

2012/2013 Michigan Drug Formulary



Your Extended Family.

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MOLINA HEALTHCARE DRUG FORMULARY

The Molina Healthcare of Michigan Drug Formulary was created to help manage the quality of our members' pharmacy benefit. The Formulary is the cornerstone for a progressive program of managed care pharmacotherapy. Prescription drug therapy is an integral component of your patient's comprehensive treatment program. The Formulary was created to ensure Molina members receive high quality, cost-effective, rational drug therapy.

The Molina Healthcare of Michigan Pharmacy and Therapeutics Committee meets quarterly to review and recommend medications for formulary consideration. This assures that the Formulary remains responsive to physician and patient needs. The Committee is composed of providers and pharmacists representing various medical specialties. With a primary consideration to provide a safe, effective and comprehensive Formulary, the Committee evaluated all therapeutic categories and has selected the most cost-effective agent(s) in each class. The Committee also uses reference materials from our Pharmacy Benefits Manager's Pharmacy and Therapeutics Advisory Panel. In addition, the Molina Pharmacy and Therapeutics Committee reviews prior authorization procedures to ensure medications are used safely, following manufacturer's guidelines and current medical practices.

If you are interested in serving on the Pharmacy and Therapeutics Committee, please contact the Pharmacy Department by calling (888) 898-7969, option 1, 5.

Please familiarize yourself with the Drug Formulary as you prescribe medications for Molina Healthcare of Michigan members. Thank you for your cooperation.

PREFACE

USING THE MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

The Molina Healthcare of Michigan Drug Formulary is a listing of preferred drug products eligible for reimbursement by Molina Healthcare of Michigan. All medications are listed by generic name. The medications are organized by therapeutic classes. For your convenience a table of contents by therapeutic category is found at the beginning and an index which lists formulary drugs by their brand and generic names is listed at the end of the Drug Formulary Book.

Specialty Bio-Pharmaceutical Medications

Caremark Pharmacy

In November 2003 Molina Healthcare of Michigan (MHM) entered into an exclusive contractual arrangement with *Caremark Specialty Pharmacy* to be the provider of specialty bio-pharmaceutical medications. This program allows our health plan to obtain the best possible price and at the same time, obtain other services to assist in the overall healthcare management of the member. *Caremark* medications may be delivered directly to the patient or to your office.

NOTE: *Caremark Specialty Pharmacy* will need the patient's telephone number to verify certain information such as continued insurance eligibility and availability to sign for the package. Please see below for a list of some of the preferred medications handled by *Caremark Specialty Pharmacy*. Other medications are non-formulary.

If you have any questions, please feel free to call Pharmacy Services at (888) 898-7969. The pharmacy fax line is (888) 373-3059.

ACTIMMUNE	GLEEVEC	NEXAVAR	SANDOSTATIN
ADVATE	HELIXATE	NOVANTRONE	SPRYCEL
ALPHANATE	HERCEPTIN	NOVOSEVEN	STIMATE
ALPHANINE	HUMATE P	OCETREOTIDE	SUTENT
APLIGRAF	HUMATROPE	PEGASYS**	SYNAGIS
ARIXTRA	HUMIRA	PEG-INTRON**	SYNAREL
ARANESP	INCRELEX	PROCRIT	TEMODAR
AUTOPLEX	INFERGEN	PROFILNINE	TEVTROPIN**
AVONEX	INTRON A	PROPLEX	THALOMID
BEBULIN	KOATE	PULMOZYME	THROMATE
BENEFIX	KOGENATE	RAPTIVA	THYROGEN
COPAXONE	LEUKINE	REBETOL	TOBI
COPEGUS	LOVENOX	REBETRON	TRACLEAR
DDAVP	LUCENTIS	RECOMBINATE	TYKERB
ELAPRASE	LUPRON	REFACTO	TRELSTAR
ENBREL	MONARCH M	REMODULIN	VIDAZA
EPOGEN	MONCLATE	REVATIO	VANTAS
EXTAVIA**	MONONINE	REVLIMID	VISUDYNE
EUFLEXXA	MYOBLOC	RHOGAM	WHINRHO
FEIBA-VH	NEUMEGA	RIBAVIRIN	XELODA
FORTEO	NEULASTA	REFERON	XOLAIR
FRAGMIN	NEUPOGEN	SAIZEN	ZOLADEX

**** Formulary Preferred**

All medications on this list require a Prior Authorization be faxed to Molina Healthcare of Michigan.

Antineoplastics and Immunosuppressants

All FDA-Approved, Non-injectable Antineoplastics and immunosuppressants are eligible for coverage. Injectable and certain high cost oral medications in this class are subject to Prior Authorization and must be filled through *Caremark Specialty Pharmacy*.

Generic Name	Brand Name
Melphalan	ALKERAN
Anastrozole	ARIMIDEX
Bicalutamide	CASODEX
Lomustine	CEENU
Mycophenolate Mofetil	CELLCEPT
Cyclophosphamide	CYTOXAN
Estramustine	EMCYT
Levamisole	ERGAMISOL
Flutamide	EULEXIN
Toremifine	FARESTON
Letrozole	FEMARA
Altrefamine	HEXALEN
Hydroxyurea	HYDREA
Azathioprine	IMURAN
Chlorambucil	LEUKERAN
Mitotane	LYSODREN
Procarbazine	MATULANE
Megestrol	MEGACE
Busulfan	MYLERAN
Tamoxifen	NOLVADEX
Tacrolimus	PROGRAF
Mercaptopurine	PURINETHOL
Sirolimus	RAPAMUNE
Methotrexate	RHEUMATREX
Cyclosporine	SANDIMUNNE
Cyclosporine	NEORAL
Testolactone	TESLAC
Thioguanine	THIOGUANINE
Etoposide	VEPESID
Pipobroman	VERCYTE
Tretinoin	VESANOID

Other medications are added in this class regularly. Please contact MHM for coverage information if the medication you are requesting does not appear on this list at (888) 898-7969.

State of Michigan, Carve Out

Effective October 2004, the State of Michigan enacted a Carve out for all Psychotropic and HIV/AIDS related medications. Effective April 2010, additional classes of medication have been added to the Carve Out. These classes include ADHD, Anti-Depressive, Sedative, Anti-Anxiety and Anti-Convulsant medications. Claims for these medications must be submitted directly to the State of Michigan, First Health. Molina members may be responsible for a \$1.00-\$3.00 co-pay on these medications as indicated by State rules.

Effective 10/1/2004	STELAZINE	DAISTAT, ACUDIAL	PHENOBARBITAL
ABILIFY	SUBOXONE	DILANTIN	PHENYTEK
AGENERASE	SUSTIVA	DORAL	PRISTIQ
AKINETON	SYMBYAX	EDLUAR	PROSOM
APTIVUS	THORAZINE	EFFEXOR, XR	PROVIGIL
ARTANE	TRILAFON	ELAVIL	PROZAC, WEEKLY
ATRIPLA	TRIZIVIR	EMSAM	REMERON
CAMPREL	TRUVADA	FELBATOL	RESTORIL
CLOZARIL	VIDEX, -EC	FOCALIN, XR	RITALIN, SR, LA
COGENTIN	VIRACEPT	GABITRIL	ROZEREM
COMBIVIR	VIRAMUNE	HALCION	SARAFEM
CRIXIVAN	VIREAD	INTUNIV	SECONAL SODIUM
EMTRIVA	ZERIT	KEPPRA, XR	SERAX
EPIVIR	ZIAGEN	KLONOPIN	SERZONE
EPZICOM	ZYPREXA, ZYDIS	LAMICTAL, ODT, XR	SINEQUAN
FAZACLO	Effective 4/1/2010		SOMNOTE, NOCTEC
FORTOVASE	ADDERALL, XR	LIBRIUM	SONATA
FUZEON	AMBIEN CR	LIMBITROL, DS	STAVZOR
GEODON	ANAFRANIL	LUDIOMIL	STRATTERA
HALDOL	APLENZIN, ER	LUMINAL	SURMONTIL
HIVID	ASENDIN	LUNESTA	TEGRETOL, XR
INAPSINE	ATTVAN	LUVOX, CR	TOFRANIL, PM
INVIRASE	BANZEL	LYRICA	TOPAMAX
KALETRA	BUSPAR, VANSPAR	MARPLAN	TRANXENE T-TAB
KEMADRIN	BUTISOL SODIUM	MEBARAL	TRIAVIL, ETRAFON
LEXIVA	CARBATROL	METADATE ER, CD	TRILEPTAL
LOXITANE	CELEXA	MILTOWN	VALIUM
MELLARIL	CELONTIN	mysoline	VIMPAT
MOBAN	CEREBYX	NARDIL	VIVACTIL
NAVANE	CONCERTA	NEURONTIN	VYVANSE
NORVIR	CYMBALTA	NIRAVAM	WELLBUTRIN, SR, XL
ORAP	DALMANE	NORPRAMIN	XANAX, -XR
PROLIXIN	DAYTRANA	NUVIGIL	ZARONTIN
SCRIPTOR	DEPAKENE	PAMELOR	ZOLOFT
RETROVIR	DEPAKOTE, ER	PARNATE	ZONEGRAN
REYATAZ	DESYREL	PAXIL, CR	
RISPERDAL	DEXEDRINE	PEGANONE	
SEROQUEL	DEXTROSTAT	PEXEVA	

PRIOR AUTHORIZATION HELPFUL HINTS

To ensure the quickest response possible from MHM Pharmacy Department please provide the following information with the Prior Authorization request.

Class of Medication/Diagnosis	Requested Clinical Information
Cholesterol Lowering	Lipid Panel
Diabetics	A1c Report
Osteoperosis	Bone Density Study
Proton Pump Inhibitor (For BID dosing only)	Endoscopy Report
Onychomycosis	Culture and Sensitivity Report
Pain Management	Medication Log, Narcotic Contract and Progress Notes
Non-Formulary Medications	Medication Log and/or Progress Notes documenting previous use of formulary medications
Non-Preferred Medications for new Members	Medication Log and/or Progress Notes documenting previous use of requested medications

GENERIC MEDICATIONS

Selected medications have FDA-approved generic equivalents available. The Molina Healthcare of Michigan drug endorsement states..."generic drugs will be dispensed whenever available".

If the use of a particular brand-name becomes medically necessary as determined by the provider, the provider must submit a Prior Authorization request and explain clinically why the branded drug product is medically necessary.

Molina Healthcare of Michigan encourages the use of quality generic products. Only those generic products which have received an "A" rating by the FDA should be utilized. Physicians are encouraged to write "Brand Only" or "DAW" only when medically necessary. Members are not permitted to ask for brand name drugs.

The Pharmacy and Therapeutics Committee recognizes that certain medications possess narrow therapeutic dose response characteristics. Therefore, the following drugs are not required to be generically substituted, unless the patient has been therapeutically maintained on the generic product for a period of time.

Generic Name	Brand Name
Digoxin	Lanoxin, Digitek
Levothyroxine	Synthroid or Levoxyl
Cyclosporine	Sandimmune, Neoral
Warfarin	Coumadin

NON-COVERED MEDICATIONS

Please note that certain medications are not covered. These include, but are not limited to:

- Medications for Cosmetic Purposes, including Retinoic Acid
- Experimental or Investigational Medications
- Convenience Dosage Forms (Transdermal Patches), not listed in the Formulary
- Fertility Drugs – Per MDCH Contract
- Erectile Dysfunction Drugs
- OTC Medications not found in formulary
- Medications used for non-FDA approved indications, unless approved by Medical Director
- Oxycontin
- Nutritional Supplements/Medical Foods (May be available through Utilization Management Department)

PRIOR AUTHORIZATION REQUEST PROCEDURE

Prescriptions for medications requiring prior approval or for medications not included on the Molina Drug Formulary may be approved when medically necessary and when formulary alternatives have demonstrated ineffectiveness. When these exceptional situations arise, the physician may fax a completed drug prior authorization form to Molina at (888) 373-3059. The forms may be obtained from Molina Healthcare of Michigan Pharmacy Prior Authorization Department by calling (888) 898-7969 and selecting 1 as a Provider and 5 for the Pharmacy Department or by visiting <http://www.molinahealthcare.com/medicaid/providers/mi/forms>. Trials of pharmaceutical samples do not guarantee or override prior authorization approval.

PRESCRIPTION QUANTITIES

Prescriptions should be written for a therapeutic supply of medications (the amount to appropriately treat a medical condition) up to a maximum of a 30-day supply. Trial quantities may be used when trying new treatments, if appropriate. Some drugs may have quantity limits.

TELEPHONE PRESCRIPTIONS

Whenever possible, the patient should be given the prescription in writing or delivered directly to the pharmacy via e-prescribing. This will allow the patient to make use of the most convenient network pharmacy and enable the pharmacy to fill the prescription after normal office hours.

INDIVIDUAL PRESCRIPTIONS

Each prescription must legally be prescribed for one individual only. If prescribing for a family, each family member must receive a prescription.

MEMBER AFTER HOURS PHARMACY SERVICES

POLICY - After normal business hours, which is defined as after the close of Molina Healthcare of Michigan Pharmacy Department (Mon-Fri) 8:00 AM-6:00 PM EST.

Molina specialized agents are available at the CVS/Caremark Help Desk and may be contacted for assistance at (800) 791-6856. The after hours pharmacy policy goes into effect as described in the Procedure section.

PURPOSE - This policy establishes the infrastructure and procedures for plan members to obtain medications on an emergency basis and on a 24-hour/day/7day/week basis.

SCOPE - This policy applies to CVS/Caremark contracted pharmacy providers dispensing medications to Molina Healthcare of Michigan members after the Plan's normal business hours.

PROCEDURE

During after hours situations contact the CVS/Caremark Helpdesk at (800) 791-6856 for an override to approve a three day supply of any medication which "when not given may cause the member's condition to worsen".

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
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Chapter 1 ANTIINFECTIVES

1.1 Penicillins

- ANTIBIOTICS IN SUSPENSION FORM DO NOT REQUIRE A PA FOR MEMBERS 12 YEARS AND YOUNGER
- Bronchitis due to viral infections should not be treated with antibiotics.
- Use with caution in patients with a reported allergy to cephalosporins and in patients with renal impairment.
- Despite increasing antibiotic resistance, Amoxicillin continues to remain the drug of choice for otitis media in children. Amoxicillin doses of 60-90mg/kg/day (in divided doses) may be needed for suspect/proven PCN-resistant S. pneumoniae.
- The secondary choice for patients with contraindications to amoxicillin is SMZ/TMP (generic Bactrim, Septra).

First Line:

*	Dicloxacillin	DYNAPEN
*	Ampicillin	PRINCIPEN
*	Amoxicillin	TRIMOX
*	Penicillin VK	VEETIDS

2nd Line:

*	Amoxicillin/potassium clavulanate	AUGMENTIN (Max#20)
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1.2 Cephalosporins

- Dosage may need to be modified in patients with renal impairment. Inappropriately large doses may cause seizures.
- Use with caution in patients with a reported sensitivity or allergy to penicillin due to cross-sensitivity in about 10% of patients.

First Line:

*	Cefaclor	CECLOR
*	Cephalexin	KEFLEX

2nd Line:

*	Cefuroxime	CEFTIN
*	Cefadroxil Monohydrate	DURICEF

PRIOR AUTHORIZATION REQUIRED

*	Cefaclor	CECLOR CD^
*	Cefprozil	CEFZIL^
*	Cefdinir	OMNICEF^
	Cefixime	SUPRAX^

[^]SUSPENSION FORM - NO PA MEMBERS 12 & UNDER

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
1.3 Erythromycins		
•	Erythromycin is the most cost-effective alternative to penicillin for the treatment of many infections in penicillin-allergic patients.	
•	Co-administration may increase levels of theophylline, carbamazepine (Tegretol), cyclosporin (Sandimmune, Neoral, Sangcya) and warfarin (Coumadin).	
First Line:		
*	Erythromycin ethylsuccinate	EES
*	Erythromycin base, (enteric-coated)	ERY-TAB
*	Erythromycin stearate	ERYTHROCIN
2nd Line:		
*	Azithromycin	ZITHROMAX (250 mg Max #6 & 500 mg Max #3)

PRIOR AUTHORIZATION REQUIRED

*	Clarithromycin	BIAXIN+^
*	Telithromycin	KETEK
*	Azithromycin	ZITHROMAX 1GM POWDER PACK**

[^]SUSPENSION FORM - NO PA MEMBERS 12 & UNDER

^{**}NO PA REQUIRED WHEN BILLED AS A 1 DAY STAT DOSE

+ Up to #28 available for treatment of H. Pylori if billed same day as Amoxicillin

1.4 Tetracyclines

- Contraindicated for children less than 8 years old, or pregnant and nursing mothers.
- Absorption is decreased by dairy products, iron, bismuth and antacids. Doxycycline is minorly affected.

*	Tetracycline	SUMYCIN
*	Doxycycline	VIBRAMYCIN (Caps only)

1.5 Quinolones

- Not generally considered First Line therapy for most infections.
- Consider use for:
 - Sensitive staphylococcal infections when another effective, less expensive oral antibiotic is not an option.
 - Gram negative, soft tissue, bone, renal and wound infections when the only other option is parenteral antibiotics.
 - Respiratory infections in cystic fibrosis patients as an alternative to parenteral antibiotics.
- Co-administration with theophylline may increase serum theophylline levels.
Co-administration with warfarin (Coumadin) may increase Coumadin effects.

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
• Common side effects for ciprofloxacin (Cipro) are restlessness and vomiting.		
*	Ciprofloxacin	CIPRO (Max #20)
PRIOR AUTHORIZATION REQUIRED		
*	Moxifloxacin	AVELOX
*	Ofloxacin	FLOXIN
	Levofloxacin	LEVAQUIN
<u>1.6 Aminoglycosides</u>		
*	Neomycin	
<u>1.7 Sulfonamides</u>		
*	Smz/tmp	BACTRIM, SEPTRA
*	Sulfisoxazole	GANTRISIN
*	Sulfisoxazole/ erythromycin Susp.	PEDIAZOLE
<u>1.8 Antituberculosis</u>		
*	Isoniazid	ISONIAZID
*	Ethambutol	MYAMBUTOL
*	Pyrazinamide	PYRAZINAMIDE
*	Rifampin	RIFADIN
*	Pyridoxine	VITAMIN B-6
<u>1.9 Antifungal</u>		
First Line:		
*	Fluconazole	DIFLUCAN 100 mg or 200 mg (Max #21)
*	Griseofulvin	FULVICIN UF, FULVICIN PG
*	Clotrimazole	MYCELEX (troches only)
2nd Line:		
*	Terbinafine tablets	LAMISIL TABLETS (Max #30)
PRIOR AUTHORIZATION REQUIRED		
*	Ketoconazole	NIZORAL
	Posaconazole	NOXAFILE
<u>1.10 Antiviral</u>		
*	Amantadine	SYMMETREL
*	Acyclovir	ZOVIRAX (tab, capsules, Ointment Max 30 gram/60 days, Cream Max 2 gram/60 days)

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>1.11 Antimalarial</u>		
	Pyrimethamine Primaquine Phosphate	DARAPRIM PRIMAQUINE
<u>1.12 Anthelmintics</u>		
*	Mebendazole	VERMOX
<u>1.13 Miscellaneous Antiinfectives</u>		
*	Clindamycin	CLEOCIN (150mg only)
*	Metronidazole Nitrofurantoin monohyd/ macrocrystals LA	FLAGYL MACROBID
*	Nitrofurantoin	MACRODANTIN
*	Trimethoprim	TRIMPEX

PRIOR AUTHORIZATION REQUIRED

Nitazoxanide	ALINIA
Entecavir	BARACLUDE

Chapter 2 **ENDOCRINE MEDICATIONS**

2.1 Systemic Corticosteroids

2.1.1 Glucocorticosteroids

*	Hydrocortisone	CORTEF
*	Dexamethasone	DECADRON
*	Methylprednisolone	MEDROL
*	Prednisolone	ORAPRED (syrup- No PA for members 18 and under)
*	Prednisone	ORASONE
*	Prednisolone	PREDNISOLONE
	Prednisolone Syrup	PRELONE

2.1.2 Mineralocorticoids

*	Fludrocortisone	FLORINEF
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2.2 Estrogens

*	Estradiol Estrogens, conjugated	ESTRACE PREMARIN (tabs, vaginal cream)
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MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
PRIOR AUTHORIZATION REQUIRED		
*	Estradiol Transdermal	ESTRADERM PATCH, VIVELLE
2.2.1	Estrogen/Progesterone Combination	FEMHRT PREMPHASE PREMPRO
<u>2.3 Oral Contraceptives #28 covered per 28 days</u>		
2.3.1 Mono-Phasic Oral Contraceptives		
*	Levonorgestrel/ethynodiol diacetate	ALESSE
*	Levonorgestrel/ethynodiol diacetate	LEVLEN
*	Norgestrel/ethynodiol diacetate	LO OVRAL, OVRAL
*	Ethinodiol/ethynodiol diacetate/norethindrone acetate	LOESTRIN
*	Ethinodiol/norethindrone acetate	MODICON
*	Levonorgestrel/ethynodiol diacetate	NORDETTE
*	Ethinodiol/desogestrel	ORTHO-CEPT
*	Ethinodiol/norgestimate	ORTHO-CYCLEN
*	Norethindrone/ethynodiol diacetate	ORTHO-NOVUM 1/35
*	Norethindrone/mestranol	ORTHO-NOVUM 1/50
*	Norethindrone/ethynodiol diacetate	OVCON-35, OVCON-50
*	Ethinodiol/Drosigestrin acetate	YASMIN
2.3.2 Bi-Phasic Oral Contraceptives		
*	Norethindrone/ethynodiol diacetate	ORTHO-NOVUM 10/11
2.3.3 Tri-Phasic Oral Contraceptives		
*	Norethindrone/ethynodiol diacetate	ESTROSTEP
*	Norethindrone/ethynodiol diacetate	ORTHO-NOVUM 7/7/7
*	Norgestimate/ethynodiol diacetate	ORTHO TRI-CYCLEN
*	Levonorgestrel/ethynodiol diacetate	TRIPHASIC
2.3.4 Progestin Only Oral Contraceptives		
*	Norethindrone	MICRONOR
*	Norgestrel	OVRETTE
<u>2.4 Miscellaneous Contraceptives</u>		
*	Medroxyprogesterone acetate	DEPO-PROVERA (150mg/ml)
<u>2.4A Other Contraceptives</u>		
	Etonogestrel/ethynodiol diacetate	NUVA RING
<u>2.5 Progestins</u>		
*	Norethindrone acetate	AYGESTIN
*	Medroxyprogesterone acetate	PROVERA, CYCRIN

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>2.6 Oral Hypoglycemics</u>		
	Pioglitazone/Metformin	ACTOPLUS (Step Therapy: Three month trial of Metformin and A1c < 8.5)
	Pioglitazone	ACTOS (Step Therapy: Three month trial of Metformin and A1c < 8.5)
*	Glimepiride	AMARYL
*	Glyburide	DIABETA
*	Chlorpropamide	DIABINESE
*	Metformin	GLUCOPHAGE
*	Metformin, Extended-Release	GLUCOPHAGE XR
*	Glipizide	GLUCOTROL
*	Glipizide extended release	GLUCOTROL XL
*	Metformin/Glipizide	GLUCOVANCE
*	Glyburide	GLYNASE
	Sitagliptin/Metformin	JANUMET (Step Therapy: Three month trial of Metformin and A1c < 8.5)
	Sitagliptin	JANUVIA (Step Therapy: Three month trial of Metformin and A1c < 8.5)
	Saxagliptin/Metformin	KOMBIGLYZE XR (Step Therapy: Three month trial of Metformin and A1c < 8.5)
	Saxagliptin	ONGLYZA (Step Therapy: Three month trial of Metformin and A1c < 8.5)
*	Tolbutamide	ORINASE
*	Tolazamide	TOLINASE
PRIOR AUTHORIZATION REQUIRED		
*	Acarbose	PRECOSE

2.7 Insulins/Supplies

- Insulin PENS are covered for all members under 16 years of age
- Insulin PEN Step Therapy for members over 16 years of age: Covered for patients with documented retinopathy and neuropathy
- #200 test strips are covered for insulin dependent & pregnant members (filling prenatal vitamins)
- #50 test strips are covered for all other members

Insulin Lispro	HUMALOG, NOVOLOG
Insulin-Human, recombin	HUMULIN, NOVOLIN
Insulin Glargine	LANTUS
Glucometer	TRUE TRACK/ TRUE RESULT
Glucose Test Strips	TRUE TRACK/ TRUE TEST
Insulin Syringes, OTC Lancets, OTC	

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>2.8 Glucagon</u>	Glucagon	GLUCAGON KIT
<u>2.9 Antithyroid Drugs</u>	*	Propylthiouracil
	*	Methimazole
<u>2.10 Thyroid Hormones</u>	*	Thyroid dessicated
	*	Levothyroxine
<u>2.11 Endometriosis Therapy</u>	*	Danazol
	*	Nafarelin
<u>2.12 Osteoporosis Drugs</u>	*	Alendronate
PRIOR AUTHORIZATION REQUIRED		
	*	Raloxifene
	*	Calcitonin Salmon
		EVISTA [^]
		MIACALCIN
		NASAL SPRAY [^]

[^]NO PA REQUIRED FOR MEMBERS OVER 50 YEARS OF AGE.

TO EXPEDITE RESPONSE PLEASE SUBMIT CURRENT BONE DENSITY STUDY

- Management of osteoporosis should start with:
 - Adequate dietary calcium, including calcium supplementation in therapeutic doses.
 - Weight bearing exercise.
 - Estrogen replacement, if not contraindicated.
 - Reduction of caffeine intake.
- Bisphosphonate patients should be carefully selected to ensure that they are able to be compliant with dosing/absorption requirements.
- Fosamax 5mg is the only strength indicated for prevention, rather than treatment of osteoporosis.
- Evista is not considered first-line therapy for a majority of patients. Its use should be reserved for those patients unable to tolerate estrogen or HRT therapy, due to intolerable adverse effects or those at a very high risk of breast cancer. Long term effects of Evista are not known at this time.

2.13 Other Endocrine Drugs

*	Ergocalciferol	CALCIFEROL
*	Bromocriptine	PARLODEL

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
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Chapter 3

CARDIOVASCULAR MEDICATIONS

3.1 Cardiac Glycosides

- Digitalis toxicity is increased by hypokalemia.
- Co-administration of digoxin with verapamil or quinidine increases digoxin levels and may cause toxicity.

Digoxin Solution	DIGOXIN SOLUTION (No PA for members 12 and under)
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*	Digoxin	DIGITEK, LANOXIN
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3.2 Nitrates

- Tolerance to oral nitrates such as isosorbide dinitrate (Isordil) may result in an increase in the dose required. Oral nitrates should be prescribed no more frequently than TID with a nitrate-free period of 10-12 hours per day.

*	Isosorbide dinitrate SR	DILATRATE SR
*	Isosorbide mononitrate	IMDUR, MONOKET, ISMO
*	Isosorbide dinitrate	ISORDIL (excluding Tembids)
*	Nitroglycerin SR	NITRO-BID
*	Nitroglycerin patch	NITRO-DUR, DEPONIT
*	Nitroglycerin spray	NITROLINGUAL SPRAY
*	Nitroglycerin Oint	NITROL OINT
*	Nitroglycerin	NITROSTAT

NOTE: IN THE TREATMENT OF HYPERTENSION, JNC VII GUIDELINES CONTINUE TO RECOMMEND DIURETICS OR BETA-BLOCKERS TO BE FIRST LINE, COST EFFECTIVE THERAPY, EXCEPT IN AFRICAN AMERICANS.

3.3 Metabolic Modulators

PRIOR AUTHORIZATION REQUIRED	
Ranolazine	RANEXA

3.4 Beta-Blockers

3.4.1 Beta-1 Specific

*	Carvedilol	COREG
*	Metoprolol	LOPRESSOR
*	Atenolol/Chlorthalidone	TENORETIC

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

	Generic Available*	Generic Name	Brand Name
	*	Atenolol	TENORMIN
	*	Metoprolol ER	TOPROL XL
3.4.2 Non-Selective	*	Nadolol	CORGARD
	*	Propranolol	INDERAL
		Propranolol ER	INNOPRAN XL
		Penbutolol	LEVATOL
	*	Labetalol	NORMODYNE
	*	Bisoprolol	ZEBETA
3.4.3 Beta-Blocker Combinations	*	Bisoprolol/HCTZ	ZIAC
<u>3.5 Calcium Antagonists</u>	*	Nifedipine SR	ADALAT-CC
	*	Verapamil	CALAN
	*	Verapamil SR	CALAN SR
	*	Diltiazem & Diltiazem ER	DILACOR XR, TIAZAC, CARDIZEM, -CD, -SR
	*	Isradipine	DYNACIRC, DYNACIRC CR
	*	Amlodipine	NORVASC
	*	Nifedipine	PROCARDIA

3.6 Antidysrhythmic Drugs

- Avoid combining agents of the same class or agents with potentially additive side effects (QT interval prolongation, negative inotropic effects, etc.) Antiarrhythmics may provoke arrhythmia (proarrhythmia); hypokalemia enhances the proarrhythmic effect of many drugs.
- The risk of proarrhythmia increases with worsening left ventricular function and ischemia.

*	Amiodarone	CORDARONE, PACERON
*	Procainamide SR	PROCANBID
*	Procainamide	PRONESTYL
*	Quinidine gluconate	QUINAGLUTE
*	Quinidine sulfate SR	QUINIDEX
*	Quinidine Sulfate	QUINIDINE SULFATE
	Dronedarone	MULTAQ (Step Therapy: Three month trial of Amiodarone)

3.7 Angiotensin Converting Enzyme Inhibitor

- ACE inhibitors may precipitate acute renal failure and hyperkalemia in patients with severe heart failure, pre-existing renal disease, or hypovolemic states.

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<ul style="list-style-type: none">• Use of ACE inhibitors in the second and third trimesters of pregnancy can harm or even kill a developing fetus and are contraindicated in pregnancy.• Co-administration of ACE inhibitors with potassium or potassium-sparing diuretics increases the risk of hyperkalemia.		
*	Quinapril	ACCUPRIL
*	Captopril	CAPOTEN
*	Benazepril	LOTENSIN
*	Trandolapril	MAVIK
*	Lisinopril	ZESTRIL
3.7.1 Angiotensin Converting Enzyme Inhibitor/Diuretic Combinations		
*	Quinapril/HCTZ	ACCURETIC
*	Captopril/HCTZ	CAPOZIDE
*	Benazepril/HCTZ	LOTENSIN - HCT
*	Lisinopril/HCTZ	ZESTORETIC
3.7.2 Angiotensin Converting Enzyme Inhibitor/Calcium Channel Blocker Combinations		
Trandolapril/Verapamil ER		TARKA
3.7.2 Angiotensin Converting Enzyme Inhibitor/Diuretic Combinations		
*	Enalapril	VASOTEC
3.7.2 Angiotensin Converting Enzyme Inhibitor/Calcium Channel Blocker Combinations		
*	Enalapril/HCTZ	VASORETIC
3.7.3 Angiotensin II Receptor Antagonists		
•	ARBs may be useful in those patients who require treatment with an ACE, but are unable to tolerate common ACE adverse effects, such as cough.	
Olmesartan		BENICAR (Step Therapy: Three month trial of COZAAR)
*	Losartan	COZAAR (Step Therapy: Three month trial of ACE Inhibitor)
3.7.4 Angiotensin II Antagonist Combination		
Olmesartan/HCTZ		BENICAR HCT (Step Therapy: Three month trial of ACE Inhibitor)
*	Losartan/HCTZ	HYZAAR (Step Therapy: Three month trial of ACE Inhibitor)

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>3.8 Antidiuretic Agents-Centrally Acting</u>		
*	Methyldopa	ALDOMET
*	Clonidine	CATAPRES (tablets only)
*	Doxazosin	CARDURA
<u>3.9 Alpha Blockers</u>		
*	Terazosin	HYTRIN
*	Prazosin	MINIPRESS
<u>3.10 Vasodilators</u>		
*	Hydralazine	APRESOLINE
<u>3.11 Diuretics</u>		
3.11.1 Loop Diuretics		
*	Bumetanide	BUMEX
*	Furosemide	LASIX
*	Furosemide Solution	LASIX SOLUTION (No PA for members 12 and under)
3.11.2 Thiazide & Related Diuretics		
*	Hydrochlorothiazide	HYDRODIURIL
*	Indapamide	LOZOL
*	Metolazone	ZAROXOLYN
3.11.3 Potassium Sparing Diuretics		
*	Spironolactone/HCTZ	ALDACTAZIDE
*	Spironolactone	ALDACTONE
*	Triamterene/HCTZ	DYAZIDE
*	Triamterene/HCTZ	MAXZIDE
3.11.4 Carbonic Anhydrase Inhibitor		
*	Acetazolamide	DIAMOX
*	Methazolamide	NEPTAZANE
<u>3.12 Cholesterol Lowering Agents</u>		

- Drug treatment for lowering cholesterol should be considered only when patients have not responded to non-drug therapies such as dietary restrictions, smoking cessation and exercise programs. Patients who are unwilling to be compliant with lifestyle modifications may not be appropriate candidates for drug therapy.
- The selection of a cholesterol-lowering drug should be based upon a) patient risk factors for coronary artery disease and b) the percentage decrease in levels that is required. Treatment criteria are based on nationally recognized treatment guidelines.

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
3.12.1 HMG CoA Reductase	Rosuvastatin	CRESTOR (Step Therapy: Three month trial of Simvastatin)
*	Pravastatin	PRAVACHOL (10, 20, 40 mg)
*	Simvastatin	ZOCOR (10, 20, 40 mg)

PRIOR AUTHORIZATION REQUIRED

Ezetimibe/Simvastatin VYTORIN

TO EXPEDITE RESPONSE PLEASE INCLUDE CURRENT
LIPID PANEL ALONG WITH REQUEST FORM

3.12.2 Other Cholesterol Lowering Agents

- Niacin has several side effects including flushing, itchy skin, GI distress, liver toxicity, hyperglycemia and hyperuricemia. To avoid flushing, give niacin with meals and start with a low dose, titrating up slowly. One aspirin or ibuprofen given 1 hour before the niacin dose helps against persistent flushing.

*	Colestipol	COLESTID TABLETS
*	Fenofibrate	LOFIBRA
*	Gemfibrozil	LOPID
*	Niacin, Niacin SR	NIACIN, SLO-NIACIN, NIASPAN
*	Cholestyramine	QUESTRAN (can only)
*	Cholestyramine	QUESTRAN LIGHT (can only)

3.13 Miscellaneous Cardiovascular Drugs

*	Pentoxifylline	TRENTAL
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Chapter 4

RESPIRATORY MEDICATIONS

4.1 Antihistamines

- Nasonex not covered without documented trial and failure of Flonase.
- Use of OTC, first generation antihistamines is recommended as initial therapy. Antihistamines should be used with caution in patients taking MAO inhibitors, alcohol or other CNS depressants.

4.1.1 Single-Entity Products

Consider OTC PRODUCTS as first line therapy

*	Fluticasone	FLONASE
*	Azelastine	ASTEPRO
*	Hydroxyzine	ATARAX, VISTARIL
*	Diphenhydramine	BENADRYL OTC BENADRYL (syrup)

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
*	Chlorpheniramine	CHLOR-TRIMETON OTC
*	Cromolyn-Nasal inhaler	NASALCROM OTC
*	Cyproheptadine	PERIACTIN
*	Clemastine	TAVIST
Lower Sedating Antihistamines		
• The use of lower sedating antihistamines is usually reserved for those patients who engage in high risk activities that would be compromised from a preferred antihistamine.		
*	Loratadine	CLARITIN OTC
*	Loratadine	CLARITIN SYRUP OTC (No PA for members 18 and under)
*	Loratadine/pseudoeph	CLARITIN-D OTC
*	Cetirizine	ZYRTEC OTC
*	Cetirizine	ZYRTEC SYRUP OTC (No PA for members 6 and under)
*	Cetirizine/Pseudoephedrine	ZYRTEC-D OTC

PRIOR AUTHORIZATION REQUIRED

*	Fexofenadine	ALLEGRA
*	Fexofenadine/Pseudoephedrine	ALLEGRA-D

4.1.2 Combination Products

OTC Products May Be Used As First Line Therapy

*	Triprolidine/ Pseudoephedrine, OTC	ACTIFED OTC (tabs)
*	Brompheniramine/ Pseudoephedrine	BROMFED, -PD
*	Chlortrimeton/Decong.	CONTAC OTC (12 hour caps)
*	Chlorpheniramine/ Pseudoephedrine	DECONAMINE SR
*	Bromphen/Decong	DIMETAPP OTC (tabs)
*	Carbinoxamine/phenylephrine	CERON (tabs)

4.2 Decongestant Products

*	Pseudoephedrine, OTC	SUDAFED OTC (tabs)
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4.3 Antitussives & Expectorants

*	Hydrocodone/Phenyl/CTM	HISTUSSIN HC
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MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
*	Guaifenesin/ Dextromethorphan	HUMIBID DM, FENESIN DM
*	Guaifenesin	HUMIBID LA
*	Phenylephrine/promethazine	PHENERGAN VC
*	Dextromethorphan/ promethazine	PHENERGAN DM
*	Codeine/promethazine	PHENERGAN/ CODEINE
*	Codeine/phenylephrine/ promethazine	PHENERGAN VC & COD
*	Guaifenesin, OTC	ROBITUSSIN OTC
*	Guaifenesin/Codeine	ROBITUSSIN AC
	Guaifenesin/ Pseudoephedrine/ Codeine	ROBITUSSIN DAC
*	Guaifenesin/ Dextromethorphan	ROBITUSSIN DM OTC
*	Benzonatate	TESSALON PERLES
*	Guaifenesin/ Dextromethorphan	TUSSI-ORGANIDIN- DM NR
*	Guaifenesin/Codeine	TUSSI-ORGANIDIN NR

4.4 Antiasthmatics

4.4.1 Adrenergic Stimulants-Inhalers

*	Albuterol	PROAIR HFA INHALER
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PRIOR AUTHORIZATION REQUIRED

Fomoterol	FORADIL^
Salmeterol	SEREVENT^
Pirbuterol	MAXAIR AUTOINHALER

^ NO PA REQUIRED AFTER MEDICATION HAS BEEN
FILLED CONSISTENTLY FOR THREE MONTHS

4.4.2 Adrenergic Stimulants-Solutions

*	Metaproterenol	ALUPENT
*	Albuterol	PROVENTIL

4.4.3 Adrenergic Stimulants-Oral Tabs

*	Terbutaline	BRETHINE
*	Albuterol	PROVENTIL

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
4.4.4 Xanthine Derivatives		
•	Theophylline levels may be decreased by cigarette smoking.	
•	There are a significant number of drug interactions with theophylline and commonly prescribed medicines such as phenytoin, isoniazid, beta-blockers, oral contraceptives and erythromycin.	
*	Theophyllines, 8-12 hour	SLO-BID GYROCAPS
*	Theophyllines, 8-24 hour	THEO-DUR
*	Theophyllines	UNIPHYL

4.4.5 Cortico-steroids For Inhalation

- Inhaled corticosteroids are useful for chronic maintenance treatment and prevention of asthma/COPD symptoms. They should be considered as first-line therapy for patients with moderate to severe, chronic symptoms of asthma.
- Inhaled corticosteroids are not effective for PRN treatment of acute symptoms.
- Use of short-acting inhaled beta-2 agonists more than 2 times a week may indicate the need to initiate long-term control therapy.
- ONLY ONE INHALED CORTICOSTERIOD COVERED PER MONTH

*	Beclomethasone	QVAR
*	Budesonide	PULMICORT RESPULES (No PA for members 9 and under)
	Budesonide	PULMICORT FLEXHALER (Step Therapy: Two month trial of QVAR)
	Mometasone	ASMANEX (Step Therapy: Two month trial of QVAR)
	Mometasone/Formoterol	DULERA (Step Therapy: Two month trial of ICS)

PRIOR AUTHORIZATION REQUIRED

Fluticasone/Salmeterol	ADVAIR
Budesonide/Formoterol	SYMBICORT

4.4.6 Leukotriene Inhibitors

- These products are not indicated for acute attacks, but are used to help prevent asthma symptoms.
- They may be less effective than inhaled corticosteroids.
- Exercise great caution when reducing doses of corticosteroids in patients taking Singulair. Aggressive corticosteroid reduction could lead to Churg-Strauss syndrome, which can cause neurological, pulmonary, or cardiac complications.

PRIOR AUTHORIZATION REQUIRED

Zafirlukast	ACCOLATE
Montelukast	SINGULAIR [^]

[^]NO PA REQUIRED FOR CHEW TAB FOR
MEMBERS 9 YEARS OF AGE AND UNDER

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
4.4.7 Other Drugs For Asthma/Respiratory Use		
	Inhaler enhancement device	AEROCHAMBER, & MASK, EASIVENT, MICROCHAMBER
*	Ipratropium	ATROVENT INHALER SOLUTION
	Sodium Chloride solution-canister	BRONCHO SALINE
*	Ipratropium/Albuterol Cromolyn	COMBIVENT CROMOLYN NEBULIZER SOLUTION
	Tiotropium Bromide	SPIRIVA

- Spacers consistently increase the delivery of inhaled medications in all age groups, regardless of technique and are strongly recommended.

Chapter 5

GASTROINTESTINAL MEDICATIONS

- Recommended lifestyle changes to include: Smoking cessation, weight loss, elevating head of bed, avoidance of spicy foods, late night snacks and alcoholic beverages.
- Antacids are effective in treating many gastrointestinal problems, including duodenal ulcer. They are as effective as H2 blockers in non-ulcer dyspepsia and should be considered initially.
- Non prescription strength famotidine (PEPCID AC) is effective for dyspepsia and is also a cost-effective alternative to other drugs.
- Initial therapy of duodenal ulcer may include H2 blockers, sucralfate or antacids for 8 weeks. Maintenance H2 therapy should be considered for patients with recurrence or bleeding complications.

5.1 Antidiarrheal Preparations

- Pepto Bismol should be avoided in children because it contains salicylate. Administration of salicylic acid derivatives (ASA) to children, including teenagers, with acute febrile illness has been associated with the development of Reye's syndrome.

*	Loperamide HCl	IMODIUM OTC
*	Diphenoxylate/atropine	LOMOTIL
*	Attapulgite	PARAPECTOLIN, KAOPECTATE OTC
*	Bismuth Subsalicylate	PEPTO BISMOL OTC

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
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5.2 Ulcer Therapy

5.2.1 H2 Antagonists

- Caution should be used in co-administration of cimetidine with warfarin, theophylline, phenytoin, benzodiazepines and other drugs.

*	Famotidine	PEPCID AC OTC (20mg)
*	Cimetidine	TAGAMET
*	Ranitidine	ZANTAC (syrup, tabs)

5.2.2 Proton-pump inhibitors

*	Omeprazole caps	OMEPRAZOLE (20mg)
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PRIOR AUTHORIZATION REQUIRED

*	Lansoprazole	PREVACID OTC + (No PA for members 12 and under)
*	Pantoprazole	PROTONIX

**TO EXPEDITE RESPONSE FOR TWICE DAILY DOSING REQUESTS PLEASE
INCLUDE MOST RECENT ENDOSCOPY REPORT**

+ Up to #56 OTC available for treatment of H. Pylori if billed same day as Amoxicillin

5.2.3 Other anti-ulcer products, antacids

*	Sucralfate	CARAFATE
*	Misoprostol	CYTOTEC
*	Antacid Liquid	MAALOX/MAALOX TC OTC
*	Antacid Liquid	MYLANTA/II OTC
*	Simethicone	MYLICON OTC
*	Sodium Bicarbonate	SODIUM BICARBONATE (Max #60)
*	Calcium carbonate	TUMS OTC

5.2.4 H. Pylori treatments

- H. Pylori has been shown to be the cause of a large percentage of duodenal ulcers. Treatment of H. pylori, when present, greatly reduces ulcer recurrence rates.

Ranitidine bismuth citrate TRITEC

5.3 Antiemetic

*	Meclizine	ANTIVERT
*	Prochlorperazine	COMPAZINE
*	Promethazine	PHENERGAN
*	Trimethobenzamide	TIGAN
*	Ondansetron	ZOFRAN (Max #12 tabs)

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>5.4 Digestants/Stool Softeners/Laxative</u>		
*	Lactulose	CEPHULAC
*	Docusate sodium	COLACE OTC
*	Lipase/protease/amylase	CREON
*	Bisacodyl	DULCOLAX (limit 2 months)
*	Docusate/casanthrol	PERI-COLACE OTC
*	Psyllium powder	METAMUCIL POWDER
*	Polyethylene Glycol	MIRALAX POWDER
<u>5.5 Antispasmodics & Drugs Affecting GI Motility</u>		
*	Dicyclomine	BENTYL
*	PEG Solution	COLYTE, COLYTE FLAVORED
*	Belladonna alkaloids/ phenobarbital	DONNATAL
*	Hyoscyamine sulfate	LEVSIN, LEVSINEX
*	CDZ/Clidinium	LIBRAX
*	Metoclopramide	REGLAN
	Lubiprostone	AMITIZA (Step Therapy: MIRALAX, LACTULOSE and COLACE trial)
<u>5.6 Sulfonamide/Mesalamine Products</u>		
*	Mesalamine	ASACOL
*	Sulfasalazine	AZULFIDINE
	Mesalamine	APRISO (Step Therapy: 3 months Asacol)

Chapter 6 **GENITOURINARY**

6.1 Vaginal Antiinfectives

OTC Products may be used as First Line Therapy

*	Acetic Acid/Oxquin	ACI-JEL
*	Clindamycin	CLEOCIN (vag cream)
*	Fluconazole Tablet	DIFLUCAN 150mg tab (Max #2)
*	Miconazole	MONISTAT

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
*	Clotrimazole	MYCELEX-G, GYNE-LOTRIMIN
*	Nystatin	MYCOSTATIN
*	Triple sulfa vag cream	SULTRIN (vag cream)
*	Metronidazole	VANDAZOLE
<u>6.2 Miscellaneous Vaginal</u>		AMINO-CERV
	Amino Acid/Urea Cervical Cream	
<u>6.3 Anticholinergic-Antispasmodics</u>		
*	Oxybutynin	DITROPAN
*	Oxybutynin XL	DITROPAN XL (Step Therapy: Three months of Ditropan)
PRIOR AUTHORIZATION REQUIRED		
*	Tolterodine Tartrate ER Propantheline	DETROL LA PRO-BANTHINE

6.4 Cholinergic Drugs

*	Bethanechol	URECHOLINE
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6.5 Urinary Analgesics

*	Phenazopyridine	PYRIDIUM
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6.6 Miscellaneous Genitourinary

*	Terazosin	HYTRIN
*	Doxazosin	CARDURA

PRIOR AUTHORIZATION REQUIRED		
Alfuzosin		UROXATROL

Chapter 7

CENTRAL NERVOUS SYSTEM

7.1 Dementia

Donepezil	ARICEPT
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PRIOR AUTHORIZATION REQUIRED	
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Rivastigmine	EXELON
Galantamine	RAZADYNE
Memantine	NAMENDA

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
7.2 Other CNS Drugs		
*	Nicotine transdermal	NICOTROL PATCH (limit 3 months)
*	Nicotine polaxcilex	NICORETTE GUM (Max #60 pieces, limit 3 months)
*	Bupropion SR	ZYBAN (limit 3 months)

PRIOR AUTHORIZATION REQUIRED

Varenicline	CHANTIX
Nicotine Inhaler	NICOTROL INHALER
Nicotine Nasal Spray	NICOTROL SPRAY

QUANTITY LIMITS MAY APPLY

Chapter 8

ANALGESICS

8.1 Non-Narcotic Analgesics

*	Aspirin-Tabs,	ASPIRIN OTC
*	Aspirin- enteric coated Tabs	ASPIRIN OTC
*	Salsalate	DISALCID, MONOGESIC
*	Butalbital/APAP/Caffeine	FIORICET
*	Butalbital/APAP/Caffeine/ Codeine	FIORICET w/CODEINE
*	Butalbital/ASA/Caffeine	FIORINAL
*	Butalbital/ASA/Caffeine/ Codeine	FIORINAL w/CODEINE
*	Acetaminophen	TYLENOL OTC
*	Tramadol HCL	ULTRAM

8.2 Narcotic Analgesics

- These drugs all have abuse potential. Tolerance and dependence can occur with prolonged use.
- Prescriptions should not exceed recommended doses of acetaminophen, aspirin or codeine. Patients on full doses of these medications should be warned not to supplement their pain relief with OTC drugs to avoid toxic levels.
- Combining these agents with alcohol, muscle relaxants or antihistamines can cause excessive sedation and confusion.
- Patients should be cautioned not to use machinery or to do other things that could be dangerous if they become drowsy or dizzy.

*	Aspirin/Codeine	ASPIRIN, CODEINE
*	Hydromorphone	DILAUDID
*	Hydrocodone/Acetaminophen	LORCET

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
*	Hydrocodone Bitartrate/APAP	LORTAB (elixir only)
*	Methadose	METHADONE
*	Morphine sulfate CR	MS CONTIN (Max #90/30 days)
*	Morphine sulfate IR	MSIR (Max #90/30 days)
*	Hydrocodone/Acetaminophen	NORCO
*	Oxycodone/APAP	PERCOCET
*	Oxycodone/ASA	PERCODAN
*	Acetaminophen/codeine	TYLENOL w/CODEINE
*	Oxycodone/APAP	TYLOX
*	Hydrocodone/ Acetaminophen	VICODIN, VICODIN ES

PRIOR AUTHORIZATION REQUIRED

Morphine sulfate CR

**ORAMORPH SR,
KADIAN**

- Use of high-dose, long-acting narcotic analgesics should be under direct supervision of a pain management specialist or oncologist.
- Patients on high-dose, long-acting narcotic analgesics may be candidates for case management.

8.3 Non-Steroidal Anti-Inflammatory Drugs

- All NSAIDs have similar effectiveness and differ very little in their toxicity and side effects. Therefore, generically available NSAIDs should be considered as first line therapy.
- Combinations of two or more NSAIDs offer no advantage, but do increase the chances of drug interaction and toxicity. Patients may be taking OTC NSAIDs without MD awareness.
- Concurrent use of an H2 blocker with an NSAID has not been shown to reduce the incidence of gastric ulceration or bleeding. Misoprostol (Cytotec) may be a better choice for preventing ulcer formation in patients at risk.
- NSAID use in the following conditions deserves special consideration of potential risks: History of GI bleeding or ulcer; chronic anti-coagulation, asthma, aspirin allergy, renal failure, hypertension or congestive heart failure.

*	Naproxen Sodium	ANAPROX. ANAPROX DS
*	Sulindac	CLINORIL
*	Piroxicam	FELDENE
*	Indomethacin	INDOCIN
*	Etodolac	LODINE, -XL
*	Meloxicam	MOBIC
*	Ibuprofen	MOTRIN
*	Naproxen	NAPROSYN
*	Diclofenac	VOLTAREN (tabs only)

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
PRIOR AUTHORIZATION REQUIRED		
*	Diclofenac/Misoprostol	ARTHROTEC
*	Oxaprozin	DAYPRO
*	Ketoprofen CR Capsules	ORUVAIL
*	Nabumentone	RELAFEN
*	Ketoralac tromethamine	TORADOL (tabs)

8.4 Antirheumatics

*	Methotrexate	METHOTREXATE
*	Hydroxychloroquine	PLAQUENIL

8.5 Drugs To Prevent And Treat Gout

*	Probenecid	INDOCIN
*	Indomethacin	ZYLOPRIM
*	Allopurinol	

8.6 Migraine

- Patients with 3 or more migraine attacks per month may be appropriate candidates for prophylactic therapy with standard therapy, including beta blockers or tricyclics.
- In patients who do not respond to therapy, consider rebound effect.
- Migraine patients should be monitored for narcotic analgesic overuse or abuse.
- **Only one migraine medication may be filled every 30 days.**
- **QUANTITY LIMITS MAY APPLY**

*	Naratriptan	AMERGE (Max #9/month)
*	Ergotamine/caffeine	CAFERGOT
*	APAP/ASA/Caffeine	EXCEDRIN
*	Sumatriptan	MIGRAINE OTC IMITREX (Max #9/month)
*	Isometheptene/ dichloralphenazone/APAP	MIDRIN
	Eletriptan Hydrobromide	RELPAX (Max #6/month, Step Therapy: Imitrex Tabs)
	Zolmitriptan	ZOMIG (Max #6/month, Step Therapy: Imitrex Tabs)

PRIOR AUTHORIZATION REQUIRED

Dihydroergotamine	MIGRAL NASAL SPRAY
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MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
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Chapter 9

NEURO-MUSCULAR

9.1 Antiparkinson Drugs

*	Biperiden HCL	AKINETON
*	Selegiline	ELDEPRYL
*	Bromocriptine	PARLODEL
*	Carbidopa/levodopa	SINEMET
*	Amantadine HCL	SYMMETREL

9.2 Skeletal Muscle Relaxants

*	Cyclobenzaprine	FLEXERIL (10mg)
*	Baclofen	LIORESAL
*	Methocarbamol	ROBAXIN
*	Carisoprodol/ASA	SOMA COMPOUND
*	Carisoprodol	SOMA (350mg)
*	Tizanidine	ZANAFLEX

PRIOR AUTHORIZATION REQUIRED

*	Orphenadrine/ASA/Caffeine	NORGESIC, NORGESIC FORTE
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9.3 Other

*	Pyridostigmine	MESTINON
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Chapter 10

VITAMINS/ELECTROLYTE

10.1 Prenatal Vitamins

*	Chewable Prenatal Vitamin	NATACHEW
*	Prenatal vitamins	NATALINS RX
*	Prenatal vitamins	NIFEREX PN, PN FORTE
*	Prenatal vitamins	PRENATE 90

10.2 Vitamins

*	Vitamin D	DRISDOL (Max #4)
*	Vitamin K	MEPHYTON
*	Multi-Vitamins & fluoride	POLY-VI-FLOR, POLY-VI-SOL (tabs, drops)

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
*	Multi-Vitamin w/ fluoride & iron	POLY-VI-FLOR w/ IRON, POLY-VI-SOL w/IRON
*	Calcitrol	ROCALTROL
*	Multi-Vitamin	THERAPEUTIC TAB, CHILDRENS CHEWABLE VITAMIN
*	Multi-Vitamin w/iron	THERA-M, CHILDRENS CHEWABLE VITAMIN
*	Multi-Vitamins & fluoride	VITAMIN w/IRON TRI-VI-FLOR (tabs, drops)

10.3 Other

*	Levocarnitine	CARNITOR
*	Ferrous Sulfate	FEOSOL OTC (tabs, solution)
*	Ferrous Gluconate	FERGON OTC
*	Sodium Fluoride drops/tabs	LURIDE
*	Calcium Carbonate	OS-CAL, TUMS OTC
*	Ped. Electrolyte Solution	PEDIALYTE OTC

10.4 Potassium Supplements

*	Potassium Cl Liquid	K-DUR-10, K-DUR 20
*	Potassium Cl tab	KLOTRIX, K-TABS
*	Potassium Cl efferv Tabs	K-LYTE/CL

Chapter 11

HEMATOLOGICAL AGENTS

11.1 Hematopoetic

*	Folic acid	
*	Folic acid/B-12/Iron	NIFEREX-150 FORTE

11.2 Anticoagulant Drugs

*	Warfarin	COUMADIN
*	Enoxaparin	LOVENOX

Lovenox treatment lasting longer than 7 days requires PA and must be filled through Caremark Specialty Pharmacy.

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
11.3 Antiplatelet Drugs		
	Aspirin-OTC remains as the first-line antiplatelet drug.	
	Plavix should be reserved for those patients who are unable to tolerate or are resistant to aspirin therapy.	
*	Dipyridamole/ASA Aspirin- Tabs, enteric coated tabs Clopidogrel	AGGRENOX ASPIRIN OTC PLAVIX

PRIOR AUTHORIZATION REQUIRED

*	Ticlopidine	TICLID
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Chapter 12

OPHTHALMIC MEDICATION

12.1 Alpha-adrenoreceptor agonists	Brimonidine 0.2%	ALPHAGAN P
12.2 Anti-Inflammatory Agents		
12.2.1 Corticosteroids		
*	Dexamethasone 0.1%	DECADRON, AK-DEX SOLN
	Fluorometholone 0.1%	FML, FML FORTE, FML S.O.P
*	Prednisolone 0.12%, 1%	PRED FORTE, PRED MILD
12.2.2 Non-Steroidal Anti-Inflammatory Drugs (NSAIDS)		
*	Ketorolac	ACULAR
	Ketorolac 0.4%	ACULAR LS
*	Nedrocromil	ALOCRIL
*	Flurbiprofen	OCUFEN
*	Diclofenac 0.1%	VOLTAREN
*	Ketotifen	ZADITOR OTC
12.3 Anti-Allergic Agents		
*	Lodoxamide	ALOMIDE
*	Cromolyn sodium 4%	OPTICROM
	Naphazoline/Antazoline	VASOCON-A
PRIOR AUTHORIZATION REQUIRED		
*	Olopatadine	PATADAY
*	Olopatadine 0.1%	PATANOL

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>12.4 Antimicrobial agents</u>		
12.4.1 Antibiotics and Antibiotic Combinations		
*	Bacitracin	AK-TRACIN
*	Sulfacetamide	BLEPH 10, SODIUM SULAMYD
*	Gentamicin	GENOPTIC
*	Erythromycin	ILOTYCIN OPHT OINT
*	Gramicidin/neomycin/ polymyxin B	NEOSPORIN
*	Oftloxacin	OCUFLOX
*	Polymyxin/TMP	POLYTRIM
*	Tobramycin	TOBREX
PRIOR AUTHORIZATION REQUIRED		
Gatifloxacin		ZYMAR
12.4.2 Antibiotic-Corticosteroid Combinations		
*	Sulfacetamide/prednisolone	BLEPHAMIDE
*	Hydrocortisone/neomycin/ polymyxin B	CORTISPORIN
	Prednisolone acetate 0.5%/ neomycin/polymyxin B	POLY PRED SUSP
	Prednisolone acetate 1%/ gentamicin	PRED-G DROPS
	Prednisolone acetate 0.6%/ gentamicin	PRED-G S.O.P. OINT
*	Tobramycin/dexamethsone	TOBRA-DEX
*	Sulfacetamide/Pred	VASOCIDIN
12.4.3 Antifungal		
	Natamycin 5%	NATACYN
12.4.4 Antiviral		
*	Trifluridine 1%	VIROPTIC
<u>12.5 Beta-adrenoreceptor Antagonists</u>		
*	Levobunolol 0.25%, 0.5%	BETAGAN
*	Betaxolol	BETOPTIC 0.25% SUSP, BETOPTIC 0.5% SOLN.
*	Timolol maleate 0.25%, 0.5%	TIMOPTIC SOLUTION
*	Timolol maleate 0.25%, 0.5%	TIMOPTIC-XE GEL
<u>12.6 Carbonic Anhydrase Inhibitors</u>		
*	Dorzolamide HCL 1%	TRUSOPT

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>12.7 Dilating Agents</u>		
12.7.1 Anticholinergic		
* Cyclopentolate	Cyclopentolate	CYCLOGYL
* Atropine	Atropine	ISOPTO ATROPINE
* Homatropine	Homatropine	ISOPTO HOMATROPINE
* Scopolamine	Scopolamine	ISOPTO HYOSCINE
* Tropicamide	Tropicamide	MYDRIACYL
12.7.2 Sympathomimetic		
*	Phenylephrine	NEOSYNEPHRINE
<u>12.8 Miotics</u>		
*	Pilocarpine hydrochloride	PILOCAR
<u>12.9 Prostaglandins</u>		
*	Dorzolamide/Timolol	COSOPT
	Latanoprost 0.005%	XALATAN, TRAVATAN Z (Step Therapy: Two Months of Xalatan)
<u>12.10 Sympathomimetics</u>		
*	Dipivefrin	PROPINE
<u>12.11 Miscellaneous Ophthalmic Products</u>		
*	Polyvinyl Alcohol	ARTIFICIAL TEARS

Chapter 13

EAR, NOSE AND THROAT MEDICATIONS

<u>13.1 OTIC Antiinfectives</u>		
*	Chloramphenicol	CHLOROMYCETIN
	Ciprofloxacin/	CIPRODEX
*	Dexamethasone	
*	Ofloxacin	FLOXIN OTIC
• FLOXIN OTIC is indicated for use in patients with chronic suppurative otitis media with perforated TM, and for acute otitis media with tympanostomy tubes. For patients with common otitis externa, use of cortisporin is recommended.		
<u>13.2 OTIC Steroid-Antiinfective Combinations</u>		
*	Hydrocortisone/neo/ polymyxin B	CORTISPORIN OTIC
*	Acetic Acid	VOSOL

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>13.3 Miscellaneous OTIC Products</u>		
*	Benzocaine/antipyrine	AURALGAN
*	Carbamide peroxide 6.5%	DEBROX OTC
*	Hydrocort./acetic acid	VOSOL HC OTIC
<u>13.4 Throat Medications</u>		
*	Clotrimazole	MYCELEX TROCHE
*	Nystatin suspension	MYCOSTATIN
*	Lidocaine viscous	XYLOCAINE VISCOUS

13.5 Corticosteroids, Inhaled Nasal

- Nasonex not covered without documented trial and failure of Flonase
 - * Fluticasone FLONASE

PRIOR AUTHORIZATION REQUIRED

Mometasone

NASONEX

Chapter 14

DERMATOLOGICALS

All topical dosage forms of listed items are formulary items.

All topical anti-acne medications covered for patients ages 10 to 30 only.

14.1 Anti-Acne Medications

*	Clindamycin 1%, topical solution, lotion, gel	CLEOCIN-T
*	Benzoyl peroxide gel, lotion 2.5%, 5%, 10%	DESQUAM-E, DESQUAM-X
*	Erythromycin, topical solution, gel, pads	ERYCETTE
*	Tretinoin	RETIN A (cream only)

14.2 Topical Antiiinfectives

*	Gentamicin	GARAMYCIN
*	Bacitracin ointment	OTC
*	Triple Antibiotic ointment	OTC
*	Polysporin ointment	OTC
*	Silver Sulfadiazine	SILVADENE

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
<u>14.3 Topical Anti-Fungals</u>		
*	Clotrimazole-cream/solution	MYCELEX OTC
*	Triamcinolone/nystatin	MYCOLOG II (30gm limit)
*	Nystatin	MYCOSTATIN
*	Ciclopirox	LOPROX
*	Clotrimazole/ betamethasone	LOTRISONE
*	Tolnaftate cream	TINACTIN OTC
<u>14.4 Topical Corticosteroids</u>		
<ul style="list-style-type: none"> Pediatric patients may have greater susceptibility to topical corticosteroid-induced HPA axis suppression than adults. Avoid using high potency steroids on the face, neck, groin, or axilla. Occlusive dressings or diapers increase the potency of the steroid. 		
GROUP IV (LOW POTENCY)		
*	Hydrocortisone	HYTONE
*	Desonide	TRIDESILON
GROUP III (MEDIUM POTENCY)		
*	Prednicarbate	DERMATOP
*	Momentasone furoate	ELOCON
*	Triamcinolone acetonide	KENALOG
*	Fluocinolone acetonide	SYNALAR
PRIOR AUTHORIZATION REQUIRED		
*	Desoximetasone	TOPICORT LP
GROUP II (HIGH POTENCY)		
*	Betamethasone dipropionate	DIPROSONE
*	Fluocinonide	LIDEX
*	Hydrocortisone valerate	WESTCORT
PRIOR AUTHORIZATION REQUIRED		
Halcinonide		HALOG, HALOG-E
GROUP I (VERY HIGH POTENCY)		
*	Halobetasol	ULTRAVATE
*	Betamethasone valerate	VALISONE

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
PRIOR AUTHORIZATION REQUIRED		
*	Augmented betamethasone dipropionate Diflorasone diacetate	DIPROLENE FLORENE, FLORENE E, PSORCON-E TOPICORT
*	Desoximetasone	

14.5 Topical Corticosteroids in Combination

Hydrocortisone/pramoxine EPIFOAM

14.6 Topical Non-Steroid Anti-Inflammatory

- PROTOPIC and ELIDEL are not indicated in patients under 2 years of age.

PRIOR AUTHORIZATION REQUIRED		
*	Tacrolimus	PROTOPIC
*	Pimecrolimus	ELIDEL

14.7 Scabicides/Pediculocides

Treatment of choice is OTC Nix

*	Lindane lotion, shampoo	KWELL
*	Permethrin	NIX-OTC
*	Pyrethrins combo.	A-200 OTC
*	Permethrin	ELIMITE

14.8 Anorectal

*	Hydrocortisone Acetate	ANUSOL HC SUPP
*	Hydrocortisone/pramoxine	PROCTOCREAM HC
*	Hydrocortisone	PROCTOCREAM HC 2.5%

14.9 Anti-Psoriatics

*	Anthralin	DRITHOCREME
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PRIOR AUTHORIZATION REQUIRED		
*	Cacipotriene	DOVONEX

14.10 Miscellaneous Topicals

*	Calamine Lotion	
*	Mupirocin	BACTROBAN
*	Podofilox	CONDYLOX
*	Aluminum Chloride	DRYSOL
*	Fluoruracil	EFUDEX
*	Lidocaine/Prilocaine	EMLA (Max 60 gram/month)
*	Nystatin	MYCOSTATIN POWDER

MOLINA HEALTHCARE OF MICHIGAN DRUG FORMULARY

Generic Available*	Generic Name	Brand Name
*	Hexachlorophene Selenium Sulfide	PHISOHEX SELSUN SHAMPOO- RX
*	Lidocaine	XYLOCAINE (Ointment Max 100 gram/month, Gel/Jelly Max 90 gram/month)
*	Acyclovir	ZOVIRAX (No PA for members 12 and over)

Chapter 15

MISCELLANEOUS

	Insect Sting Kit	ANA-GUARD, ANA-KIT
*	Caffeine Citrate	CAFFEINE CITRATE SOLUTION (No PA for members 2 and under)
*	Barium Enema Prep Kit	FLEETS PREP KIT
*	Sodium Polystyrene	KAYEXALATE
*	Methylergonovine	METHERGINE
*	Acetylcysteine	MUCOMYST (5 day supply only)
*	Condoms	OTC various (Max #12)
*	Spermicidal Jelly/foam	OTC various
*	Chlorhexidine Gluconate	PERIDEX
*	Calcium Acetate	PHOSLO
	Diaphragm	VARIOUS

Michigan Quality Improvement Consortium Guideline

July, 2008



General Principles for the Diagnosis and Management of Asthma

The following guideline recommends general principles and key clinical activities for the diagnosis and management of asthma.	
Eligible Population	Key Components
Children and adults with the following: <ul style="list-style-type: none"> • Wheezing. • History of cough (worse particularly at night), recurrent wheeze, recurrent difficulty in breathing, recurrent chest tightness • Symptoms occur or worsen in the presence of exercise, viral infection, inhalant allergens, irritants, changes in weather, strong emotional expression (laughing or crying hard), stress, menstrual cycles • Symptoms occur or worsen at night, awakening the patient 	<p>Recommendation and Level of Evidence</p> <ul style="list-style-type: none"> • Detailed medical history and physical exam to determine that symptoms of recurrent episodes of airflow obstruction are present • Use spirometry in all patients > 2 years of age to determine that airway obstruction is at least partially reversible [C]. Goals of therapy are to achieve control [A]: <ul style="list-style-type: none"> • Reducing impairment (prevent chronic symptoms, minimize need for rescue therapy with short-acting beta₂-agonists (SABA), maintain near-normal lung function and activity level(s)) • Reducing risk (prevent exacerbations, minimize need for emergency care or hospitalization, prevent loss of lung function or prevent reduced lung growth in children, have minimal or no adverse effects of therapy) • Assess asthma severity to initiate therapy: Use a severity classification chart, assessing both domains of impairment [B] and risk [C] <ul style="list-style-type: none"> • Assess asthma control to monitor and adjust therapy [B]. (Use asthma control chart, assessing both domains of impairment and risk to determine if therapy should be maintained or adjusted. Step up if necessary; step down if appropriate.) • Obtain lung function measures by spirometry at least every 1-2 years [B], more frequently for not well-controlled asthma. • Schedule follow-up care. In general, consider scheduling patients at 2- to 4-week intervals while gaining control [D]; at 1- to 6-month intervals, depending on step of care required or duration of control, to monitor if sufficient control is maintained; at 3-month intervals if a step-down in therapy is anticipated [D]. • Assess asthma control, medication technique, written asthma action plan, patient adherence, and concerns at every visit. • Provide self-management education [A]. Teach and reinforce self-monitoring to assess control and signs of worsening asthma (either symptom or peak flow monitoring) [B]; using written asthma action plan (review differences between long-term control and quick-relief medication); taking medication correctly (inhaler technique and use of devices); avoiding environmental and occupational factors that worsen asthma. • Tailor education to literacy level of patient; integrate education into all points of care; appreciate potential role of patient's cultural beliefs and practices in asthma management [C]. • Develop written action plan in partnership with patient [B].
Control environmental factors and comorbid conditions	<ul style="list-style-type: none"> • Recommend measures to control exposures to allergens and pollutants or irritants that make asthma worse [A]. (See age-specific guidelines.) • Consider antigen immunotherapy for patients with persistent asthma and when there is clear evidence of a relationship between symptoms and exposure to an allergen to which the patient is sensitive [B]. • Treat comorbid conditions (e.g., allergic bronchopulmonary aspergillosis [A], gastroesophageal reflux [B], obesity [B], obstructive sleep apnea [D], rhinitis and sinusitis [B], chronic stress or depression) [D]. • Inactivated influenza vaccine for all patients over 6 months of age [A] unless contraindicated
Medications	<ul style="list-style-type: none"> • Select medication and delivery devices to meet patient's needs. • Use a stepwise approach to pharmacologic therapy to gain and maintain asthma control [A]. (See age-specific guidelines.) • Inhaler corticosteroids (ICS) are the most effective long-term control therapy [A]. Optimize ICS use before advancing to other therapies. When choosing among treatment options, consider patient's impairment and risk, history of response to medication, willingness and ability to use medication.
Referral	<ul style="list-style-type: none"> • Refer to an asthma specialist for consultation or management if there are difficulties achieving or maintaining control (See age-specific guidelines); immunotherapy or oral/mouthwash is considered; additional testing is indicated; or if the patient required 2 bursts of oral systemic corticosteroids in the past year or a hospitalization [D].

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel.
 This guideline lists core management steps. It is based on the 2007 National Asthma Education and Prevention Program Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma. Individual patient considerations and advances in medical science may supersede or modify these recommendations.
www.mnic.org



Michigan Quality Improvement Consortium Guideline

Management of Asthma in Children 0 to 4 Years

Recommendation and Level of Evidence							
Key Components		Assess Asthma Severity		Assess Asthma Control			
First, assess severity to decide initial therapy	Components of Severity	Intermittent	Persistent (Mild)	Persistent (Moderate)	Persistent (Severe)		
Impairment	Symptoms	≤ 2 days/week.	> 2 days/week, not daily	Daily	Throughout day		
Nighttime awakenings		0	1-2/month	3-4/month	> 4/month		
Short-acting beta ₂ -agonist use for symptoms		≤ 2 days/week	> 2 days/week, not daily	Daily	Several times daily		
Interference with normal activity		None	Minor limitation	Some limitation	Extremely limited		
Risk	Exacerbations requiring oral steroids	0-1/year	≥ 2 in 6 months requiring oral steroids, or factors for persistent asthma	> 4 in 1 year (factors for persistent asthma)	> 1 day and have risk		
Recommended step for initiating treatment	Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class.	Step 1	Step 2	Step 3			
On follow-up, reassess control and step therapy up or down	Re-evaluate control in 2-6 weeks and adjust therapy accordingly.						
Components of Control	Well-Controlled	Not Well-Controlled	Very Poorly Controlled				
Impairment	Symptoms	≤ 2 days/week, but not > 1/day	> 2 days/week or many times on ≤ 2 days/week	Throughout day			
Nighttime awakenings		≤ 1/month	> 1/month	> 1x/week			
Short-acting beta ₂ -agonist use for symptoms		≤ 2 days/week	> 2 days/week	Several times daily			
Interference with normal activity		None	Some limitation	Extremely limited			
Risk	Exacerbations requiring oral steroids	0-1/year	2-3/year	> 3/year			
Treatment-related adverse effects	Intensity of medication-related side effects does not correlate to specific levels of control, but should be considered in overall assessment of risk.	Step up 1 step	Step up 1 step	Consider oral steroids			
Recommended treatment and follow-up	<ul style="list-style-type: none"> Maintain current step Regular follow-up, every 1-6 months Consider step down if well-controlled < 3 months 		<ul style="list-style-type: none"> * Pre-evaluate in 2-6 weeks If no clear benefit in 4-6 weeks, consider alternative diagnosis or adjust therapy [D] 	Step up 1-2 steps			
Intermittent	Quick relief medication for all patients: Inhaled short-acting beta ₂ -agonist (SABA) as needed for symptoms. Intensity of treatment depends on severity of symptoms; up to 3 treatments at 20-minute intervals as needed. Short course of systemic oral corticosteroids may be needed. Use of SaABA > 2 days a week br symptom control (not prevention of exercise-induced bronchospasm) indicates inadequate control and the need to step up treatment.						
Step 1	Short-acting beta ₂ -agonist as required	Mild Persistent	Step 2	Moderate Persistent	Step 3	Step 4	Step 5
Preferred	Preferred	Preferred	Preferred	Preferred	Step 6	Step 6	Step 6
	Low-dose inhaled corticosteroid [A]	Medium-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]	High-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]	High-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or montelukast [D]			
	Alternative Cromolyn or Montelukast [B]						

Approved by MDCR Medical Directors 07/08

www.mqfc.or



Management of Asthma in Children 5 to 11 Years

July, 2008

Recommendation and Level of Evidence							
Classification of Asthma Severity							
		Intermittent	Persistent (mild)	Persistent (moderate)	Persistent (severe)		
	Components of Severity Impairment	Symptoms	Per 8 hr (mild)	Daily	Throughout day		
First assess severity to decide initial therapy	Symptoms	≤ 2 days/week	> 2 days/week, not daily	> 1 week, not daily	Other 7 x week		
		≤ 2 months	≥ 3 months	Daily	Several times/day		
Risk	Symptoms	None	Minor limitation	Some limitation	Extremely limited		
		Normal FEV ₁ between exacerbations	> 80%	60% - 80%	< 60%		
Recommended step for initiating treatment	Lung function: FEV ₁ /peak flow FEV ₁ /FVC	> 80% 0-1/year	> 80% 75% - 80%	75% - 80%	< 75%		
		Exacerbations requiring oral steroids	* Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class. * Relative annual risk of exacerbations is higher related to FEV ₁ .		≥ 2 years		
Step 1							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Well-Controlled ≤ 2 days/week, but not > 1 day ≤ 1 month	> 2 days/week or more times on ≤ 2 days/week ≥ 2 months	Very Poorly Controlled Throughout day ≥ 2 weeks	Very Poorly Controlled Throughout day ≥ 2 weeks	
Risk	Symptoms	None	≥ 2 days/week	> 2 days/week	Severely Uncontrolled Several times/day		
		FEV ₁ or Peak Flow FEV ₁ /FVC	> 80% 0-1/year	Some limitation 60% - 80% 75% - 80%	Extremely Uncontrolled < 60% < 75%		
Step 2							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Well-Controlled ≤ 2 days/week, but not > 1 day ≤ 1 month	> 2 days/week or more times on ≤ 2 days/week ≥ 2 months	Very Poorly Controlled Throughout day ≥ 2 weeks	Very Poorly Controlled Throughout day ≥ 2 weeks	
Risk	Symptoms	None	≥ 2 days/week	> 2 days/week	Severely Uncontrolled Several times/day		
		FEV ₁ or Peak Flow FEV ₁ /FVC	> 80% 0-1/year	Some limitation 60% - 80% 75% - 80%	Extremely Uncontrolled < 60% < 75%		
Step 3							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Well-Controlled ≤ 2 days/week, but not > 1 day ≤ 1 month	> 2 days/week or more times on ≤ 2 days/week ≥ 2 months	Very Poorly Controlled Throughout day ≥ 2 weeks	Very Poorly Controlled Throughout day ≥ 2 weeks	
Risk	Symptoms	None	≥ 2 days/week	> 2 days/week	Severely Uncontrolled Several times/day		
		FEV ₁ or Peak Flow FEV ₁ /FVC	> 80% 0-1/year	Some limitation 60% - 80% 75% - 80%	Extremely Uncontrolled < 60% < 75%		
Step 4							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Well-Controlled ≤ 2 days/week, but not > 1 day ≤ 1 month	> 2 days/week or more times on ≤ 2 days/week ≥ 2 months	Very Poorly Controlled Throughout day ≥ 2 weeks	Very Poorly Controlled Throughout day ≥ 2 weeks	
Risk	Symptoms	None	≥ 2 days/week	> 2 days/week	Severely Uncontrolled Several times/day		
		FEV ₁ or Peak Flow FEV ₁ /FVC	> 80% 0-1/year	Some limitation 60% - 80% 75% - 80%	Extremely Uncontrolled < 60% < 75%		
Step 5							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Well-Controlled ≤ 2 days/week, but not > 1 day ≤ 1 month	> 2 days/week or more times on ≤ 2 days/week ≥ 2 months	Very Poorly Controlled Throughout day ≥ 2 weeks	Very Poorly Controlled Throughout day ≥ 2 weeks	
Risk	Symptoms	None	≥ 2 days/week	> 2 days/week	Severely Uncontrolled Several times/day		
		FEV ₁ or Peak Flow FEV ₁ /FVC	> 80% 0-1/year	Some limitation 60% - 80% 75% - 80%	Extremely Uncontrolled < 60% < 75%		
Step 6							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
Step 1							
First assess severity to decide initial therapy	Components of Severity Impairment	Symptoms	Intervening beta ₂ agonist as required	Preferred	Preferred	Preferred	
Risk	Symptoms	None	Low-dose inhaled corticosteroid [A]	Medium-dose inhaled corticosteroid + long-acting beta ₂ -agonist [B]	High-dose inhaled corticosteroid + long-acting beta ₂ -agonist [B]	Preferred	
		FEV ₁ or Peak Flow FEV ₁ /FVC	Or Leukotriene receptor antagonist or Nedocromil; or Theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	
Step 2							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Intervening beta ₂ agonist as required	Preferred	Preferred	Preferred	
Risk	Symptoms	None	Low-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or a leukotriene receptor antagonist, or theophylline [B]	Medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	Alternative	
		FEV ₁ or Peak Flow FEV ₁ /FVC	Or Leukotriene receptor antagonist or Nedocromil; or Theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	
Step 3							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Intervening beta ₂ agonist as required	Preferred	Preferred	Preferred	
Risk	Symptoms	None	Low-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or a leukotriene receptor antagonist, or theophylline [B]	Medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	Alternative	
		FEV ₁ or Peak Flow FEV ₁ /FVC	Or Leukotriene receptor antagonist or Nedocromil; or Theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	
Step 4							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Intervening beta ₂ agonist as required	Preferred	Preferred	Preferred	
Risk	Symptoms	None	Low-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or a leukotriene receptor antagonist, or theophylline [B]	Medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	Alternative	
		FEV ₁ or Peak Flow FEV ₁ /FVC	Or Leukotriene receptor antagonist or Nedocromil; or Theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	
Step 5							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							
On follow-up: assess control and step therapy up or down	Components of Control Impairment	Symptoms	Intervening beta ₂ agonist as required	Preferred	Preferred	Preferred	
Risk	Symptoms	None	Low-dose inhaled corticosteroid + either a long-acting beta ₂ -agonist or a leukotriene receptor antagonist, or theophylline [B]	Medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	Alternative	
		FEV ₁ or Peak Flow FEV ₁ /FVC	Or Leukotriene receptor antagonist or Nedocromil; or Theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	Or Leukotriene receptor antagonist or a leukotriene receptor antagonist or theophylline [B]	High-dose inhaled corticosteroid + oral systemic corticosteroid + either a leukotriene receptor antagonist or theophylline [D]	
Step 6							
Re-evaluate control in 2-6 weeks and adjust therapy accordingly.							



Michigan Quality Improvement Consortium Guideline

Management of Asthma in Youth 12 Years and Older and Adults

Key Components	Recommendation and Level of Evidence							
	Classification of Asthma Severity				Classification of Asthma Control			
First, assess initial therapy	Components of Severity	Components of Control	Step 1	Step 2	Step 3	Step 4 or 5	Step 6	
Risk	<p>Components of Severity</p> <p>Symptoms</p> <ul style="list-style-type: none"> Normal FEV₁/FVC: 91-100% years 0-4; 81-90% years 5-14; 76-80% years 15-24; 70-75% years 25-64; <70% years 65+. Asthma symptoms: non-tameable at night or with exercise. Impairment: interference with normal activity <p>Lung function:</p> <ul style="list-style-type: none"> FEV₁: FEV₁/FVC FEV₁ > 70% predicted FEV₁ > 80% normal FEV₁ < 80% normal <p>Exacerbations:</p> <ul style="list-style-type: none"> Oral corticosteroids required Oral corticosteroids: short-acting beta₂-agonist use for non-tameable symptoms between exacerbations Oral corticosteroids: short-acting beta₂-agonist use for exercise-induced bronchospasm <p>Adverse effects:</p> <ul style="list-style-type: none"> Therapy-related adverse effects Therapy action for treatment 	<p>Components of Control</p> <p>Symptoms</p> <ul style="list-style-type: none"> ≤ 2 days/month ≤ 2 days/month None > 2 days/month > 2 days/month, not daily and not 1 day Minor limitation Major limitation <p>Impairment:</p> <ul style="list-style-type: none"> Normal FEV₁ between exacerbations Normal FEV₁ < 80% normal 0-1 year ≥ 2 years <p>Exacerbations:</p> <ul style="list-style-type: none"> Consider severity & interval since last exacerbation. Predictive annual risk of exacerbations (index needed) FEV₁ < 80% normal 0-1 year ≥ 2 years <p>Recommended step for initiating treatment</p>	<p>Step 1</p> <p>Re-evaluate control in 2-6 weeks and adjust therapy accordingly.</p>	<p>Step 2</p> <p>Well Controlled</p> <p>Not Well Controlled</p>	<p>Step 3</p> <p>2-4 weeks</p> <p>1-2 weeks</p> <p>≥ 2 days/week</p> <p>Score limit: 0/100</p> <p>60%-80%</p>	<p>Step 4</p> <p>Very Poorly Controlled</p> <p>Throughout day</p> <p>2-4 weeks</p> <p>Several times/week</p> <p>Extremely limited</p> <p>< 60%</p>	<p>Step 5</p> <p>Consider oral steroids</p> <p>Step up 1-2 weeks</p> <p>Re-evaluate in 2 weeks</p> <p>Step up 1-2 weeks</p> <p>Extremely limited</p> <p>< 60%</p>	<p>Step 6</p> <p>Consider oral steroids</p> <p>Step up 1-2 weeks</p> <p>Re-evaluate in 2 weeks</p> <p>Extremely limited</p> <p>Consider oral steroids</p> <p>Consider oral omalizumab</p> <p>Consider oral montelukast</p> <p>Consider oral theophylline or zileutin</p>
On follow-up, reassess control and step up or down								
Risk								
Step approach for asthma management	<p>• Quick relief medication for all patients: inhaled short-acting beta₂-agonist (e.g., albuterol) as needed for symptoms [A]. Intensity of treatment depends on severity of symptoms: up to 3 treatments at 20-minute intervals as needed; system course of systemic oral corticosteroids may be needed. Use of SABA > 2 days a week for symptom control (not prevention of exercise-induced bronchospasm) indicates inadequate control and the need to step up treatment.</p> <p>• Patient education and environmental control at each step</p> <p>• Persistent asthma: daily long-term control therapy [A]; consult with a asthma specialist if step 4 or higher [D], or progressive decreased lung function. Consider consultation at step 3 [D].</p>	<p>Mild Persistent</p> <p>Step 1</p> <p>Preferred: Short-acting beta₂-agonist as required</p>	<p>Step 2</p> <p>Preferred: Low-dose inhaled corticosteroid [A]</p>	<p>Step 3</p> <p>Preferred: Medium-dose inhaled corticosteroid + long-acting beta₂-agonist [A] or medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist [A], theophylline [B], or zileutin [D]</p>	<p>Step 4</p> <p>Preferred: Medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist, theophylline [B], or zileutin [D]</p>	<p>Moderate Persistent</p> <p>Step 5</p> <p>Preferred: High-dose inhaled corticosteroid + long-acting beta₂-agonist [B]</p>	<p>Step 6</p> <p>Preferred: High-dose inhaled corticosteroid + long-acting beta₂-agonist [B] and consider omalizumab for patients who have IgE-mediated allergies [B]</p>	

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Michigan Quality Improvement Consortium Guideline

Management of Diabetes Mellitus

June, 2008

The following guideline applies to patients with type 1 and type 2 diabetes mellitus. It recommends specific interventions for periodic medical assessment, laboratory tests and education to guide effective patient self-management.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Patients 18-75 years of age with type 1 or type 2 diabetes mellitus	<ul style="list-style-type: none"> Assessment should include: <ul style="list-style-type: none"> Height, weight, BMI, blood pressure [A] (adult target of < 130/80) Assess cardiovascular risks (smoking, hypertension, dyslipidemia, sedentary lifestyle, obesity, stress, family history, age > 40) Comprehensive foot exam (including monofilament testing annually) [B] Screen for depression [D] Dilated eye exam by ophthalmologist or optometrist [B], or diloscope [B] 	<ul style="list-style-type: none"> • At least annually and more frequently as needed • In the absence of retinopathy repeat in 2 years 	A1C 2-4 times annually based on individual therapeutic goal; other tests at least annually
Laboratory tests	<ul style="list-style-type: none"> Tests should include: <ul style="list-style-type: none"> A1C [D] Urine microalbumin measurement [D] Serum creatinine and calculated GFR [D] Fasting lipid profile 		At diagnosis and as needed
Education, counseling and risk factor modification	<ul style="list-style-type: none"> Comprehensive diabetes self-management education (DSME) from a collaborative team or diabetic educator if available Education should be individualized, based on the National Standards for DSME¹ [B] and include: <ul style="list-style-type: none"> Assessment of patient knowledge, attitudes, self-management skills and health status; strategies for making health behavior changes and addressing psychosocial concerns [C] Description of diabetes disease process and treatment; safe and effective use of medications; prevention, detection and treatment of acute and chronic complications Importance of nutrition management and regular physical activity [A] Role of self-monitoring of blood glucose in glycemic control [A] Cardiovascular risk reduction Smoking cessation intervention [B] and secondhand smoke avoidance [C] Sell-care of feet [B]; preconception counseling [D]; encourage patients to receive dental care [D] 		At each visit until therapeutic goals are achieved
Medical recommendations	<ul style="list-style-type: none"> Care should focus on smoking, hypertension, lipids and glycemic control: Medications for tobacco dependence unless contraindicated Medication for hypertension using up to 3-4 anti-hypertensive medications to achieve adult target of < 130 systolic [B] Prescription of ACE inhibitor or angiotensin receptor blocker in patients with hypertension or albuminuria [A]² Or who have an LDL-C ≥ 100 mg/dl [A]³ Statin therapy for primary prevention against macrovascular complications in patients with diabetes who are ≥ age 40 and < 80 diastolic [A] Anti-platelet therapy [A]; low dose aspirin daily for primary prevention in adults at increased cardiovascular risk with type 1 [C] and type 2 [A] diabetes, unless contraindicated Adjust the plan to eventually achieve normal or near-normal glycemia with an A1C goal for most patients of < 7%. Less stringent treatment goals may be appropriate for patients with a history of severe hypoglycemia, patients with limited life expectancies, very young children or older adults and individuals with comorbid conditions. More stringent treatment goals (i.e., a normal A1C < 6%) for individual patients and in pregnancy. Note: Insulin and sulfonylureas sometimes result in weight gain. Assurance of appropriate immunization status (tetanus, diphtheria, pertussis, influenza, pneumococcal vaccine) [C] 		

¹ See http://diabetesjournals.org/content/10/3/Supplement_1/

² Consider referral of patients with serum creatinine value >2.0 mg/dl (adult value) or persistent albuminuria to nephrologist for evaluation.

³ Target LDL-C < 100 mg/dl [B]. For patients with overt CVD, a lower LDL-C goal of < 70 mg/dl is an option [B].

Levels of evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials; C = observational studies; D = expert panel.

This Guideline lists core management steps. It is based on several sources, including the 2008 American Diabetes Association Clinical Practice Recommendations (www.diabetes.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MOJC Medical Directors 8/6/08



Michigan Quality Improvement Consortium Guideline

Outpatient Management of Uncomplicated Deep Venous Thrombosis

		Recommendations and Level of Evidence	
Eligible Population	Key Components		
Adult patients \geq 18 years of age	Initial assessment	<ul style="list-style-type: none"> • Perform initial comprehensive history and physical examination; consider conditions predisposing to DVT. • Assess patient/caregiver ability and compliance for outpatient therapy, and need for home care resources. • Assess for relative or absolute contraindications to outpatient anticoagulation therapy, including: <ul style="list-style-type: none"> • Severe HTN • Pulmonary embolism • Extensive iliofemoral thrombus • Known potential for non-compliance • Active bleeding • Outpatient therapy is preferred if no contraindications. • Contraindications to warfarin therapy: <ul style="list-style-type: none"> • Absolute: pregnancy, Relative dementia, certain psychoses, diminished mental capacity, or childbearing age without contraception • Begin LMWH. • Begin warfarin after 1st dose of LMWH [A], on the same day, titrate to INR range of 2.0 - 3.0. • Continue LMWH (along with warfarin) at least 5 days, and until INR range 2.0 - 3.0 for 2 consecutive days. [A] • Maintain warfarin therapy at least 3 months in therapeutic INR range [A], longer if risk of recurrence. • Ask about any changes in diet, medications, supplements and herbal products, and compliance before any dosage adjustment. • If known hypercoagulable state, consider referral to a coagulation specialist. 	
Diagnosis of acute DVT, confirmed by duplex ultrasound, or venography. [A]	No contraindications to anticoagulation or use of low molecular weight heparin (LMWH).	<ul style="list-style-type: none"> • Obtain baseline lab values: aPTT, PT/INR, CBC with platelet count. Consider platelet count 3 to 5 days into anticoagulation therapy. • Monitor warfarin therapy using INR; no lab monitoring required for LMWH unless special circumstances such as renal insufficiency or extremes of body weight. • Frequent INR monitoring is necessary at the onset of warfarin therapy (e.g. at least 2 checks in the first week of therapy); then at least 2-3 times per week for the next 1-2 weeks. When stable, monitor every 4-8 weeks. • Monitor common bleeding sites; gums, nose, GI, GU and skin. • Monitor for signs/symptoms of pulmonary embolism, and medication side effects. • Maintain an Anticoagulant Monitoring Log (or dose adjustment system) for each patient treated with warfarin. • Management through a systematic program is essential (either in office or a specialized program for anticoagulation monitoring). 	
Initiating and monitoring pharmacologic interventions		<ul style="list-style-type: none"> • Inform patient/caregiver of the reasons and benefits of therapy, potential side effects, importance of follow-up monitoring, warfarin dosage adjustment, compliance, dietary recommendations (i.e. a diet that is constant in vitamin K), the potential for drug interactions, safety precautions, recognizing internal bleeding, and risk of hormonal contraceptives/therapies. • Instruct patient/caregiver on symptoms of pulmonary embolism, extension of DVT and self-injection of LMWH. • The patient should be encouraged to be ambulatory after an appropriate weight-based dose of LMWH [D]. • Compression stockings should be used routinely to prevent post-thrombotic syndrome [A], beginning as soon as possible after the diagnosis of DVT and continuing for a minimum of 2 years. If stockings cannot be used initially due to swelling, compression wraps should be used until it is possible to use stockings. 	
Patient education			

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = control trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline represents core management steps. It is based on several sources including: Management of Venous Thromboembolism: A Clinical Practice Guideline from the American College of Physicians and the American Academy of Family Physicians. Ann Intern Med 2007;146:204-10; and, New Antithrombotic Drugs. American College of Chest Physicians. CHEST 2008;133:245-266S. Individual patient considerations and advances in medical science may supersede or modify the recommendations.

Approved by MQIC Medical Directors, August 2009; revised March 2010



Michigan Quality Improvement Consortium Guideline

Adults with Systolic Heart Failure

The following guideline recommends diagnostic evaluation, pharmacologic treatment and education that support effective patient self-management.		
Eligible Population	Key Components	Recommendation and Level of Evidence
Adults with suspicion of left-ventricular systolic dysfunction, including heart failure	Evaluation Initial assessment should include: <ul style="list-style-type: none">• Thorough history and physical examination [C]• Depression screening• Assessment for coronary artery disease and risk factors• Chest X-ray [C]• 12-lead electrocardiogram [C]• Lipid profile, CBC, electrolytes, calcium, magnesium, BUN, creatinine, blood glucose, liver function tests, TSH, urinalysis [C]• Two-dimensional echocardiography with Doppler [C]• Serial monitoring should include: weight, volume status, electrolytes, renal function and activity tolerance.	
Adults diagnosed with left-ventricular systolic dysfunction, including heart failure	Pharmacological management Diuretics recommended for routine use. <ul style="list-style-type: none">• ACE inhibitors in all patients, unless contraindicated¹ [A]• Recommended beta-blockers (carvedilol, sustained-release metoprolol, bisoprolol) in all stable patients, unless contraindicated¹ [A] Drugs recommended for use in selected patients: <ul style="list-style-type: none">• Diuretics and sodium restriction for evidence of fluid retention [A]• Spironolactone for patients with moderate or severe symptoms of heart failure, preserved renal function (creatinine < 2.0 in women; creatinine < 2.5 in men) and normal serum potassium concentration [A]• In patients who cannot tolerate ACE inhibitors or ARBs due to cough or angioedema, angiotensin receptor blockers are recommended [A].• In patients who cannot tolerate ACE inhibitors or ARBs due to angioedema or renal insufficiency; hydralazine and nitrate combination is recommended [A].• African-American patients who remain symptomatic despite therapy with ACE inhibitors, beta-blockers and PRN diuretics, may be candidates for adding the combination of hydralazine and isosorbide dinitrate [A]. Education, counseling and risk factor modification Educate patient and family regarding: <ul style="list-style-type: none">• Daily self-monitoring of weight and adherence to recommended patient action plan• Recognition of symptoms and when to seek medical attention• Moderate dietary sodium restriction (e.g., 2,000-2,500 mg sodium/day)• Risk factor modification (regular exercise 5 times per week as tolerated [B], smoking cessation; control of BP, DM, lipids)• Avoid excessive alcohol intake, illicit drug use, and the use of NSAIDS• Vaccination against influenza and pneumococcal disease	

¹ Contraindications include: life-threatening adverse reactions (angioedema or anuria/renal failure), pregnancy, hypotension, patient is at immediate risk of cardiogenic shock, systolic blood pressure < 80 mm Hg, serum creatinine > 3 mg/dL, bilateral renal artery stenosis, or serum potassium > 5 mmol/L.

² Contraindications include: patients with current or recent fluid retention history, unstable or poorly controlled reactive airway disease, symptomatic bradycardia or advanced heart block (unless treated with a pacemaker), or recent treatment with an intravenous positive inotropic agent.

Levels of Evidence for the most significant recommendations: A = randomized, controlled trials; B = controlled trials, no randomization; C = observational studies. Data opinion of expert panel.
This guideline lists core management steps. It is based on the ACC/AHA 2005 Guideline Update for the Diagnosis and Management of Chronic Heart Failure in the Adult: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (www.acc.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.



Michigan Quality Improvement Consortium Guideline

Screening and Management of Hypercholesterolemia

The following guideline recommends risk assessment, stratification, education, counseling and pharmacological interventions for the management of low-density lipoprotein cholesterol (LDL-C).

Eligible Population	Key Components	Recommendation and Level of Evidence		
Age \geq 18 years	Risk Assessment	<ul style="list-style-type: none"> • Screening: Initial fasting lipid profile (i.e., total LDL-C, HDL-C, triglycerides). If normal, repeat at least every five years. [D] • Treatment is based on LDL-C, major risk factors and presence of CHD or equivalent. 		
		Major Risk Factors:		
		<ul style="list-style-type: none"> Cigarette smoking • Hypertension (BP \geq 140/90) • On antihypertensives, regardless of current BP levels • HDL-C < 40 (HDL-C \geq 60 = negative risk factor) • Family history (first degree) of premature CHD (men $<$ 55 years, women $<$ 65 years) • Age (men \geq 45 years, women \geq 55 years) 		
		CHD Risk Equivalents:		
		<ul style="list-style-type: none"> • Other clinical forms of atherosclerotic disease (e.g., peripheral arterial disease, abdominal aortic aneurysm, and/or symptomatic carotid artery disease) • Diabetes plus one additional risk factor (diabetes alone is not considered a risk equivalent) • Multiple risk factors confer a 10-year risk for CHD $>$ 20% • CHD and CHD risk equivalents give a $>$ 20% risk of a CHD event within 10 years 		
		Risk Stratification		
		<ul style="list-style-type: none"> • Calculate short-term risk for patients with 2+ risk factors using Framingham projection of 10-year absolute risk [D]: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 40%;"> Categorical Risk <ul style="list-style-type: none"> • CHD or CHD risk equivalents • 10-year risk $>$ 20% • 2+ risk factors • 10-year risk \leq 20% • 0 - 1 risk factor </td> <td style="vertical-align: top; width: 60%;"> Goal for LDL-C <ul style="list-style-type: none"> < 160 mg/dL < 130 mg/dL < 160 mg/dL < 160 mg/dL < 160 mg/dL </td> </tr> </table>	Categorical Risk <ul style="list-style-type: none"> • CHD or CHD risk equivalents • 10-year risk $>$ 20% • 2+ risk factors • 10-year risk \leq 20% • 0 - 1 risk factor 	Goal for LDL-C <ul style="list-style-type: none"> < 160 mg/dL < 130 mg/dL < 160 mg/dL < 160 mg/dL < 160 mg/dL
Categorical Risk <ul style="list-style-type: none"> • CHD or CHD risk equivalents • 10-year risk $>$ 20% • 2+ risk factors • 10-year risk \leq 20% • 0 - 1 risk factor 	Goal for LDL-C <ul style="list-style-type: none"> < 160 mg/dL < 130 mg/dL < 160 mg/dL < 160 mg/dL < 160 mg/dL 			
		<ul style="list-style-type: none"> • Educate patient/family regarding Therapeutic Lifestyle Changes (TLC): • Reduce saturated fats and cholesterol [A], increase plant stanols/stanol (e.g., cholesterol-lowering margarines), increase viscous soluble fiber (e.g., oats, barley, lentils, beans), consider increasing fish consumption (Omega-3 fatty acids). • Decrease weight and increase exercise to moderate level of activity for 30 minutes, most days of the week [A]. 		
		<ul style="list-style-type: none"> • TLC and/or drug therapy may be initiated based on the LDL-C level and/or presence of CHD risk or CHD risk factors. • Initiate statin therapy for patients with CHD, CHD risk equivalents, or if the LDL-C is not at goal by 3 months after TLC have begun in earnest. • Statins are the most commonly used lipid-lowering agents. Liver function test monitoring is recommended at 3 months following treatment initiation, or dosage increases, of any statin. For prolonged myalgias, consider dosage reduction or statin change. • Evaluate and adjust drug therapy every 3 months until goal achieved. • For patients who do not reach LDL-C goal, consider referral to lipid specialist. 		

*Not all national guidelines agree

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel
 This guideline represents core management steps. It is based on several sources, including: Lipid Management in Adults, Institute for Clinical Systems Improvement, 2007 (icsi.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors, August 2009
 mqic.org



Michigan Quality Improvement Consortium Medical Management of Adults with Hypertension

The following guideline recommends diagnostic evaluation, education and pharmacologic treatment that support effective patient self-management.

Recommendation and Level of Evidence

Eligible Population	Key Components	Recommendation and Level of Evidence
Adult patients ≥ 18 years of age. Not pregnant.	Initial assessment	<ul style="list-style-type: none"> The objectives of the initial evaluation are to assess lifestyle cardiovascular risk factors, concomitant disorders, reveal identifiable causes of hypertension and check for target organ damage and cardiovascular disease. Physical examination: 2 or more BP measurements using regularly calibrated equipment with the appropriate sized cuff and separated by at least 2 minutes, verification in contralateral arm, funduscopic exam, neck exam (bruits), heart and lung exam, abdominal exam for bruits or aortic aneurysm, extremity pulses. [A] Laboratory tests prior to initiating therapy: Potassium, creatinine, glucose, hematocrit, calcium, urinalysis, lipid panel, EKG. [D]
Classification based on mean of 2 or more seated BP readings on each of 2 or more office visits.	Patient education and nonpharmacologic interventions	<ul style="list-style-type: none"> Lifestyle modification: weight reduction (BMI goal < 25), reduction of dietary sodium to less than 2.4 gm/day, DASH diet [A] (i.e. diet high in fruits and vegetables, reduced saturated and total fat), aerobic physical activity ≥ 30 minutes most days of the week, tobacco avoidance, increased dietary potassium and calcium, moderation of alcohol consumption¹. [A] Use of self BP monitoring. Check accuracy of home measurement device regularly. Mean self measured BP > 135/85 generally considered to be hypertensive.
Normal BP <120-80	Goals of Therapy	<ul style="list-style-type: none"> If no other risk factors: target BP <140/90. Patients with risk factors: target BP <140/90 (<130/80 for patients with diabetes or kidney disease). [D] Caution: low diastolic or orthostatic symptoms may limit ability to control systolic. Use extreme caution if diastolic is below 60. For diabetic patients, mortality increases if diastolic is below 70.
Prehypertension 120-139/80-89	Pharmacologic interventions	<ul style="list-style-type: none"> Hypertension, Stage 1 (140-159/90-99): start with thiazide-type diuretics for most patients. ACE-I and long-acting DHP-CCB² (e.g. amlodipine) are first-choice additional agents. Hypertension, Stage 2 ($\geq 160/\geq 100$): consider two-drug combination (thiazide plus ACE-I or DHP-CCB²). In general, diuretics and DHP-CCB² appear to be more effective as an initial treatment in African-Americans. ACE-I recommended in patients with diabetes or heart failure. [A] Beta-blockers are recommended in patients with ischemic heart disease or heart failure. Use angiotensin receptor blockers (ARB) if ACE-I not tolerated. Intensity treatment until treatments goals are met; 3 or more drugs may be necessary for some patients to achieve goal BP. Caution: NSAIDs may complicate management of hypertension and worsen renal function.
Monitoring and adjustment of therapy [D]		<ul style="list-style-type: none"> Prehypertension without other risk factors: annual BP check with lifestyle modification counseling. Hypertension, Stage 1: initiate therapy and recheck at monthly intervals until goal is reached. Hypertension, Stage 2: initiate therapy and recheck weekly or more often if indicated. Symptomatic Stage 2 may require hospital monitoring and treatment. Modify antihypertensive therapy as needed if adverse effects become intolerable. Once BP controlled with medication: recheck every 3-6 months. Check serum potassium and creatinine at least 1-2 times/year for patients on diuretics/ACE-I/ARB.

¹Moderate alcohol consumption is generally defined as up to two drinks per day for men, one drink per day for women.

²DHP-CCB = long-acting dihydropyridine calcium channel blocker (e.g. amlodipine, felodipine)

Levels of Evidence for the most significant recommendations: A = randomized trials, B = controlled trials, C = observational studies, D = opinion of expert panel
This guideline represents core management steps. It is based on several sources including: Hypertension Diagnosis and Treatment, Institute for Clinical Systems Improvement, November 2008 (Icahn). Individual patient considerations and advances in medical science may supersede or modify these recommendations.



Michigan Quality Improvement Consortium Guideline

Diagnosis and Management of Adults with Chronic Kidney Disease

The following guideline recommends diagnosis and aggressive management of chronic kidney disease by clinical stage.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
All adults at increased risk for CKD	<ul style="list-style-type: none"> Screening & Diagnosis For patients at increased risk for CKD (e.g., diabetes, hypertension, family history of kidney failure, kidney stones, etc.), assess for markers of kidney damage: • Measure blood pressure [A] • Obtain estimated GFR¹ (serum creatinine levels should not be used as sole means to assess renal function) • Protein-to-creatinine ratio or albumin-to-creatinine ratio (first morning or random spot urine specimen) • Urinalysis, fasting lipid profile, electrolytes, BUN 	<ul style="list-style-type: none"> For patients at increased risk for CKD (e.g., diabetes, hypertension, family history of kidney failure, kidney stones, etc.), assess for markers of kidney damage: • Measure blood pressure [A] • Obtain estimated GFR¹ (serum creatinine levels should not be used as sole means to assess renal function) • Protein-to-creatinine ratio or albumin-to-creatinine ratio (first morning or random spot urine specimen) • Urinalysis, fasting lipid profile, electrolytes, BUN 	<ul style="list-style-type: none"> Semi-annual blood pressure monitoring; more frequent monitoring if indicated • Monitor GFR every 1-2 years
Risk Factor Management & Patient Education	<ul style="list-style-type: none"> Evaluation and management of comorbid conditions (e.g. diabetes, hypertension, urinary tract obstruction, cardiovascular disease)² Review medications for dose adjustment, drug interactions, adverse effects, therapeutic levels Educate on therapeutic lifestyle changes: dietary sodium intake < 2.4 g/d recommended for patients with CKD and hypertension [A], weight maintenance if BMI < 25, weight loss if BMI ≥ 25, exercise and physical activity, moderation of alcohol intake, smoking cessation 	<ul style="list-style-type: none"> Evaluation and management of comorbid conditions (e.g. diabetes, hypertension, urinary tract obstruction, cardiovascular disease)² Review medications for dose adjustment, drug interactions, adverse effects, therapeutic levels Educate on therapeutic lifestyle changes: dietary sodium intake < 2.4 g/d recommended for patients with CKD and hypertension [A], weight maintenance if BMI < 25, weight loss if BMI ≥ 25, exercise and physical activity, moderation of alcohol intake, smoking cessation 	<ul style="list-style-type: none"> At each routine health exam
Adults with CKD	<p>All of the above plus:</p> <ul style="list-style-type: none"> Develop clinical action plan for each patient, based on disease stage as defined by the National Kidney Foundation, Kidney Disease Outcomes Quality Initiative (KDOQI) [B] Incorporate self-management behaviors into treatment plan at all stages of CKD [B] <p>Core Principles of Treatment</p> <ul style="list-style-type: none"> Stage 1 (GFR 2-90): Monitor GFR annually, smoking cessation, consider ASA, consider ACE and/or ARB therapy, BP goal <130/80, LDL-C goal < 100 Stage 2 (GFR 60-89): Nephrology referral if GFR decline >4ml/min/yr, maintain BP and lipid goals as above Stage 3 (GFR 30-59): Consult Nephrologist and Renal Dietician; Suppress PTH with Vit D to level appropriate for CKD stage; Phosphorus lowering treatment if > 4.6 mg/dl; Correct iron deficiency before start of erythropoiesis stimulating agent (ESA); ESA if Hgb (Hct) < 10 (30%); Renal-specific vitamins; Update vaccines: HBV, influenza, Tdap and Pneumovax Stage 4 (GFR 15-29): Nephrology and vascular access surgery referrals, ESA if Hgb < 10 g/dL, Optimize Ca & P product to < 55 with specific agents, update vaccines as indicated, CKD education classes Stage 5 (GFR < 15): Renal replacement therapy 	<p>All of the above plus:</p> <ul style="list-style-type: none"> Develop clinical action plan for each patient, based on disease stage as defined by the National Kidney Foundation, Kidney Disease Outcomes Quality Initiative (KDOQI) [B] Incorporate self-management behaviors into treatment plan at all stages of CKD [B] <p>Core Principles of Treatment</p> <ul style="list-style-type: none"> Stage 1 (GFR 2-90): Monitor GFR annually, smoking cessation, consider ASA, consider ACE and/or ARB therapy, BP goal <130/80, LDL-C goal < 100 Stage 2 (GFR 60-89): Nephrology referral if GFR decline >4ml/min/yr, maintain BP and lipid goals as above Stage 3 (GFR 30-59): Consult Nephrologist and Renal Dietician; Suppress PTH with Vit D to level appropriate for CKD stage; Phosphorus lowering treatment if > 4.6 mg/dl; Correct iron deficiency before start of erythropoiesis stimulating agent (ESA); ESA if Hgb (Hct) < 10 (30%); Renal-specific vitamins; Update vaccines: HBV, influenza, Tdap and Pneumovax Stage 4 (GFR 15-29): Nephrology and vascular access surgery referrals, ESA if Hgb < 10 g/dL, Optimize Ca & P product to < 55 with specific agents, update vaccines as indicated, CKD education classes Stage 5 (GFR < 15): Renal replacement therapy 	<p>All of the above plus:</p> <ul style="list-style-type: none"> Develop clinical action plan for each patient, based on disease stage as defined by the National Kidney Foundation, Kidney Disease Outcomes Quality Initiative (KDOQI) [B] Incorporate self-management behaviors into treatment plan at all stages of CKD [B] <p>Core Principles of Treatment</p> <ul style="list-style-type: none"> Stage 1 (GFR 2-90): Monitor GFR annually, smoking cessation, consider ASA, consider ACE and/or ARB therapy, BP goal <130/80, LDL-C goal < 100 Stage 2 (GFR 60-89): Nephrology referral if GFR decline >4ml/min/yr, maintain BP and lipid goals as above Stage 3 (GFR 30-59): Consult Nephrologist and Renal Dietician; Suppress PTH with Vit D to level appropriate for CKD stage; Phosphorus lowering treatment if > 4.6 mg/dl; Correct iron deficiency before start of erythropoiesis stimulating agent (ESA); ESA if Hgb (Hct) < 10 (30%); Renal-specific vitamins; Update vaccines: HBV, influenza, Tdap and Pneumovax Stage 4 (GFR 15-29): Nephrology and vascular access surgery referrals, ESA if Hgb < 10 g/dL, Optimize Ca & P product to < 55 with specific agents, update vaccines as indicated, CKD education classes Stage 5 (GFR < 15): Renal replacement therapy

¹If not calculated by lab, refer to the National Kidney Foundation website for GFR calculator (<http://www.kidney.org/professionals/tools/>)

² Reference MoIC guidelines on Diabetes, hyperlipidemia and obesity (www.mic.org).

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel.
 This guideline lists core management steps. It is based on the Henry Ford Health System, Divisions of Nephrology & Hypertension and General Internal Medicine Chronic Kidney Disease (CKD) Clinical Practice Recommendations for Primary Care Physicians and Healthcare Providers, Edition 5.0 (www.ghsenal.com). Individual patient considerations and advances in medical science may supersede or modify these recommendations.



Michigan Quality Improvement Consortium Guideline

Tobacco Control

The following guideline recommends specific interventions for cessation services for current smokers and tobacco users.			
Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
All patients 12 years of age and older (regardless of prior use status)	Identification of tobacco use and exposure status (never, former, current) and type (all forms, including smokeless tobacco, pipe, snuff, cigars, hookah [water pipe] and second hand smoke)	<ul style="list-style-type: none"> Ask and document tobacco use status in the medical record and/or problem list. [A] 	At each outpatient visit and inpatient admission
All patients identified as current smokers/tobacco users	Intervention to promote cessation of tobacco use	<ul style="list-style-type: none"> Advise to quit [A] avoid second-hand smoke. Assess patient willingness to attempt to quit. [C] Assist patients who are ready to quit by: <ul style="list-style-type: none"> Establishing a quit date. Providing self-help materials (e.g. free Quit Kits; see (www.michigan.gov/tobacco)). Offering nicotine replacement therapy (adults only) and/or non-nicotine medications e.g., sustained release bupropion [A] (adolescents and adults). Recommending a smoking cessation program (e.g. MI Quit Line 1-800-480-7848 or your preferred program). The combination of medication plus a smoking cessation program is more effective than either alone. [A] Arrange follow-up contact, either in person or by telephone [D]: 	At each periodic health exam, more frequently at the discretion of the physician

SPECIAL CIRCUMSTANCES

- Pregnant Smokers:** Due to the serious risks to the mother and fetus, pregnant smokers should be offered interventions such as referral to a smoking cessation program.
- Hospitalized Smokers:** Clinicians should provide appropriate pharmacotherapy and counseling during hospitalization to reduce nicotine withdrawal symptoms and assist smokers in quitting.
- Smokers with Psychiatric Comorbidity:** Nicotine withdrawal symptoms may exacerbate depression among patients with a prior history of affective disorder. Stopping smoking may affect the pharmacokinetics of certain psychotropic agents. Clinicians should monitor closely the actions or side effects of psychiatric medications in smokers/tobacco users who are attempting to quit.

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline lists core management steps. It is based on several sources including the Clinical Practice Guideline for the Management of Tobacco Use, Veterans Health Administration Department of Defense, 2004 (oqp.med.va.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors, September 2009

mqic.org



Michigan Quality Improvement Consortium Guideline

Management of Overweight and Obesity in the Adult

The following guideline recommends specific interventions for treatment of overweight and obese conditions in adults.		Recommendation and Level of Evidence	Frequency
Eligible Population	Key Components		
Adults 18 years or older; Assessment of Body Mass Index (BMI)	<ul style="list-style-type: none"> • Measure height and weight, and calculate patient's BMI¹ to determine if patient is overweight or obese, and pattern of weight change [C]. • If overweight, assess for complicating risk factors: <ul style="list-style-type: none"> • Family history of premature CHD • Presence of atherosclerotic disease • Diabetes mellitus • Sleep apnea • Assess current eating, exercise behaviors, history of weight loss attempts and psychological factors or medications that contribute to weight gain². 	<ul style="list-style-type: none"> • Help your patients establish their own realistic lifestyle goals³: <ul style="list-style-type: none"> • Help your patient set a realistic goal for reducing calories and adjusting to maintain gradual weight loss [A], ideally to maintain a 1- to 2-pound weight loss per week and improve dietary quality. • Help your patient set a realistic goal for physical activity: at a minimum, more activity than present; ideally 30 minutes of moderate physical activity most days of the week [A]. • Recommend weight loss strategies and resources as needed. (See www.michigan.gov/surgeongeneral.) • Arrange follow-up with patients to monitor progress and provide support. 	At each periodic health exam; more frequently at the discretion of the physician
Patients with BMI ≥ 25	Interventions to promote weight management	<p>All of the above plus:</p> <ul style="list-style-type: none"> • Consider referral to a program that provides guidance on nutrition, physical activity and psychosocial concerns. • Consider pharmacotherapy only for patients with increased medical risk because of their weight with co-existing risk factors or comorbidities (monitor for weight loss and medication side effects; periodically review need for medication). • Insurance coverage for weight loss medications varies; consult health plan for eligibility. 	At each periodic health exam; more frequently when possible
Patients with BMI > 30 or > 27 with other risk factors or diseases	Interventions to promote weight management	<ul style="list-style-type: none"> • Weight loss surgery should be considered only for patients in whom other methods of treatment have failed and who have clinically severe obesity, i.e., BMI ≥ 40 or BMI ≥ 35 with life-threatening comorbid conditions⁴ [B]. • Evaluate for psychological readiness for surgical intervention and post-surgical lifestyle commitment. 	
BMI ≥ 40 or BMI ≥ 35 with uncontrolled comorbid conditions ⁵	Surgical treatment	<p>¹ BMI is an accurate proxy for body fat in average adults but may be misleading in muscular individuals.</p> <p>² Weight gain may be associated with medications: antidepressants, anticonvulsants, atypical antipsychotics, beta-blockers and corticosteroids.</p> <p>³ Avoid weight gain or maintain weight loss, initial goal of 10% weight loss and reassess after goal achieved, maximum weight loss of 1/2 pound per week if overweight and 1-2 pounds per week if BMI > 30.</p> <p>⁴ Insurance coverage for bariatric surgery varies; consult health plan for eligibility.</p> <p>⁵ Comorbidities: Severe cardiac disease (CHD, pulmonary hypertension, congestive heart failure, and cardiomyopathy); Type 2 diabetes; obstructive sleep apnea and other respiratory disease (chronic asthma) (hypertension syndrome, Pickwickian syndrome); end-organ damage; pseudo-tumor cerealis; gastrointestinal reflux disease; hypertension; hyperlipidemia; severe joint or disc disease if interferes with daily functioning.</p>	

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion or expert panel.
This guideline represents core management steps. It is based on the Prevention and Management of Obesity (Mature Adolescents and Adults), Institute for Clinical Systems Improvement, 2006, and the National Institutes of Health, National Heart, Lung and Blood Institute Obesity Education Initiative, The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults, 2000 (www.ncbi.nlm.nih.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.
Revised and approved by MOLC: Medical Director on 3/09
www.mqic.org



Michigan Quality Improvement Consortium Guideline

June, 2008

Treatment of Childhood Overweight and Obesity

The following guideline recommends specific treatment interventions for childhood overweight and obesity.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Children 2 years or older with a BMI \geq 85th percentile	<p>Identify presence of weight related risk factors and complications</p> <ul style="list-style-type: none"> • Family history, evaluate general comorbidities, including but not limited to cardiovascular disease and diabetes • History of medication use including nutritional supplements • Symptoms of gallbladder disease, type 2 diabetes, obstructive sleep disorders, hypothyroidism • Presence of acanthosis nigricans • Weight-related orthopedic problems • Pulse and blood pressure, using appropriate technique and cuff size for age • Be alert to secondary causes of obesity. If aberrant findings are noted (short stature, hypotonia, hypertension, etc.), then consider genetic and other endogenous causes of obesity. • Patient or parental concern about weight • Testing: Annual lipid profile and fasting glucose 	<p>Reinforce Prevention Recommendation (See also MQIC Prevention and Identification of Childhood Overweight Guideline)</p> <p>History and physical exam [D]:</p> <ul style="list-style-type: none"> • Family history, evaluate general comorbidities, including but not limited to cardiovascular disease and diabetes • History of medication use including nutritional supplements • Symptoms of gallbladder disease, type 2 diabetes, obstructive sleep disorders, hypothyroidism • Presence of acanthosis nigricans • Weight-related orthopedic problems • Pulse and blood pressure, using appropriate technique and cuff size for age • Be alert to secondary causes of obesity. If aberrant findings are noted (short stature, hypotonia, hypertension, etc.), then consider genetic and other endogenous causes of obesity. • Patient or parental concern about weight • Testing: Annual lipid profile and fasting glucose 	Each periodic health exam, more frequently as case requires
Children 2 years or older with a BMI \geq 85th-94th percentile (overweight) without risk factors or complications	Lifestyle intervention to reach weight maintenance	<p>Consider all of the above, plus:</p> <p>Intervention to promote weight management/treatment [D]:</p> <ul style="list-style-type: none"> • Reinforce lifestyle intervention and behavior modification. Focus is appropriate weight maintenance, family must be involved; small gradual changes are recommended towards the stated goal • Monitor for increasing BMI percentile • Monitor for the development of risk factors or complications 	Consider management of childhood obesity as a medium- to long-term intervention
Children 2 years or older with a BMI \geq 95th-94th percentile with risk factors or complications	Lifestyle intervention with treatment of risk factors and complications as needed	<p>All of the above, plus:</p> <ul style="list-style-type: none"> • Primary goal of childhood weight interventions is regulation of body weight and fat with adequate nutrition for growth and development. • Treat risk factors and complications as needed. • Substantial slowing of weight gain may be achieved by relatively small but consistent changes in energy (200-500 kcal/day) intake, expenditure or both. If weight loss is desired, an appropriate starting goal is about 1 lb of weight loss per month. • Consider referral to multidisciplinary pediatric obesity treatment center, pediatric endocrinologist or registered dietitian. 	All of the above, plus:
Children 2 years or older with BMI \geq 95th percentile (obese) with or without risk factors or complications	Weight loss with concomitant treatment of risk factors and complications as needed	<ul style="list-style-type: none"> • Long-term goal should be a body mass index below 85th percentile for age and sex. • Consider aggressive approach to weight loss and treatment for patients after conservative approaches have failed. • Consider AST, ALT, BUN and creatinine. 	All of the above, plus:

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials/no randomization; C = observational studies; D = opinion of expert panel.

This Guideline lists core management steps. It is based on several sources, including: the American Medical Association Recommendations 2007 Expert Committee Recommendations on the Treatment of Pediatric Obesity (www.ama-assn.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors 06/08
www.mqic.org



Michigan Quality Improvement Consortium Guideline

Prevention and Identification of Childhood Overweight

The following guideline recommends specific interventions for prevention and identification of childhood overweight and obesity.			
Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Parents of children younger than 2 years old	Education of parents regarding obesity and prevention of risk	Prevention to promote healthy weight: • Encourage breast feeding, discourage overfeeding of bottle fed infants [A]. • Avoid premature introduction of solids and base timing for introduction of solids on child's development, usually between 4 months and 6 months of age. • Preserve natural satiety by respecting a child's appetite. • Educate caregivers on the importance of age-specific meals and snacks, consistent mealtimes, appropriate snacking, serving sizes, reading nutritional labeling and daily physical activity. • Educate parents about the importance of parental role modeling for healthy lifestyle behaviors and of parental controls [D]. • Avoid high-calorie, nutrient-poor beverages (e.g., soda, fruit punch or any juice drink less than 100% juice). • Limit intake of 100% juice to < 6 oz per day, may offer in a cup, starting at 6 months of age. • Evaluate general comorbidities, including but not limited to cardiovascular disease of parents. • No television or computer screen time [D].	At each periodic health exam
Children 2 years or older	Assessment of body mass index, risk factors for overweight and excessive weight gain relative to linear growth	General assessment: • History (including focused family history) and physical exam • Measure and record weight and height on CDC BMI-for-age growth chart, calculate and plot patients' BMI [weight (kg)/height squared (m^2) or (pounds / 703/inches) ²] • Dietary patterns (e.g., frequency of eating outside the home, consumption of breakfast, adequate fruits and vegetables, excessive portion sizes, etc.) • Risk factors for overweight ² including pattern of weight change [C]. Watch for increases of 3-4 BMI units/year	
Children 2 years or older, BMI for age < 85th percentile	Prevention to promote healthy weight	Age specific prevention messages: Preschool: • Limit television and computer screen time to 1-2 hours per day, remove television and computer screens from primary sleeping area. • Replace whole milk with skim, avoid high-calorie, nutrient-poor beverages (soda, fruit punch, juice drinks); limit intake of 100% juice. • Eat breakfast daily, limit eating out and portion sizes, particularly fast foods. • Promote a healthy diet (include fruit and vegetables and low-fat dairy) that encourages family mealtimes, regular eating times and minimizes nutritionally poor food prepared outside the home. • Respect the child's appetite and allow him or her to self-regulate food intake. • Provide structure and boundaries around healthy eating with adult supervision. School-aged, the above plus: • Accumulate at least 60 minutes, and up to several hours, of age-appropriate physical activity on all or most days of the week (emphasize lifestyle exercise, i.e., outdoor play, yard work, and household chores). • Consider barriers (e.g., social support, unsafe neighborhoods or lack of school-based physical education) and explore individualized solutions. • Reinforce making healthy food and physical activity choices at home and outside of parental influence.	

¹ See <http://apps.nccd.cdc.gov/databmicalculator.aspx>

² Low or high birth weight, low income, minority, television or computer screen time > 2 hrs, low physical activity, poor eating, depression

Levels of evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials; C = observational studies; D = opinion or expert panel
This guideline lists core management steps. It is based on several sources, including the American Medical Association 2007 Expert Committee Recommendations on the Treatment of Pediatric Obesity (www.ama-assn.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.



Michigan Quality Improvement Consortium Guideline

Medical Management of Adults With Osteoarthritis

The following guideline recommends initial evaluation, nonpharmacologic and pharmacologic interventions for the management of osteoarthritis.					
Eligible Population	Key Components				
Adults with clinical suspicion or confirmed diagnosis of osteoarthritis	<ul style="list-style-type: none"> Initial evaluation <ul style="list-style-type: none"> Detailed history (aspirin use, pain control with over-the-counter medications, activity/tolerance and limitations) Physical examination As seen gastrintestinal (GI) risk: <ul style="list-style-type: none"> History of GI bleeding History of peptic ulcer disease and/or non-steroidal induced GI symptoms Concomitant use of corticosteroids and/or warfarin [A] High dose, chronic, or multiple NSAIDs including aspirin Age > 60 yrs 				
Nonpharmacologic modalities	<ul style="list-style-type: none"> Treatment plan should include: <ul style="list-style-type: none"> education and counseling regarding weight reduction and joint protection range-of-motion [B], aerobic and muscle strengthening exercises for patients with functional limitations, consider physical and occupational therapy self-management resources (e.g., American Arthritis Foundation self help course and book) <p>For select patients:</p> <ul style="list-style-type: none"> assistive devices for ambulation and activities of daily living appropriate footwear, orthotics (e.g., wedged insoles) 				
Therapies other than NSAIDs	<ul style="list-style-type: none"> Initial drug of choice: Acetaminophen at maximum recommended dose, modify dose for patients at risk for toxicity (note patients with hepatic toxicity risk factors, especially those on aspirin, or warfarin). Warn patients that many over the counter products contain acetaminophen and to monitor dose carefully. Reassess and taper as tolerated. Topical capsaicin 				
NSAID analgesics:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">No or low NSAID GI risk</th> <th style="text-align: center;">NSAID GI risk</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> • NSAID plus PP¹ • If NSAID not tolerated, Cyclo-oxygenase-2 (COX-2) selective inhibitor • For those with prior GI bleed avoid all NSAIDs/COX-2, if must use, then COX-2 plus PP¹[D] </td> <td> <ul style="list-style-type: none"> • NSAIID plus PP¹² • If aspirin offers no advantage over NSAID • Naproxen^{3,3} plus PP¹ if cardiovascular risk > GI risk • COX-2 plus PP¹ if GI risk > cardiovascular risk </td> </tr> </tbody> </table> <p>* Cardiovascular risk</p> <ul style="list-style-type: none"> • Naproxen^{3,3} • Add PP¹ if GI risk of aspirin/NSAID combination warrants GI protection <p>Other pharmacologic agents</p> <ul style="list-style-type: none"> • Nonacetaminophen salicylate, tramadol, opioid, methotrexate, hyaluronate, lidocaine or methylsalicylate 	No or low NSAID GI risk	NSAID GI risk	<ul style="list-style-type: none"> • NSAID plus PP¹ • If NSAID not tolerated, Cyclo-oxygenase-2 (COX-2) selective inhibitor • For those with prior GI bleed avoid all NSAIDs/COX-2, if must use, then COX-2 plus PP¹[D] 	<ul style="list-style-type: none"> • NSAIID plus PP¹² • If aspirin offers no advantage over NSAID • Naproxen^{3,3} plus PP¹ if cardiovascular risk > GI risk • COX-2 plus PP¹ if GI risk > cardiovascular risk
No or low NSAID GI risk	NSAID GI risk				
<ul style="list-style-type: none"> • NSAID plus PP¹ • If NSAID not tolerated, Cyclo-oxygenase-2 (COX-2) selective inhibitor • For those with prior GI bleed avoid all NSAIDs/COX-2, if must use, then COX-2 plus PP¹[D] 	<ul style="list-style-type: none"> • NSAIID plus PP¹² • If aspirin offers no advantage over NSAID • Naproxen^{3,3} plus PP¹ if cardiovascular risk > GI risk • COX-2 plus PP¹ if GI risk > cardiovascular risk 				

¹ Misoprostol at full dose (200 µg four times a day) may be substituted for PP¹.

² Naproxen probably has lowest cardiovascular risk of NSAID/COX-2 class.

³ If aspirin is used daily, COX-2 offers no advantage over NSAID.

Level of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel. This guideline lists core management steps and is based on the following sources: The IC SI Diagnosis and Treatment of Adult Degenerative Joint Disease (DJD)/Osteoarthritis (OA) of the Knee, Institute for Clinical Systems Improvement, 2007 (icsi.org), and Schellman JM, and Schellman JM. *Lancet* 2007; 369: 1,590-1. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors, August 2009

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Michigan Quality Improvement Consortium Guideline

Management of Acute Low Back Pain

March 2008

The following guideline recommends assessment, diagnosis and treatment interventions for the management of acute low back pain in adults.

Eligible Population	Key Components	Recommendation and Level of Evidence
Adults with low back pain or back related leg symptoms for < 6 weeks	<p>Patients with low risk of serious pathology (no red flags)</p> <p>Therapy:</p> <ul style="list-style-type: none"> Stay active and continue ordinary activity within the limits permitted by pain. Avoid bedrest [A]. Early return to work is associated with less disability. Injury prevention (e.g. use of proper body mechanics, safe back exercises) Recommend ice for painful areas and stretching exercises [D]. McKenzie exercises [A] are helpful for pain radiating below the knee. <p>Referral:</p> <ul style="list-style-type: none"> If no improvement at 1-2 weeks, refer for goal-directed manual physical therapy, not modalities such as heat, traction, ultrasound, TENS. Surgical referral usually not required if no "red flags". <p>Medication Strategies:</p> <ul style="list-style-type: none"> Medication treatment depending on pain severity with acetaminophen or NSAIDS [A] COX-2 inhibitors and muscle relaxants have not been shown to be more effective than NSAIDS [A]. Opiate analgesics have not been shown to be more effective than NSAIDS in acute low back pain. <p>Testing:</p> <ul style="list-style-type: none"> Diagnostic tests or imaging usually not required. If no improvement after 6 weeks, consider imaging. <p>Assess for "red flag" indications of serious disease:</p> <ul style="list-style-type: none"> Cauda Equina <ul style="list-style-type: none"> Severe or progressive neurologic deficit Recent bowel or bladder dysfunction Saddle anesthesia Cancer <ul style="list-style-type: none"> Men and women age > 50 Cancer history Insidious onset No relief at bedtime or worsening when supine Constitutional symptoms (e.g. fever, weight loss) Male with diffuse osteoporosis or compression fracture Infection <ul style="list-style-type: none"> Steroid use history Diabetes Mellitus Immune suppression History UTI or other infection Constitutional symptoms (e.g. fever, weight loss) No relief at bedtime or supine HIV <ul style="list-style-type: none"> Previous surgery Insidious onset IV drug use 	<p>Reassure patient that 90% of episodes resolve within six weeks regardless of treatment [C]. Advise that minor flare-ups may occur in the subsequent year.</p> <p>Therapy:</p> <ul style="list-style-type: none"> Stay active and continue ordinary activity within the limits permitted by pain. Avoid bedrest [A]. Early return to work is associated with less disability. Injury prevention (e.g. use of proper body mechanics, safe back exercises) Recommend ice for painful areas and stretching exercises [D]. McKenzie exercises [A] are helpful for pain radiating below the knee. <p>Referral:</p> <ul style="list-style-type: none"> If no improvement at 1-2 weeks, refer for goal-directed manual physical therapy, not modalities such as heat, traction, ultrasound, TENS. Surgical referral usually not required if no "red flags". <p>Medication Strategies:</p> <ul style="list-style-type: none"> Medication treatment depending on pain severity with acetaminophen or NSAIDS [A] COX-2 inhibitors and muscle relaxants have not been shown to be more effective than NSAIDS [A]. Opiate analgesics have not been shown to be more effective than NSAIDS in acute low back pain. <p>Testing:</p> <ul style="list-style-type: none"> Diagnostic tests or imaging usually not required. If no improvement after 6 weeks, consider imaging. <p>Assess for "red flag" indications of serious disease:</p> <ul style="list-style-type: none"> Cauda Equina <ul style="list-style-type: none"> Severe or progressive neurologic deficit Recent bowel or bladder dysfunction Saddle anesthesia Cancer <ul style="list-style-type: none"> Men and women age > 50 Cancer history Insidious onset No relief at bedtime or worsening when supine Constitutional symptoms (e.g. fever, weight loss) Male with diffuse osteoporosis or compression fracture Infection <ul style="list-style-type: none"> Steroid use history Diabetes Mellitus Immune suppression History UTI or other infection Constitutional symptoms (e.g. fever, weight loss) No relief at bedtime or supine HIV <ul style="list-style-type: none"> Previous surgery Insidious onset IV drug use

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline lists core management steps. It is based on several sources, including the ICSI Adult Low Back Pain Guideline, Institute for Clinical Systems Improvement, 2006 (www.icsi.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors 03/08

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Michigan Quality Improvement Consortium Guideline **Management and Prevention of Osteoporosis**

The following guideline recommends assessment and management of patients with osteopenia and osteoporosis.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Patients at potential risk for osteoporosis	Assessment	<ul style="list-style-type: none"> ■ Asses for loss of height (> 1.5 inches) and back pain. ■ Assess other risk factors: <ul style="list-style-type: none"> • Current cigarette smoking • Low body weight (< 27 lbs or BMI \leq 20) • Female gender • Menopause • Endocrine disorders: <ul style="list-style-type: none"> • Premature or surgical menopause • Chronic corticosteroid therapy • Estrogen or testosterone deficiency • Excessive thyroid hormone replacement • Calcium or vitamin D deficiency • Depo-Provera use ■ Bone mineral density (BMD) testing using DEXA for high risk patients or moderate risk patients at risk for falls. ■ CT scan for screening is not recommended. 	<ul style="list-style-type: none"> • Adult height assessments at periodic well exams
Patient Selection for Treatment and Prevention		<p>Regardless of risk factors:</p> <ul style="list-style-type: none"> • Dietary calcium 1200 mg/d and 800 - 1000 IU vitamin D₃ [B] • Weight-bearing exercise [A] • Address modifiable risk factors above 	<ul style="list-style-type: none"> • BMD testing more often than every two years is generally not useful. • Consider rechecking BMD after at least two years of pharmacologic treatment to monitor effectiveness. [D]
Patients requiring therapy to reduce high risk of fracture	Patient Selection for Pharmacological Management Based on DEXA	<ul style="list-style-type: none"> • Treatment to prevent fractures in osteopenia [T-score between -1 and -2.0] <ul style="list-style-type: none"> without risk factors is not useful. [D] Treat patients on corticosteroid therapy with a T-score \leq -1.0. [A] Treat patients with osteopenia and a T-score between -2.0 and -2.5 at increased risk. [D] • Patients with osteoporosis [T-score < -2.5] (Osteopenia associated with atraumatic fracture should be treated as osteoporosis [D]). 	
Pharmacological Management		<ul style="list-style-type: none"> • Consider oral bisphosphonate, generic if available¹. • Consider referral to endocrine or bone and mineral metabolism specialist if patient does not tolerate treatment or shows progression or recurrent fracture after 2 years on treatment. 	

¹ Use caution in patients with active upper GI disorders. Take medication on an empty stomach with water, remain upright, no food or beverage for 30 minutes, (60 minutes for ibandronate).

Level of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials; C = observational studies; D = opinion of expert panel

This guideline represents core management steps. It is based on The Guide to Clinical Preventive Services-2007, Recommendations of the U.S. Preventive Services Task Force (www.ahrq.gov) and the Diagnosis and Treatment of Osteoporosis Guideline, Institute for Clinical Systems Improvement, 2008 (www.icsi.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.



Michigan Quality Improvement Consortium Guideline

Acute Pharyngitis in Children

January, 2009

The following guideline recommends assessment, diagnosis and treatment interventions for the management of acute pharyngitis in children and adolescents.

Eligible Population	Key Components	Recommendation and Level of Evidence
Children 2-18 years old with suspected GABHS pharyngitis	<p>Assessment</p> <p>Assess past history of rheumatic fever (especially carditis or valvular disease) or household contact with a history of rheumatic fever to identify high-risk patients.</p> <p>Assess the likelihood of strep pharyngitis by looking for the following:</p> <ul style="list-style-type: none"> • Sudden onset • Sore throat • Fever • Patchy discrete exudate 	<p>Patient 5-15 years old</p> <ul style="list-style-type: none"> • Headache • Nausea, vomiting and abdominal pain • Inflammation of pharynx and tonsils • Tender, enlarged anterior cervical nodes • No cough
Not high-risk for rheumatic fever	<p>Diagnosis</p> <p>Testing (intermediate or high probability of GABHS):</p> <p>Throat culture</p> <p>Or</p> <p>Rapid screen</p>	<p>If throat culture is positive, use antibiotics.</p> <p>If throat culture is negative, use symptomatic treatment only. Avoid antibiotics.</p> <p>If rapid screen is positive, use antibiotics.</p> <p>If rapid screen is negative, culture¹, and only use antibiotics if throat culture is positive.</p>
High-risk for rheumatic fever or household contact with history of rheumatic fever or confirmed strep pharyngitis	<p>Treatment</p>	<p>Start antibiotics immediately. Obtain throat culture. If negative, stop antibiotics.</p> <p>See www.med.umich.edu/info/FHP/practiceguides/pharyngitis/pharyn.pdf for detailed drug and dosing recommendations.</p> <p>Preferred Treatment for Strep Pharyngitis:</p> <ol style="list-style-type: none"> 1) Penicillin VK-250-500 mg bid-qid x 10 days 2) Amoxicillin: 40 mg/kg/d divided bid-qd x 10 days [A] or 750 mg daily x 10 days if compliance is a concern 3) Benzathine penicillin G IM x1 4) If allergic to penicillin: erythromycin ethyl succinate: 40 mg/kg/day bid-qid (max 1 gm/day) x 10 days or azithromycin 5) With oral antibiotics, a full 10-day course is required (exception: azithromycin). <p>Alternative Treatment for Strep Pharyngitis:</p> <ol style="list-style-type: none"> 6) Cephalaxin <p>Re-evaluation, referral</p> <ol style="list-style-type: none"> 1) If failure to respond clinically after 48 hours of treatment, rule out peritonsillar or retropharyngeal abscess. If present, prompt ENT evaluation is recommended. 2) Assess the potential for a compliance problem.

¹ Culture optional for age 16 and older

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel
 This guideline lists core management steps. It is based on several sources including the ICSI Diagnosis and Treatment Lines in Children and Adults Guideline, Institute for Clinical Systems Improvement, 2008 (www.icsi.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.
www.mqic.org
 Approved by MIGC Medical Directors 01/09



May, 2008

Michigan Quality Improvement Consortium Guideline

Management of Uncomplicated Acute Bronchitis in Adults

The following guideline recommends assessment, diagnosis, treatment and counseling interventions for the management of uncomplicated acute bronchitis in adults.			
Eligible Population	Key Components	Recommendation and Level of Evidence	
Adults 18 years or older with clinical suspicion of uncomplicated acute bronchitis	<ul style="list-style-type: none"> Assessment <ul style="list-style-type: none"> • Perform thorough history (including tobacco use status [A]) and physical exam • Assess the likelihood of uncomplicated acute bronchitis using the following items: <ul style="list-style-type: none"> - Acute respiratory infection (ARI) manifested predominantly by cough, with or without sputum production lasting no more than 3 weeks - No clinical evidence of pneumonia - Common cold, acute asthma, or exacerbation of COPD have been ruled out as cause of cough - Consider other diagnoses if cough persists greater than 3 weeks 		
Diagnosis	<p>Clinical Information and Testing:</p> <ul style="list-style-type: none"> • Presumed diagnosis of acute bronchitis: <ul style="list-style-type: none"> - ARI and cough with or without sputum production lasting no more than 3 weeks - No clinical evidence of pneumonia - Viral cultures, serologic assays and sputum analyses should not be routinely performed [C] • Chest x-ray is not indicated if all of the following are present [B]: <ul style="list-style-type: none"> - Acute cough and sputum production suggestive of acute bronchitis - Heart rate < 100 beats/min - Respiratory rate < 24 breaths/min - Oral temperature < 38° C (100.4° F) - Chest exam lacks findings of focal consolidation, egophony or fremitus 		
Treatment	<ul style="list-style-type: none"> • Condition is a self-limited respiratory disorder. Symptomatic treatment only. Routine treatment with antibiotics is not justified and should not be offered. Avoid antibiotics [A] • Beta₂-agonist bronchodilators should not be routinely used to alleviate cough. In select patients with wheezing, treatment with beta₂-agonists bronchodilators may be useful [C] • Antitussive agents can be offered for short-term symptomatic relief of coughing [C] • Mucokinetic (mucolytic) agents are not recommended (no consistent favorable effect) [D] 		
Education and counseling	<ul style="list-style-type: none"> • Educate patient/family regarding: <ul style="list-style-type: none"> - Condition often does not require medical treatment - Inform patient that cough may last for 3 weeks - Routine use of antibiotics is not recommended [A] - Use the term "chest cold" which is associated with less patient belief that antibiotics are needed - Rest and increasing fluid intake - Smoking cessation and second-hand smoke avoidance [C] (See also MQIC Tobacco Control Guideline) 		

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel
 This guideline lists core management steps. It is based on several sources including the American College of Chest Physicians Chronic Cough Due to Acute Bronchitis; ACCP Evidence-Based Clinical Practice Guidelines, 2006 (www.chestjournal.org). Individual patient considerations and medical science www.mqic.org

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