing documents both from the Office of Oregon Health Policy & Research and from OHSU Center for Evidence-based Policy.

Critical Policy:

- *Senate Bill 819*
  - "The Department of Human Services shall adopt a Practitioner-managed Prescription Drug Plan for the Oregon Health Plan. The purpose of the plan is to ensure that enrollees of the Oregon Health Plan receive the most effective prescription drug available at the best possible price."

- *Health Resources Commission*
  - "Clinical outcomes are the most important indicators of comparative effectiveness;"
  - "If evidence is insufficient to answer a question, neither a positive nor a negative association can be assumed."

Introduction:

Skeletal muscle relaxants are a heterogeneous group of medications that are commonly used to treat two different types of underlying conditions: spasticity from upper motor neuron syndromes and muscular pain or spasms from peripheral musculoskeletal conditions. Although these drugs have been classified into one class, the Food and Drug Administration (FDA) has approved only baclofen, dantrolene, and tizanidine in this class for the treatment of spasticity; tizanidine and the remainder of the skeletal muscle relaxant class are approved for treatment of musculoskeletal conditions.

Spasticity is a clinical condition that is "a motor disorder characterized by increase in tonic stretch reflexes (muscle tone) with exaggerated tendon jerks, resulting from hyper-excitability of the stretch reflex, as one component of the upper motor neuron syndrome."[1] Spasticity from the upper motor neuron syndrome can result from a variety of conditions that affect the brain or the spinal cord such as: multiple sclerosis, spinal cord injury, traumatic brain injury, cerebral palsy, and post-stroke syndrome. In many patients with these chronic conditions, spasticity can be disabling and painful with a marked effect on their functional ability and quality of life.

Common musculoskeletal conditions causing tenderness and muscle spasms include fibromyalgia, tension headaches, myofascial pain syndrome, and mechanical low back or neck pain. In these conditions, muscle spasm is related to local factors involving the affected muscle groups. There is no increased tone or reflex. These conditions are usually acute and occur more commonly than spasticity in clinical practice. They can cause significant disability and pain in some patients. Skeletal muscle relaxants are one of several classes of medications such as anti-inflammatory drugs and pain relievers that are used to treat these conditions.

Inclusion Criteria:

- *Scope*
  - Patients: Adult or pediatric patients with:
  - A) Chronic neurological conditions associated with spasticity (including cerebral palsy, multiple sclerosis, traumatic brain injury, spinal cord injury, post-stroke),
  - B) Chronic or acute musculoskeletal condition associated with muscle spasms (including fibromyalgia, tension headaches, low back pain, myofascial pain syndromes and nocturnal leg cramps), or
  - C) Chronic or acute pain condition with muscle spasms (including fibromyalgia, tension headaches, low back pain, and myofascial pain syndromes).

[1] Lance, JW. Symposium synopsis. In: Feldman, RG, Young RR, Koella WP, editors. Spasticity: disordered motor control. Chicago: Yearbook Medical; 1980. p. 485-494

- *Interventions*
  - Baclofen, carisoprodol chlorzoxazone, cyclobenzaprine, dantrolene, metaxalone, methocarbamol, orphenadrine, quinine, tizanidine, clonazepam*, clonidine*, clorazepate*, diazepam*, and gabapentin*, (*Drugs of another class used for comparison only).
  - For effectiveness: Controlled clinical trial comparing an included muscle relaxant with: 1) another included muscle relaxant, 2) another oral agent or placebo.
  - For safety: Controlled clinical trials or observational studies.
  - For duration: Chronic neurological conditions, at least 4 weeks of study; musculoskeletal conditions, any duration.
- *Outcomes*
  - Relief of muscle spasms or pain, functional status, quality of life, withdrawal rates, or adverse effects (including sedation, addiction, and abuse). Exclude: Non-clinical outcomes.

- *Exclusions*
  - Obstetric patients
  - Chronic pain conditions without muscle spasm
  - Restless leg syndrome
  - Studies of less than 4 weeks in duration evaluating patients with a chronic neurological condition

Drugs:

- ***Muscle Relaxants***

Generic	**Brand**
- Baclofen	Baclofen
- Carisoprodol	Soma
- Chlorzoxazone	Parafon Forte
- Cyclobenzaprine	Flexeril
- Dantrolene	Dantrium
- Metaxalone	Skelaxin
- Methocarbamol	Robaxin
- Orphenadrine	Norflex
- Quinine	Quinine
- Tizanidine	Zanaflex

Key Questions

1. What is the comparative efficacy of different muscle relaxants in reducing symptoms and improving functional outcomes in patients with a chronic neurological condition associated with spasticity, a chronic or acute musculoskeletal condition associated with muscle spasms, or a chronic or acute pain condition with muscle spasms?

2. What are the comparative incidence and nature of adverse effects (including addiction and abuse) of different muscle relaxants in patients with a chronic neurological condition associated with spasticity, a chronic or acute musculoskeletal condition associated with muscle spasms, or a chronic or acute pain condition with muscle spasms?

3. Are there subpopulations of patients for which one muscle relaxant is more effective or associated with fewer adverse effects?

Findings from Update #2

1. In the process of revising the 2005 Drug Class Review of Skeletal Muscle Relaxants the OH&SU EPC identified one head-to-head trial of tizanidine versus baclofen for spasticity,[2] 1 head-to-head trial of chlorzoxazone versus diazepam for musculoskeletal conditions,[3] and placebo-controlled trials of baclofen (2 trials in 3 reports), [4,5,6] metaxolone (2 trials[7,8),] methocarbamol (1trial[9], and cyclobenzaprine (1 trial[10]).

2. Two dossiers were submitted by McNeil Consumer Pharmaceuticals for cyclobenzaprine and King Pharmaceuticals for metaxalone that identified 2 citations not previously identified.

3. The FDA approved no new drugs and a search of their MedWatch web site revealed no changes in labeling.

---

[2] Corstron RN, Johnson F, Godwin-Austen RB. The assessment of drug treatment of spastic gait. *J. Neurol Neurosurg Psychiatry.* 1981;44(11):1035-1039.
[3] Scheiner JJ. Muscle relaxants: chlorzoxazone compared with diazepam (a double-blind study). *Curr Ther Res.* 1976; 19:51-57
[4] Hudgson P, Weightman D, Cartlidge NE. Clinical trial of baclofen against placebo. *Postgrad Med J.* 1972;5:37-40.
[5] Hudgson P, Weightman D, Cartlidge NE. Clinical trial of baclofen against placebo. *Postgrad Med J.* 1972;5:37-40.
[6] Levine IM, Jossmann PB, DeAngelis V. Ioresal, a new muscle relaxant in the treatment of spasticity –a double-blind quantitative evaluation. *Dis Nerv Syst.*1977;38(12):1011-1015.
[7] Kurtake J, Gylfe J. A new muscle relaxant in spasticity. *Neurology* 1962;12:343-350.
[8] Morey L, Crosby A. Metaxalone, a new skeletal muscle relaxant. *J Am Osteopath Assoc.* 1963;62:517-521.
[9] Valtonen EJ. A double-blind trial of methocarbamol versus placebo in painful muscle spasm. *Curr Med Res Opin.* 1975;3:382-385.
[10] Hamaty D, Valentine JL, Howard R, et al. The plasma endorphin, prostaglandin and catecholamine profile of patients with fibrositis treated with cyclobenzaprine and placebo: a 5-month study. *J. Rheumatol suppl.* 1989;19:164-168.

4. Five systematic reviews were also identified during Update #2 searches that met inclusion criteria; one[11] was an update of a previously included systematic review and the remainder were newly published studies.[12,13,14,15]
5. Based on additional trials reviewed and incorporated into the report there does not appear to be new evidence that would significantly change the conclusion of the original report. Two new head-to-head trials were identified but did not effect the consensus statements, and none of the placebo-controlled trials identified since the original report were rated good quality.

Amended Summary of Results

Key Question 1

What is the comparative efficacy of different muscle relaxants:

A. ***For reducing symptoms and improving functional outcomes in patients with a chronic neurological condition associated with spasticity?***

Five systematic reviews, of which two were good quality that addressed spasticity in patients with Multiple Sclerosis, showed insufficient evidence to compare tizanidine, baclofen, dantrolene, or diazepam due to the marked heterogeneity in study designs, interventions, and outcomes measured. Two meta-analyses of unpublished studies of fair quality concluded there were no differences between tizanidine and diazepam or baclofen. Nine head-to-head trials, of which most were only fair quality, revealed no difference between tizanidine vs. baclofen. Another eight head-to-head trials compared tizanidine, baclofen, or dantrolene, to diazepam and found no difference for efficacy. Of the 42 placebo-controlled trials identified, no conclusions about comparative efficacy could be drawn from these trials.

Diazepam was used for comparison only and not directly evaluated. Diazepam belongs to the benzodiazepam class of drugs that are classified as tranquilizers rather than a muscle relaxant. Since tranquilizers are considered a mental health drug, SB 819 prohibits the HRC from evaluating their efficacy.

B. ***For reducing symptoms and improving functional outcomes in patients with a chronic or acute musculoskeletal condition associated with muscle spasms?***

[11] Shakespeare DT, Boggild M, Young C. Anti-spasticity agents for multiple sclerosis [update of Cochrane Database Syst Rev. 2001;(4):CD001332; PMID:11687107]. *Cochrane Database of Systematic Reviews.* 2003;4.
[12] Schnitzer TK. Ferraro A. Hunsche E, et al. A comprehensive review of clinical trials on the efficacy and safety of drugs for the treatment of low back pain. *Journal of Pain & Symptom Management.* 2004,28(1):72-95.
[13] Beard S, Hunn A, Wight J. Treatments for spasticity and pain in multiple sclerosis: a systematic review. *Health Technol Assess.* 2003;7(40):1-111.
[14] Tofferi JK, Jackson JL, O'Malley PG. Treatment of fibromyalgia with cyclobenzaprine: A meta-analysis. *Arth Rheum.* 2004;51(1):9-13.
[15] Montane E. Vallano A, Laporte JR. Oral Antispastic drugs in non-progressive neurologic diseases: A systematic review. *Neurology.* 2004;63(8):1357-1363.

Three good quality systematic reviews in patients with back pain concluded that cyclobenzaprine was superior to placebo. One good quality systematic review of fibromyalgia found cyclobenzaprine similar to placebo. One fair quality meta-analysis of unpublished short-term trials with a variety of musculoskeletal conditions concluded that cyclobenzaprine and diazepam were equivalent and better than placebo. Twelve head-to-head trials of fair quality that compared: tizanidine vs. chlorzoxazone, cyclobenzaprine vs. carisoprodol, cyclobenzaprine vs. methocarbamol, carisoprodol vs. diazepam, cyclobenzaprine vs. diazepam, tizanidine vs. diazepam showed no clear evidence that any muscle relaxant was superior for efficacy. The duration of all the studies were short in the head-to-head trials ranging from 7 to 18 days.

There is fair quality evidence from 21 placebo controlled trials that cyclobenzaprine is more effective than placebo. The body of evidence regarding tizanidine (7 trials), carisoprodol (4 trials), orphenadrine (4 trials) and methacarbomol (2 trials) was not as robust, yet with each of these interventions there was a consistent trend favoring the active treatment compared to placebo. Metaxalone was shown to be effective in four of the five available placebo-controlled trials. The marked heterogeneity of the placebo-controlled trials makes it impossible to determine comparative efficacy for these drugs.

C. *For reducing symptoms and improving functional outcomes in patients with a chronic or acute pain condition with muscle spasms?*

None of the reviews, trials, or observational reports separated the patients with chronic or acute pain with muscle spasms from the patients with muscle spasm or spasticity alone.

The Standing Update Committee agrees by consensus that:

- *The evidence does not support a difference between the comparative efficacies of baclofen, dantrolene, or tizanidine for spasticity associated with chronic neurological conditions.*
- *The evidence does not support a difference between the comparative efficacies of any of the skeletal muscle relaxants for muscle spasm.*
- *Nearly all the studies for musculoskeletal conditions were limited to short-term treatment and showed only a modest clinical effect. Cyclobenzaprine had the largest body of evidence to support its efficacy.*

Key Question 2

What are the comparative incidence and nature of adverse effects (including addiction and abuse) of different muscle relaxants?

A. ***For patients with a chronic neurological condition associated with spasticity?***

Eighteen head-to-head trials with fair evidence of adverse event assessments did show that baclofen was associated with more weakness and less dry mouth than tizanidine, but no conclusions as to the safety of dantrolene compared to baclofen and tizanidine could be drawn. Two observational studies reported rare but serious dose related hepatotoxicity from dantrolene resulting in a black box warning in the Physicians Desk Reference. Both tizanidine and dantrolene require monitoring of liver enzymes to identify hepatotoxicity. There were no reports of addiction for tizanidine, baclofen, or dantrolene although there have been clinical reports of severe symptoms with the sudden withdrawal of baclofen, particularly intrathecally administered baclofen.

B. ***For patients with a chronic or acute musculoskeletal condition associated with muscle spasms?***

There was very limited adverse event data for skeletal muscle relaxants from head-to-head, placebo-controlled trials, or observational studies. There are reports of potential addiction with carisoprodol since its known metabolite is meprobamate that is a schedule IV controlled substance.

There appear to be very rare cases of hepatotoxicity with two fatalities out of 23 reported cases since 1970 associated with chlorzoxazone, but the rate of complications could not be calculated from the reviewed study.

One new fair quality randomized controlled trial found that cyclobenzaprine 5 mg tid provided equivalent effectiveness to 10 mg tid regimen, yet was associated with fewer adverse events. This could guide optimum dose recommendations and similar information would be useful for other skeletal muscle relaxants.

In spite of diligent efforts of the EPC and our sub-committee, no evidence of systematic reports of addiction or abuse from skeletal muscle relaxants were available, although anecdotal evidence would suggest such tendencies. The available literature provides no data regarding the comparative risk of abuse and addiction from skeletal muscle relaxants, though there are a few case reports, almost all of which are associated with carisoprodol.

C. ***For patients with a chronic or acute pain condition with muscle spasms?***

None of the reviews, trials, or observational reports separated the patients with chronic or acute pain with muscle spasms from the patients with muscle spasm or spasticity alone.

The Standing Update Committee agrees by consensus that:

- *There is sufficient evidence to conclude that there are different nuisance side effect profiles associated with baclofen, dantrolene, or tizanidine.*
- *Dantrolene is associated with rare but fatal hepatotoxicity and tizanidine requires monitoring of liver function tests as it may also pose a risk for hepatotoxicity.*
- *The evidence does not support any conclusions about the comparative safety of any of the skeletal muscle relaxants in patients with musculoskeletal conditions.*
- *There appear to be very rare cases of hepatotoxicity with two fatalities potentially associated with chlorzoxazone, but the rate of complications could not be calculated from the reviewed study.*
- *There was insufficient evidence of the comparative risk of abuse or addiction with skeletal muscle relaxants, but the subcommittee notes that only carisoprodol and its active metabolite, meprobamate, are Schedule IV controlled substances in Oregon, although Meprobamate is not a federally Schedule IV controlled substance.*

Key Question 3

Are there subpopulations of patients for which one muscle relaxant is more effective or associated with fewer adverse effects?

There were no studies designed to compare efficacy for different races, genders, or age groups. All of the data reviewed for the spasticity drugs were from adult trials. Most of the data on musculoskeletal conditions was collected on patients with low back symptoms, neck syndromes, or multiple sclerosis.

The Standing Update Committee agrees by consensus that:

- *The evidence does not support any conclusions as to the comparison of the efficacy or adverse effects for different subpopulations of patients such as race, gender, or age.*

Conclusion

In a public meeting with the opportunity for questions, comments and testimony, the Standing Update Committee of the Health Resources Commission reviewed the medical evidence comparing Skeletal Muscle Relaxants. The Oregon Evidence-based Practice Center's report, "Drug Class Review on Skeletal Muscle Relaxant Drugs," which included appropriate information presented in pharmaceutical manufacturer dossiers, was reviewed and public testimony considered. Most skeletal muscle relaxants were evaluated for either spasticity (baclofen, dantrolene, and tizanidine) or musculoskeletal conditions (carisoprodol, chlorzoxazone, cyclobenzaprine, metaxalone, methocarbamol, and orphenadine); only tizanidine was evaluated in head-to-head and more than two placebo-controlled trials for both spasticity and musculoskeletal conditions.

Using all of these sources of information, the subcommittee arrived at the following conclusions about the comparative effectiveness and safety of skeletal muscle relaxants as supported by analysis of the medical literature:

It is the decision of the Standing Update Committee that:

- *The evidence does not support any conclusions about the comparative effectiveness between baclofen, tizanidine, or dantrolene for spasticity. All are effective and equivalent to diazepam. Dantrolene is associated with rare serious dose-related hepatotoxicity.*
- *The evidence does not support any conclusions for the comparative efficacy between skeletal muscle relaxants for musculoskeletal conditions. Cyclobenzaprine had the largest body of evidence to support its efficacy compared to placebo.*
- *The evidence does not support any conclusions for the comparative safety of any of the skeletal muscle relaxants in these conditions. Chlorzoxazone is associated with rare serious dose-related hepatotoxicity. The subcommittee notes that only carisoprodol and its active metabolite, meprobamate, are Schedule IV controlled substances in Oregon.*
- *The evidence does not support any conclusions about the comparative efficacy or adverse effects for different subpopulations of patients such as race, gender, or age.*

Walter Shaffer, MD
Chair, Health Resources Commission

Paul Tiffany
Vice Chair, Health Resources Commission

David Labby, MD
Chair, Standing Update Committee
Health Resources Commission

Bruce Goldberg, MD
Administrator
Office for Health Policy and Research

Kathleen Weaver, MD
Director, Health Resources Commission
Office for Health Policy and Research

Health Resources Commission
Walter Shaffer, MD
Paul R. Tiffany
Steven DeLashmutt, MD
Dean Haxby, Pharm. D.
Dan Kennedy, R.Ph
James H. MacKay, MD
Mark S. Yerby, MD
Lynn-Marie Crider
John W. Saultz
Manny Berman

Skeletal Muscle Relaxants
Elaine Dunda
Josh Boverman, MD
Jennifer Lochner, MD
Judith Becher, MD
Richard Clark, MD, MPH
Steve Dixon
Claudia Haywood, MD
Sean Karbowicz, PharmD
David Labby, MD
Robert Nickel, MD
Marie Valleroy, MD

Standing Update Committee Members
David Labby, MD, Chair
Kathy Crispell, MD
Tracy Klein, WHCNP/FNP
Nicole O'Kane, PharmD
Kathy Ketchum, RPh, MPA-HA
Kathy Weaver, MD
Roger Chou, MD

Health Resources Commission

The State of Oregon's Health Resources Commission is a volunteer commission appointed by the Governor. The Health Resources Commission provides a public forum for discussion and development of consensus regarding significant emerging issues related to medical technology. Created by statute in 1991, it consists of four physicians experienced in health research and the evaluation of medical technologies and clinical outcomes; one representative of hospitals; one insurance industry representative; one business representative; one representative of labor organizations; one consumer representative; two pharmacists. All Health Resources Commissioners are selected with conflict of interest guidelines in mind. Any minor conflict of interest is disclosed.

The Commission is charged with conducting medical assessment of selected technologies, including prescription drugs. The commission may use advisory committees or subcommittees, the members to be appointed by the chairperson of the commission subject to approval by a majority of the commission. The appointees have the appropriate expertise to develop a medical technology assessment. Subcommittee meetings and deliberations are public, where public testimony is encouraged. Subcommittee recommendations are presented to the Health Resources Commission in a public forum. The Commission gives strong consideration to the recommendations of the advisory subcommittee meetings and public testimony in developing its final reports.