Oregon Health Resources Commission

Executive Summary Reports
Drug Class Evaluation

These executive summaries permit the reader to compare clinical conditions and their treatment in the thirteen drug classes completed by the Health Resources Commission (HRC). In addition the seven proposed drug classes and their estimated date of completion are included.

Disclaimer notice: this is not intended as a substitute for reading the subcommittee reports. For in depth evidenced-based evaluation, the reader is referred to the full evidence reports. These reports are available at: www.oregonrx.org To review the OMAP Plan Drug List (PDL) Pocket Guide comparative pricing information: http://pharmacy.oregonstate.edu//drug_policy/prescriber_tools/POCKETFinal.pdf

Drug Class	Last Update

1. Angiotensin-Converting Enzyme Inhibitors (ACEI) **July 2004**

a. Drugs Reviewed

Generic (*Brand Only*)	Brand
benazepril	Lotensin
captopril	Capoten
enalapril	Vasotec
fosinopril	Monopril
lisinopril	Prinivil, Zestril
moexipril	Univasc
Perindopril	Aceon
Quinapril	Accupril
Ramipril	Altace
trandolapril	Mavik

b. In patients with hypertension, all ACEIs are proven equally effective.
c. In patients with high cardiovascular risk, enalapril, ramipril, and perindopril have proven reduction in cardiovascular events.
d. In patients with recent MI captopril, enalapril, lisinopril and ramipril have proven reduction in mortality or heart failure
e. In patients with chronic HF all ACEIs have proven reduction of mortality except moexipril and trandolapril.
f. In patients with diabetic nephropathy, captopril reduces ESRD and death.
g. In patients with non-diabetic nephropathy, benazepril reduces ESRD.
h. There is no evidence that any ACEI has a lesser rate of serious complications or is superior in sub-populations.

2. Alzheimer's Drugs **(2005)**

3. **Antinausea (anti 5HT3) Drugs** **(2005)**

4. **Antiplatelet (newer) Drugs** **(2005)**

5. **Anti-TNF (arthritis)** **(2005)**

6. **Antihistamines (Non-sedating)** **(2005)**

7. **Angiotensin II Receptor antagonists (AIIRA)** **September 2004**

   a. Drugs reviewed

Generic (*Brand Only*)	**Brand**
Candesartan	Atacand
Eprosartan	Tevetan
Irbesartan	Avapro
Losartan	Cozaar
Olmesartan	Benicar
Telmisartan	Micardis
Valsartan	Diovan

   b. In patients with essential hypertension, high cardiovascular risk factors, recent MI, heart failure, or nephropathy there is no data to suggest that one AIIRA is superior to another for effectiveness or safety

   c. There is no data to support a difference between the AIIRAs with respect to demographics, in combination with other medications, or in hypertensive patients with other co morbidities.

8. **Beta Adrenergic Blockers** **October 2004**

   a. Drugs reviewed

Generic (*Brand Only*)	**Brand**
acebutolol	Sectral
atenolol	Tenormin
betaxolol	Kerlone
bisoprolol	Zebeta
Carvedilol	Coreg
labetalol	Normodyne
metoprolol Tartrate (IR)	Lopressor
Metoprolol Succinate (ER)	Toprol XL
nadolol	Corgard
Penbutolol	Levatol
pindolol	Visken
propranolol	Inderal
Propranolol LA	Inderal LA
timolol	Blocadren

b. In the treatment of hypertension, all of the □-Blockers reviewed are effective, but there are no differences between □-Blockers for blood pressure control, survival, or quality of life.

c. In patients with mild-moderate HF, bisoprolol, carvedilol, or metoprolol succinate (ER) has been proven to reduce mortality; but in patients with severe HF, only carvedilol or metoprolol succinate (ER) have been proven to reduce mortality.

d. In patients with recent MI acebutolol, carvedilol, metoprolol tartrate (IR), propranolol, or timolol have been proven to reduce mortality

e. In patients with migraine headaches there is not a difference in the □-Blockers tested for preventing recurrence and diminishing the severity of migraine headaches: atenolol, bisoprolol, metoprolol tartrate (IR), metoprolol succinate (ER), propranolol, propranolol LA, or timolol.

f. For reducing esophageal variceal re-bleeding, the current evidence does not distinguish among beneficial □-Blockers that were tested: atenolol, nadolol, propranolol, or propranolol LA.

g. There are no differences found among □-Blockers in safety or adverse events.

h. There are no differences found among □-Blockers for effectiveness or fewer adverse effects in subgroups with respect to demographics, in combination with other medications, or co morbidities.

9. Calcium Channel Blocker (CCB) — June 2005

a. Drugs Reviewed

Generic (*Brand Only*)	**Brand**
Dihydropyridines	
Amlodipine	Norvasc
Felodipine	Plendil
Isradipine	DynaCirc, DynaCirc CR
nicardipine	Cardene, Cardene SR
nifedipine	Adalat CC, Afeditab CR, Nifediac CC, Nifedical XL, Procardia, Procardia XL
Nisoldipine	Sular
Non-dihydropyridines	
Diltiazem	Cardizem (CD, LA, SR), Cartia XT, Dilacor XR, Dilt CD, Dilt XR, Tiltia XT, Taztia XT, Tiazac
Verapamil	Calan, Calan SR, Covera-HS, Isoptin, Isoptin SR, Verelan, Verelan PM

b. In treating hypertension, all CCBs except bepridil and felodipine have been proven effective but current evidence does not allow comparisons of CCBs for this condition.

c. For treating chronic stable angina the current evidence does not differentiate between CCBs: amlodipine, diltiazem, nicardipine, nifedipine, and

nisoldipine. There is no evidence for felodipine and isradipine. There were no differences found between dihydropyridines and non-dihydropyridines for the treatment of angina.

d. For treating supraventricular arrhythmias the current evidence does not differentiate between diltiazem or verapamil for efficacy and adverse effects.

e. Review of long-term observational studies for safety revealed: limited evidence that bepridril has a higher risk over-all mortality.

f. For treating HF, please see the subcommittee report that details the complexity of treating this condition with CCBs.

10. Estrogen for Treatment of Menopausal Symptoms and Prevention of Low Bone Density and Fractures **September 2004**

a. Drugs Reviewed

Generic (*Brand Only*)	**Brand**
Oral Estradiol	
estradiol	Estrace, Estradiol, Gynodiol
Estradiol/Norethindrone Acetate	Activella
Ethinylestradiol/Norethindrone	Femhrt
Estradiol/Norgestimate	Prefest
Oral Conjugated Estrogens	
estrogen conjugated	Premarin
Estrogen A, Conjugated (Synthetic)	Cenestin
Estrogen B, Conjugated (Synthetic)	Enjuvia
Oral Esterified Estrogens	
Estrogens Esterified	Menest
Oral Estropipate	
Oral Estropipate	Ogen, Ortho-Est
Transdermal Estradiol	
Estradiol Patches	Alora, Climara, Esclim, Estraderm, Vivelle DOT
Estradiol/Norethindron Acetate Patches	Combipatch
Estradiol Lotion	Estrasorb
Estradiol Gel	Estragel
Vaginal Preparations	
conjugated estrogens	Premarin Cream
Estradiol	Estrace, Vagifem, Femring
Estrapipate	Ogen Vaginal

b. For treating menopausal symptoms and improving bone density with reduced fracture risk, there are no proven differences between estrogen preparations.
c. The majority of studies are of estradiol or conjugated equine estrogen. For many estrogen preparations, clinical trials are few and evidence is insufficient that other estrogens are equal to estradiol or conjugated equine estrogen.
d. There are no studies comparing the relative safety of different estrogen products or fewer adverse effects in subgroups with respect to demographics, in combination with other medications, or comorbidities.

11. Glitazones (Other Oral Diabetic Drugs) (2005)

12. Inhaled Corticosteroids March 2005

a. Drugs Reviewed

Generic (*Brand Only*)	**Brand**
Beclomethasone dipropionate	QVAR®, Vanceril®
Budesonide	Pulmicort Turbohaler®, Pulmicort Respules®
Flunisolide	Aerobid®
Fluticasone	Flovent®, Flovent® Discus
Triamcinolone	Azmacort®

b. There is insufficient evidence to evaluate differences among ICSs for comparative effectiveness for patients with asthma or COPD.
c. The available evidence fails to consider the number of inhalations required to deliver equivalent doses and/or the patients' ability to comply with treatment making it difficult to extrapolate to an entire asthma population.
d. There is consistent evidence that ICSs do not reduce mortality or improve quality of life in COPD.
e. There is fair evidence that short-term growth rate (<1 year) is reduced with all ICSs, but significantly less with fluticasone as compared to beclomethasone or budesonide treatment for asthma. However, evidence does not suggest a long-term effect on reduction of adult height with any ICSs within this class.

13. Newer Sedative Hypnotics (2005)

14. Non-steroidal anti-inflammatory Drugs (NSAIDs) July 2004

a. Drugs Reviewed

Generic (*Brand Only*)	**Brand**
COX-2 inhibitors	
Celecoxib	Celebrex

These COX-2 Inhibitors were recalled as causing increased cardiovascular or Stephens-Johnson's Syndrome:

Rofecoxib	**Vioxx**
Valdecoxib	**Bextra**

COX-2 preferential NSAIDS

Meloxicam	Mobic
Nabumetone	Relafen; others
Etodolac	Lodine; others
Salsalate	Salflex

Non-selective NSAIDs

Naproxen	Naprosyn
Diclofenac	Voltaren, Cataflam
Ibuprofen	Motrin, Advil; others

b. There is no evidence to demonstrate a difference in efficacy between COX-2 inhibitors and other NSAIDs.

c. There is raised concern that for patients taking aspirin the benefit of celecoxib in preventing serious gastrointestinal events was obviated. Even though the evidence may demonstrate decreased adverse gastrointestinal events of COX-2 Inhibitors compared to other NSAIDs, however limitations of studies currently available preclude a confident conclusion overall that there are clinically significant safety advantages.

d. For patients with recent GI bleeding, caution should be used in using COX-2 inhibitors or other NSAIDs because of the high risk for re-bleeding.

e. There are concerns about increased cardiac adverse events of COX-2 inhibitors as a sub-class of NSAIDs.

15. Oral Hypoglycemics (Sulfonlyureas and Secretagogues) May 2005

a. Drugs reviewed

Generic (*Brand Only*)	**Brand**
chlorpropamide	Diabenase
Glimperide	Amaryl
glipizide	Glucotrol, Glucotrol XL
glyburide	Diaβeta, Micronase, Glynase PresTab, Glycron
tolazamide	Tolinase
tolbutamide	Orinase
Repaglinide	Prandin
Nateglinide	Starlix

b. For their ability to lower HbA1c, there is no difference between any of the agents in the two drug classes tested (sulfonylureas and secretagogues).

c. For ability to prevent retinopathy glyburide was proven more effective than chlorpropamide.
d. Chlorpropamide has a less favorable adverse effect profile than glyburide, and there is no difference in the rest of the hypoglycemic drugs tested.
e. There are no differences found among oral hypoglycemic drugs for effectiveness or fewer adverse effects in subgroups with respect to demographics, in combination with other medications, or co morbidities.

16. Long-acting OPIOID Analgesics (For Non-cancer Pain) **May 2005**

a.

Generic (*Brand Only*)	**Brand**
morphine sulfate SA	Oramorph SR, MS Contin, Kadian, Avinza
Oxycodone	OxyContin
methadone	Dolphine, Methadose
Transdermal Fentanyl	Duragesic
levorphanol	Levo-Dromoran

b. There is insufficient evidence to draw any conclusions about the comparative effectiveness of long-acting opioids.
c. There is insufficient evidence to draw conclusions about the incidence and nature of adverse effects, including discontinuation rates and addiction and abuse of long-acting opioids.
d. There is insufficient evidence to support differences in efficacy or adverse effects in sub-populations by race and ethnicity, age, gender, or type of pain in this class of drugs.

17. Proton Pump Inhibitors (PPIs) **April 2004**

a. **Drugs Reviewed**

Generic (*Brand Only*)	**Brand**
omeprazole	Prilosec Rx, Zegered
omeprazole magnesium	Prilosec OTC
Lansoprazole	Prevacid
Pantoprazole	Protonix
Rabeprazole	Aciphex
Esomeprazole	Nexium

b. For treatment of GERD, peptic ulcer, non-steroidal ulcer, duodenal ulcer, or eradication of *Helicobacter Pylori*, the evidence does not demonstrate a clinical difference in efficacy or adverse effects amongst the PPIs.
c. No evidence supports differences in efficacy or adverse effects in sub-populations by race and ethnicity, age, gender, or co-morbidities.

18. Skeletal Muscle Relaxants — May 2005

a.

Generic (*Brand Only*)	Brand
baclofen	Kemstro
carisprodol	Soma
chlorzoxazone	Parafon Forte
dantrolene	Dantrium
metaxalone	Skelaxin
methocaramol	Robaxin
orphenadrine	Norflex
quinine	Quinine
tizanidine	Zanaflex

b. For spasticity, the evidence does not support any conclusions about the effectiveness between baclofen, tizanidine, or dantrolene. All are effective and equivalent to diazepam. Dantrolene is associated with some serious dose-related hepatotoxicity.

c. For musculoskeletal conditions, the evidence does not support any conclusions for the comparative efficacy between skeletal muscle relaxants. Cyclobenzaprine had the largest body of evidence to support its efficacy compared to placebo.

d. For adverse effects dantrolene and chlorzoxazone are associated with rare serious does-related hepatotoxicity. Only carisprodol and its active metabolite, meprobamate, are Schedule IV controlled substances in Oregon.

e. 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.

19. Statins — July 2004

a. Drugs Reviewed

Generic (*Brand Only*)	Brand
Atorvastatin	Lipitor
Fluvastatin	Lescol, Lescol XL
lovastatin	Mevacor
Pravastatin	Pravachol
Rosuvastatin	Crestor
Simvastatin	Zocor

b. Improvement of coronary heart disease clinical outcomes has been proven by atorvastatin, fluvastatin, lovastatin, pravastain, and simvastatin. To date there is no evidence for improved cardiac outcomes with rosuvastatin.

c. No evidence supports differences between Statins in adverse effects in sub-populations by race and ethnicity, age, or gender.

20. Triptan — February 2005

a. Drugs Reviewed

Generic (*Brand Only*)	Brand
Almotriptan	Axert
Eletriptan	Relpax
Frovatriptan	Frova
Naratriptan	Amerge
Rizatriptan	Maxalt, Maxalt-MLT
Sumatriptan	Imitrex
Zolmitriptan	Zomig, Zomig-ZMT

b. In comparing the effectiveness and duration of response of different triptans in reducing the severity and duration of symptoms in adult patients with moderate to severe migraine, almotriptan, eletriptan, naratriptan, rizatriptan, sumatatriptan, and zolmatriptan were similarly efficacious.

c. In comparing the incidence and nature of complications of different triptans, eletriptan, naratriptan, rizatirptan, sumatriptan, and zolmitriptan have similar side effect profiles.

d. Ready availability of alternate delivery forms is necessary for patients who are unable to tolerate the oral route.

21. Urinary Incontinence — June 2005

a. **Drugs Reviewed**

Generic (*Brand Only*)	**Brand**
flavoxate	Urispas
oxybutynin	Ditropan
oxybutynin ER	Ditropan XL
oxybutynin Transdermal	Oxytrol
tolterodine	Detrol
tolterodine ER	Detrol LA
trospium chloride	Sanctura

b. For adult patients with urge incontinence/overactive bladder there is no difference in efficacy measures among oxybutynin IR, oxybutynin ER, oxybutynin TD, tolterodine IR, tolterodine ER and trospium chloride. There is no evidence demonstrating the effectiveness of flavoxate.

c. For adverse events or withdrawals due to adverse events, evidence does not demonstrated differences among trospium chloride, IR, ER, or TD forms for oxybutynin and IR or ER forms of tolterodine.

d. There is insufficient evidence of the comparative efficacy or safety among incontinence drugs for subgroups.