2014 Michigan Drug Formulary

MOLINA® HEALTHCARE

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	TRACLEER
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
Mercaptoprine	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	DIASTAT, 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**	LEXAPRO	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	ATIVAN	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
RESCRIPTOR	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
Onychomychosis	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 forumlary
- 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".

Generic Available*	Generic Name	Brand Name

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)

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

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 Monohydrate	ADOXA (Caps only)
*	Minocycline	MINOCIN

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 Coumadins effects.

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**
1.6 Aminoglycosides		
*	Neomycin	
1.7 Sulfonamides		
*	Smz/tmp	BACTRIM, SEPTRA
*	Sulfisoxazole	GANTRISIN
*	Sulfisoxazole/ erythromycin Susp.	PEDIAZOLE
1.8 Antituberculosis		
*	Isoniazid	ISONIAZID
*	Ethambutol	MYAMBUTOL
	Pyrazinamide	PYRAZINAMIDE
*	Rifampin	RIFADIN
*	Pyridoxine	VITAMIN B-6
1.9 Antifungal		
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	**NOXAFIL**
1.10 Antiviral		
*	Amantadine	SYMMETREL
*	Acyclovir	ZOVIRAX (tab, capsules)

Generic Available*	Generic Name	Brand Name
1.11 Antimalarial		
	Pyrimethamine	DARAPRIM
	Primaquine Phosphate	PRIMAQUINE
1.12 Anthelmintics		
*	Mebendazole	VERMOX
1.13 Miscellaneous Antiinfectives		
*	Clindamycin	CLEOCIN (150mg only)
*	Metronidazole	FLAGYL
	Nitrofurantoin monohyd/ macrocrystals LA	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
2.2 Estrogens		
*	Estradiol	ESTRACE
	Estrogens, conjugated	PREMARIN (tabs, vaginal cream)

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

Generic Available*	Generic Name	Brand Name
2.6 Oral Hypoglycemics		
	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 Glulisine	APIDRA
Insulin-Human, recombin	HUMULIN, NOVOLIN
Insulin Glargine	LANTUS
Glucometer	TRUE RESULT
Glucose Test Strips	TRUE TEST
Insulin Syringes, OTC	
Lancets, OTC	

Generic Available*	Generic Name	Brand Name
2.8 Glucagon		
	Glucagon	GLUCAGON KIT
2.9 Antithyroid Drugs		
*	Propylthiouracil	PTU
*	Methimazole	TAPAZOLE
2.10 Thyroid Hormones		
	Thyroid dessicated	ARMOUR THYROID
*	Levothyroxine	SYNTHROID, LEVOXYL
2.11 Endometriosis Therapy		
*	Danazol	DANOCRINE
	Nafarelin	SYNAREL
2.12 Osteoporosis Drugs		
*	Alendronate	FOSAMAX
PRIOR AUTHORIZATION REQUIRED		
	Raloxifene	**EVISTA^**
*	**Calcitonin Salmon**	**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.
- Bisphophonate 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

Generic Available*	Generic Name	Brand Name

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)
*	Digoxin	DIGITEK, LANOXIN

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

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
3.5 Calcium Antagonists		
*	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.

Generic Available*	Generic Name	Brand Name
	• 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)

Generic Available*	Generic Name	Brand Name
3.8 Antiadrenergic Agents-Centrally Acting		
*	Methyldopa	ALDOMET
*	Clonidine	CATAPRES (tablets only)
*	Doxazosin	CARDURA
3.9 Alpha Blockers		
*	Terazosin	HYTRIN
*	Prazosin	MINIPRESS
3.10 Vasodilators		
*	Hydralazine	APRESOLINE
3.11 Diuretics		
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

3.12 Cholesterol Lowering Agents

- 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.

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

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)

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
*	Ceririzine	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)

4.3 Antitussives & Expectorants

*	Hydrocodone/Phenyl/CTM	HISTUSSIN HC

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	VENTOLIN HFA/ PROAIR HFA

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

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 INHALER
	Mometasone	ASMANEX
	Mometasone/Formoterol	DULERA (Step Therapy: Trial of formulary ICS)
	Budesonide/Formoterol	SYMBICORT (Step Therapy: Trial of formulary ICS)

PRIOR AUTHORIZATION REQUIRED

Fluticasone/Salmeterol	**ADVAIR**

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

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	COMBIVENT
*	Cromolyn	CROMOLYN NEBULIZER SOLUTION
	Aclidinium Bromide	TUDORZA

- 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 HCI	IMODIUM OTC
*	Diphenoxylate/atropine	LOMOTIL
*	Attapulgite	PARAPECTOLIN, KAOPECTATE OTC
*	Bismuth Subsalicylate	PEPTO BISMOL OTC

Generic Available*	Generic Name	Brand Name

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)
	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 Tabs/ODT (Max #90)

Generic Available*	Generic Name	Brand Name
5.4 Digestants/Stool Softeners/Laxative		
*	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
5.5 Antispasmodics & Drugs Affecting GI Motility		
*	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)
5.6 Sulfonamide/Mesalamine Products		
	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

Generic Available*	Generic Name	Brand Name
*	Clotrimazole	MYCELEX-G, GYNE-LOTRIMIN
*	Nystatin	MYCOSTATIN
*	Triple sulfa vag cream	SULTRIN (vag cream)
*	Metronidazole	VANDAZOLE
6.2 Miscellaneous Vaginal		
	Amino Acid/Urea Cervical Cream	AMINO-CERV
6.3 Anticholinergic-Antispasmodics		
*	Oxybutynin	DITROPAN
*	Oxybutynin XL	DITROPAN XL (Step Therapy: Three months of Ditropan)
	PRIOR AUTHORIZATION REQUIRED	
	Tolterodine Tartrate ER	**DETROL LA**
*	**Propanthelene**	**PRO-BANTHINE**
6.4 Cholinergic Drugs		
*	Bethanechol	URECHOLINE
6.5 Urinary Analgesics		
*	Phenazopyridine	PYRIDIUM
6.6 Miscellaneous Genitourinary		
*	Terazosin	HYTRIN
*	Doxazosin	CARDURA
	PRIOR AUTHORIZATION REQUIRED	
	Alfuzosin	**UROXATROL**

Chapter 7
CENTRAL NERVOUS SYSTEM

7.1 Dementia		
	Donepezil	ARICEPT
	PRIOR AUTHORIZATION REQUIRED	
	Rivastigmine	**EXELON**
	Galatamine	**RAZADYNE**
	Memantine	**NAMENDA**

Generic Available*	Generic Name	Brand Name
7.2 Other CNS Drugs		
*	Nicotine transdermal	NICOTROL PATCH (limit 3 months)
*	Nicotine polaxcrilex	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

Generic Available*	Generic Name	Brand Name
*	Hydrocodone Bitartrate/APAP	HYCET (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

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)

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	
*	Indomethacin	INDOCIN
*	Allopurinol	ZYLOPRIM

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 MIGRAINE OTC
*	Sumitriptan	IMITREX (Max #9/month)
*	Isometheptene/ dichloralphenazone/APAP	MIDRIN
	Eletriptan Hydrobromide	RELPAX (Max #6/month, Step Therapy: Imitrex and Amerge Tabs)
	Zolmitriptan	ZOMIG (Max #6/month, Step Therapy: Imitrex and Amerge Tabs)
	PRIOR AUTHORIZATION REQUIRED	
	Dihydroergotamine	**MIGRANAL NASAL SPRAY**

Generic Available*	Generic Name	Brand Name
	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**
	9.3 Other	
*	Pyridostigmine	MESTINON
	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)

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 w/IRON
*	Multi-Vitamins & fluoride	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.

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	AGGRENOX
*	Aspirin- Tabs, enteric coated tabs	ASPIRIN OTC
	Clopidogrel	PLAVIX
	PRIOR AUTHORIZATION REQUIRED	
*	**Ticlopidine**	**TICLID**

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**

Generic Available*	Generic Name	Brand Name
12.4 Antimicrobial agents		
12.4.1 Antibiotics and Antibiotic Combinations		
*	Bacitracin	AK-TRACIN
*	Sulfacetamide	BLEPH 10, SODIUM SULAMYD
*	Gentamicin	GENOPTIC
*	Erythromycin	ILOTYCIN OPTH OINT
*	Gramicidin/neomycin/ polymyxin B	NEOSPORIN
*	Ofloxacin	OCUFLOX
*	Polymyxin/TMP	POLYTRIM
*	Tobramycin	TOBREX
PRIOR AUTHORIZATION REQUIRED		
	Gatifloxacin	**ZYMAR**
12.4.2 Antibiotic-Corticosteroid Combinations		
	Sulfacetamide/prednisolone	BLEPHAMIDE
*	Hydrocortisone/neomycin/ polymixin B	CORTISPORIN
	Prednisolone acetate 0.5%/ neomycin/polymixin 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
12.5 Beta-adrenoreceptor Antagonists		
*	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
12.6 Carbonic Anhydrase Inhibitors		
*	Dorzolamide HCL 1%	TRUSOPT

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

Chapter 13
EAR, NOSE AND THROAT MEDICATIONS

13.1 OTIC Antiinfectives		
*	Chloramphenicol	CHLOROMYCETIN
	Ciprofloxacin/Dexamethasone	CIPRODEX (No PA required if prescribed by ENT)
*	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 otits externa, use of cortisporin is recommended.

13.2 OTIC Steroid-Antiinfective Combinations		
*	Hydrocortisone/neo/polymyxin B	CORTISPORIN OTIC
*	Acetic Acid	VOSOL

Generic Available*	Generic Name	Brand Name
13.3 Miscellaneous OTIC Products		
*	Benzocaine/antipyrine	AURALGAN
*	Carbamide peroxide 6.5%	DEBROX OTC
*	Hydrocort./acetic acid	VOSOL HC OTIC
13.4 Throat Medications		
*	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 Antiinfectives		
*	Gentamicin	GARAMYCIN
*	Bacitracin ointment	OTC
*	Triple Antibiotic ointment	OTC
*	Polysporin ointment	OTC
*	Silver Sulfadiazine	SILVADENE

Generic Available*	Generic Name	Brand Name
14.3 Topical Anti-Fungals		
*	Clotrimazole-cream/solution	MYCELEX OTC
*	Nystatin	MYCOSTATIN
*	Ciclopirox	LOPROX
*	Tolnaftate cream	TINACTIN OTC

14.4 Topical Corticosteroids

- 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

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

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**
	Pimecromlimus	**ELIDEL**

14.7 Scabicides/Pediculocides

Treatment of choice is OTC Nix

*	Lindane lotion, shampoo	KWELL
*	Permethrin	NIX-OTC
*	Pyrethins 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
	PRIOR AUTHORIZATION REQUIRED	
	Cacipotriene	**DOVONEX**

14.10 Miscellaneous Topicals

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

Generic Available*	Generic Name	Brand Name
	Hexachlorophene	PHISOHEX
*	Selenium Sulfide	SELSUN SHAMPOO- RX
*	Lidocaine	XYLOCAINE (Ointment Max 100 gram/month, Gel/Jelly Max 90 gram/month)

Chapter 15 MISCELLANEOUS

	Epinephrine	EPIPEN, EPIPEN JR
*	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

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	Recommendation and Level of Evidence
Children and adults with the following: • 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	Diagnosis and management goals	• Detailed medical history and physical exam to determine that symptoms of recurrent episodes of airflow obstruction are present. • Use spirometry[1] in all patients ≥ 5 years of age to determine that airway obstruction is at least partially reversible **[C].** • Consider alternative causes of airway obstruction. **Goals of therapy are to achieve control by [A]:** • Reducing impairment (prevent chronic symptoms, minimize need for rescue therapy with short-acting beta$_2$-agonists (SABA), maintain near-normal lung function and activity levels). • 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).
	Assessment and monitoring	• Assess asthma severity to initiate therapy. (Use severity classification chart, assessing both domains of impairment **[B]** and risk **[C]** to determine initial treatment.) • 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 possible.) • Obtain spirometry[1] to confirm control, and at least every 1-2 years [B], more frequently for not well-controlled asthma. • **Schedule follow-up care: consider scheduling patient within 1 week, or sooner, if acute exacerbation; at 2- to 6-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 interval 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.
	Education	• 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]**. Update annually, more frequently if needed.
	Control environmental factors and comorbid conditions	• Recommend measures to control exposures to allergens and pollutants or irritants that make asthma worse **[A]**. • Consider allergen 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 (See age-specific guidelines[2,3,4])	• Initial treatment should be based on the severity of asthma, both impairment and risk. • **Inhaled corticosteroids (ICS) are the most effective long-term control therapy [A]. Optimize ICS use before advancing to other therapies.** • Re-evaluate in 2 - 6 weeks for control. Modify treatment based on level of control. • Consider step down if well-controlled for 3 months.
		Warning for use of Long-acting beta-agonists (LABA). See Black Box Warning: • Do not use LABA as monotherapy. Use only with an asthma controller such as inhaled corticosteroids (preferably combination product for children). • Use for the shortest duration possible. • Only use if not controlled on other drugs. • Pediatric and adolescent patients who require the addition of a LABA to an inhaled corticosteroid should use a combination product containing both.
	Referral	• Refer to an asthma specialist for consultation or comanagement if there are difficulties achieving or maintaining control (See age-specific guidelines.); immunotherapy or omalizumab is considered; additional testing is indicated; or if the patient required 2 bursts of oral corticosteroids in the past year or a hospitalization **[D]**.

[1] spirometry = FEV_1, FEV_6, FVC, FEV_1/FVC

[2] MQIC Management of Asthma in Children 0 to 4 Years http://mqic.org/pdf/mqic_management_of_asthma_in_children_0_to_4_years_cpg.pdf

[3] MQIC Management of Asthma in Children 5 to 11 Years http://mqic.org/pdf/mqic_management_of_asthma_in_children_5_to_11_years_cpg.pdf

[4] MQIC Management of Asthma in Youth 12 Years and Older and Adults http://mqic.org/pdf/mqic_management_of_asthma_in_youth_12_years_and_older_and_adults_cpg.pdf

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, National Heart, Lung and Blood Institute (www.nhlbi.nih.gov)

Michigan Quality Improvement Consortium

Michigan Quality Improvement Consortium Guideline

Management of Asthma in Children 0 to 4 Years

Key Components	Recommendation and Level of Evidence
First, assess severity to decide initial therapy	**Assess Asthma Severity**

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	1-2x/month	3 - 4x/month	> 1x/wk
	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** ≥ 4 in 1 year lasting > 1 day **and** have risk factors for persistent asthma		
		Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class.			
	Recommended step for initiating treatment	**Step 1**	**Step 2**	**Step 3**	
		Re-evaluate control in 2-6 weeks and adjust therapy accordingly.			

On follow-up, assess control and step therapy up or down. Check adherence, inhaler/spacer technique, environment, and co-morbidities.	**Assess Asthma Control**

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	≤ 1x/month	> 1x/month	> 1x/week
	Short-acting beta$_2$-agonist use for symptoms	≤ 2 days/week	> 2 days/week	Several times/day
	Interference with normal activity	None	Some limitation	Extremely limited
Risk	Exacerbations requiring oral steroids	0-1x/year	2-3x/year	> 3x/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.		
Recommended treatment and follow-up		• Maintain current step • Regular follow-up every 1-6 months • Consider step down if well-controlled ≥ 3 months	• Step up 1 step • Re-evaluate in 2-6 weeks • If no clear benefit in 4-6 weeks, consider alternative diagnosis or adjust therapy **[D]**.	• Consider oral steroids • Step up 1-2 steps • Re-evaluate in 2 weeks

Step approach for asthma management (Use lowest treatment level required to maintain control.)

- Quick relief medication for all patients: Inhaled short-acting beta$_2$-agonist (SABA) as needed **[A]**. Up to 3 treatments at 20-minute intervals as needed. Short course of 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.
- Patient education and environmental control at each step.
- Persistent asthma: Daily long-term control therapy **[A]**; consult with asthma specialist step 4 or higher **[D]**; consider consultation at step 3 **[D]**

Intermittent	**Mild Persistent**	**Moderate Persistent**		**Severe Persistent**	
Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**
Preferred Short-acting beta$_2$-agonist as required	**Preferred** Low-dose inhaled corticosteroid **[A]** **Alternative** Cromolyn or Montelukast **[B]**	**Preferred** Medium-dose inhaled corticosteroid **[D]**	**Preferred** Medium-dose inhaled corticosteroid + either a long-acting beta$_2$-agonist* or montelukast **[D]**	**Preferred** High-dose inhaled corticosteroid + either a long-acting beta$_2$-agonist* or montelukast **[D]**	**Preferred** High-dose inhaled corticosteroid + oral corticosteroid + either a long-acting beta$_2$-agonist* or montelukast **[D]**

Warning for use of Long-acting beta-agonists (LABA). See Black Box Warning:

- Do not use LABA as monotherapy. Use only with an asthma controller such as inhaled corticosteroids (preferably combination product for children).
- Use for the shortest duration possible.
- Only use if not controlled on other drugs.
- Pediatric and adolescent patients who require the addition of a LABA to an inhaled corticosteroid should use a combination product containing both.

*Currently there are no LABAs identified for use in children 0-4 years of age.

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, National Heart, Lung and Blood Institute (www.nhlbi.nih.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors July 2008, 2010, 2012

Michigan Quality Improvement Consortium Guideline

Management of Asthma in Children 5 to 11 Years

Key Components			Recommendation and Level of Evidence			
First, assess severity to decide initial therapy			**Classification of Asthma Severity**			
	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	≤ 2x/month	3-4x/month	> 1x/week, not nightly	Often, 7x/week
		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
		Lung function: FEV_1 or peak flow FEV_1/FVC	Normal FEV_1 between exacerbations > 80% > 85%	> 80% > 80%	60% - 80% 75% - 80%	< 60% < 75%
	Risk	Exacerbations requiring oral steroids	0-1/year	≥ 2/year		
			• Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class. • Relative annual risk of exacerbations may be related to FEV_1.			
	Recommended step for initiating treatment		**Step 1**	**Step 2**	**Step 3**	
			Re-evaluate control in 2-6 weeks and adjust therapy accordingly.			
On follow-up, assess control and step therapy up or down			**Classification of Asthma Control**			
	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	≤ 1x/month	≥ 2x/month		≥ 2x/week
		Short-acting beta$_2$-agonist use for symptoms	≤ 2 days/week	> 2 days/week		Several times/day
		Interference with normal activity	None	Some limitation		Extremely limited
		FEV_1 or Peak Flow	> 80%	60% - 80%		< 60%
		FEV_1/FVC	> 80%	75% - 80%		< 75%
	Risk	Exacerbations requiring oral steroids	0-1x/year	≥ 2x/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.			
	Recommended action for treatment		• Maintain current step • Regular follow-up every 1-6 months • Consider step down if well-controlled ≥ 3 months	• Step up at least 1 step • Re-evaluate in 2-6 weeks • Adjust therapy accordingly		• Consider oral steroids • Step up 1-2 steps • Re-evaluate in 2 weeks

Step approach for asthma management (Use lowest treatment level required to maintain control.)

- Quick relief medication for all patients: Inhaled short-acting beta$_2$-agonist (SABA) as needed for symptoms **[A]**. Intensity of treatment depends on severity of symptoms; up to 3 treatments at 20-minute intervals as needed. Short course of 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.
- Patient education and environmental control at each step.
- Persistent asthma: Daily long-term control therapy **[A]**; consult with asthma specialist step 4 or higher **[D]**; consider consultation at step 3 **[D]**

Intermittent	Mild Persistent	Moderate Persistent		Severe Persistent	
Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**
Preferred Short-acting beta$_2$- agonist as required	**Preferred** Low-dose inhaled corticosteroid **[A]** **Alternative** Cromolyn or Leukotriene receptor antagonist; or Nedocromil; or Theophylline **[B]**	**Preferred** Low-dose inhaled corticosteroid + either a long-acting beta$_2$- agonist, a leukotriene receptor antagonist, or theophylline Or Medium-dose inhaled corticosteroid **[B]**	**Preferred** Medium-dose inhaled corticosteroid + long-acting beta$_2$-agonist **[B]** **Alternative** Medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist or theophylline **[B]**	**Preferred** High-dose inhaled corticosteroid + long-acting beta$_2$-agonist **[B]** **Alternative** High-dose inhaled corticosteroid + either a leukotriene receptor antagonist or theophylline **[B]**	**Preferred** High-dose inhaled corticosteroid + long-acting beta$_2$-agonist + oral corticosteroid **[D]** **Alternative** High-dose inhaled corticosteroid + oral corticosteroid + either a leukotriene receptor antagonist or theophylline **[D]**

Warning for use of Long-acting beta-agonists (LABA). See Black Box Warning:

- Do not use LABA as monotherapy. Use only with an asthma controller such as inhaled corticosteroids (preferably combination product for children).
- Use for the shortest duration possible.
- Only use if not controlled on other drugs.
- Pediatric and adolescent patients who require the addition of a LABA to an inhaled corticosteroid should use a combination product containing both.

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, National Heart, Lung and Blood Institute (www.nhlbi.nih.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors July 2006, 2010, 2012

Michigan Quality Improvement Consortium Guideline

July 2012

Management of Asthma in Youth 12 Years and Older and Adults

Key Components

Recommendation and Level of Evidence

First, assess severity to decide initial therapy

Classification of Asthma Severity

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	≤ 2x/month	3-4x/month	> 1x/week, not nightly	Often, 7x/week
Normal FEV_1/FVC *& 19 years:85%* *20-39 years:80%* *40-59 years:75%* *60-80 years:70%*	Short-acting $beta_2$-agonist use for symptoms	≤ 2 days/week	> 2 days/week, not daily and not > 1/day	Daily	Several times daily
	Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
	Lung function: FEV_1 FEV_1/FVC	Normal FEV_1 between exacerbations > 80% Normal	> 80% Normal	60%-80% Reduced 5%	< 60% Reduced > 5%
Risk	Exacerbations requiring oral steroids	0-1/year	≥ 2/year		
		• Consider severity & interval since last exacerbation. Frequency & severity may fluctuate over time for patient of any severity class. • Relative annual risk of exacerbations may be related to FEV_1.			
Recommended step for initiating treatment		**Step 1**	**Step 2**	**Step 3**	**Step 4 or 5**
		Re-evaluate control in 2-6 weeks and adjust therapy accordingly.			

On follow-up, assess control and step therapy up or down

Classification of Asthma Control

Components of **Control**		*Well-Controlled*	*Not Well-Controlled*	*Very Poorly*
Impairment	Symptoms	≤ 2 days/week	> 2 days/week	Throughout day
	Nighttime awakenings	≤ 2x/month	1 - 3x/week	≥ 4x/week
	Short-acting $beta_2$-agonist use for symptoms	≤ 2 days/week	> 2 days/week	Several times/day
	Interference with normal activity	None	Some limitation	Extremely limited
	FEV_1 or Peak Flow	> 80%	60%-80%	< 60%
Risk	Exacerbations requiring oral steroids	0-1x/year	≥ 2x/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.		
Recommended action for treatment		• Maintain current step • Regular follow-up every 1-6 months • Consider step down if well-controlled ≥ 3 months	• Step up 1 step • Re-evaluate in 2-6 weeks	• Consider oral steroids • Step up 1-2 steps • Re-evaluate in 2 weeks

Step approach for asthma management (Use lowest treatment level required to maintain control.)

- Quick relief medication for all patients: Inhaled short-acting $beta_2$-agonist (SABA) as needed for symptoms **[A]**. Intensity of treatment depends on severity of symptoms; up to 3 treatments at 20-minute intervals as needed. Short course of 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.
- Patient education and environmental control at each step.
- Persistent asthma: Daily long-term control therapy **[A]**; consult with asthma specialist if step 4 or higher **[D]**, or progressive decreased lung function. Consider consultation at step 3 **[D]**.

Intermittent	**Mild Persistent**	**Moderate Persistent**			**Severe Persistent**
Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**
Preferred Short-acting $beta_2$-agonist as required	**Preferred** Low-dose inhaled corticosteroid **[A]** **Alternative** Cromolyn Or Leukotriene receptor antagonist; or Nedocromil; or Theophylline **[B]**	**Preferred** Low-dose inhaled corticosteroid + long-acting $beta_2$-agonist **[A] or** medium-dose inhaled corticosteroid **[A]** **Alternative** Low-dose inhaled corticosteroid + either a leukotriene receptor antagonist **[A]**, theophylline **[B]**, or zileuton **[D]**	**Preferred** Medium-dose inhaled corticosteroid + long-acting $beta_2$-agonist **[B]** **Alternative** Medium-dose inhaled corticosteroid + either a leukotriene receptor antagonist, theophylline **[B]** or zileuton **[D]**	**Preferred** High-dose inhaled corticosteroid + long-acting $beta_2$-agonist **[B]** **and** consider omalizumab for patients who have IgE-mediated allergies **[B]**	**Preferred** High-dose inhaled corticosteroid + long-acting $beta_2$-agonist + oral corticosteroid **[D] and** consider omalizumab for patients who have IgE-mediated allergies **[B]**

Warning for use of Long-acting beta-agonists (LABA). See Black Box Warning:

- Do not use LABA as monotherapy. Use only with an asthma controller such as inhaled corticosteroids (preferably combination product for children).
- Use for the shortest duration possible.
- Only use if not controlled on other drugs.
- Pediatric and adolescent patients who require the addition of a LABA to an inhaled corticosteroid, should use a combination product containing both.

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, National Heart, Lung and Blood Institute (www.nhlbi.nih.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors July 2008, 2010, 2012

Michigan Quality Improvement Consortium Guideline
Management of Diabetes Mellitus

March 2013

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	Periodic assessment	Assessment should include: • Height, weight, BMI, blood pressure **[A]** • Assess cardiovascular risks (smoking, hypertension, dyslipidemia, sedentary lifestyle, obesity, stress, family history, age > 40) • Comprehensive foot exam (visual, monofilament, and pulses) **[B]** • Screen for depression **[D]** • Dilated eye exam by ophthalmologist or optometrist **[B]**, or if no prior retinopathy, may screen with fundal photography **[B]**	• Perform periodic assessment at least annually • Record BP at every visit • In the absence of retinopathy repeat retinal eye exam in 2 years
	Laboratory tests	Tests should include: • A1C **[D]** • Urine microalbumin measurement **[D]** • Serum creatinine and calculated GFR **[D]** • Fasting Lipid Profile **[D]** • Consider TSH and LFTs **[D]**	A1C 2 - 4 times annually based on individual therapeutic goal; other tests at least annually
	Education, counseling and risk factor modification	• 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 DSME[1] **[B]** and include: • Importance of regular physical activity and a healthy diet **[A],** and working towards an appropriate BMI • 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, including recognition of hypoglycemia • 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]** • Self-care of feet **[B]**; preconception counseling **[D]**; encourage patients to receive dental care **[D]**	At diagnosis and as needed
	Medical recommendations	**Care should focus on smoking, hypertension, lipids and glycemic control:** • Medications for tobacco dependence unless contraindicated • Treatment of hypertension using up to 3-4 anti-hypertensive medications to achieve adult target of < 140/80 mmHg **[A]**. Mortality increases if diastolic is < 70. • Prescription of ACE inhibitor or angiotensin receptor blocker in patients with hypertension or albuminuria **[A]**[2] • Statin therapy for primary prevention against macrovascular complications in patients with diabetes who have an LDL ≥ 100 or age ≥ 40 with another CV risk factor **[A]**[3] • Anti-platelet therapy **[A]**: low dose aspirin for adults with cardiovascular disease unless contraindicated. • Individualize the A1C[4] goal[5]. Goal for most patients is 7-8%. Mortality increases when A1C is > 9% [B]. • Assurance of appropriate immunization status (Tdap or Td, influenza, pneumococcal vaccine, Hep B) **[C]**	At each visit until therapeutic goals are achieved

[1] See http://care.diabetesjournals.org/content/vol31/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]**.

[4] A1C 6% = 126 eAG; estimated Average Glucose calculator http://professional.diabetes.org/GlucoseCalculator.aspx

[5] Diabetes Care, Volume 36, Supplement 1, January 2013, S18:21, Table 9; http://care.diabetesjournals.org/content/36/Supplement_1/S11.full.pdf+html

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 Diabetes Association Clinical Practice Recommendations 2013 (www.diabetes.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Michigan Quality Improvement Consortium

Michigan Quality Improvement Consortium Guideline

Outpatient Management of Uncomplicated Deep Venous Thrombosis

Eligible Population	Key	Recommendation and Level of Evidence
Adult patients ≥ 18 years of age Diagnosis of acute DVT, confirmed by duplex ultrasonography or venography. **[A]** No contraindications to anticoagulation or use of low molecular weight heparin (LMWH).	Initial assessment	• Perform initial comprehensive history and physical examination; consider conditions predisposing to DVT such as surgery, trauma, hospital or nursing home confinement, malignant neoplasm, central venous catheter or pacemaker, and neurologic disease with extremity paresis. • 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:** ◦ Pulmonary embolism with hemodynamic or respiratory instability ◦ Extensive iliofemoral thrombus ◦ Known potential for non-compliance ◦ Active bleeding ◦ Severe HTN (diastolic > 110 or symptoms) ◦ Renal clearance <30 mL/min or creatinine >2.5 mg/dL ◦ Thrombocytopenia < 50,000 ◦ History of heparin induced thrombocytopenia
	Initiating and monitoring pharmacologic interventions	• Outpatient therapy is preferred if no contraindications. • Contraindications to warfarin therapy: Absolute: pregnancy, history of **warfarin**-induced skin necrosis 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**[1]. • 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. • For calf-level DVT, maintain warfarin therapy at least 6 weeks to 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.
	Testing/ Monitoring	• Obtain baseline lab values: aPTT, PT/INR, creatinine, 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. usually 2 checks per week in the first 3 weeks of therapy or until stable); then monitor every 4 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).
	Patient education	• **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 contraception/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 **[B]**, beginning as soon as possible of 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.

[1]If warfarin contraindicated, consider a LMWH for the duration of the therapy.

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: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines, February 2012; Venous Thromboembolism Diagnosis and Treatment, Institute for Clinical Systems Improvement, January 2013; and 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. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

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: ◆ Thorough history and physical examination [C], including depression screening, and assessment for coronary artery disease and risk factors ◆ Testing includes: chest X-ray, 12-lead electrocardiogram, lipid profile, CBC, electrolytes, calcium, magnesium, BUN, creatinine, blood glucose, liver function tests, TSH, urinalysis, and 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	Drugs recommended for routine use: ◆ ACE inhibitors in all patients, unless contraindicated[1] **[A]** ◆ Beta-blockade using carvedilol, sustained-release metoprolol, bisoprolol in all stable patients, unless contraindicated[1,2] **[A]** Drugs recommended for use in select patients: ◆ Diuretics and sodium restriction for evidence of fluid retention **[A]** ◆ Spironolactone for patients with 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 due to cough or angioedema, use angiotensin receptor blockers **[A].** ◆ Consider hydralazine and isosorbide dinitrate for patients who cannot tolerate ACE inhibitors or ARBs, or African-American patients who remain symptomatic despite therapy **[A]**.
	Education, counseling and risk factor modification	Educate patient and family regarding: ◆ Careful review of medication regimen with patient and caregivers at hospitalization or other changes in treatment ◆ 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 ◆ Consider referral for evaluation for implantable defibrillator, biventricular pacemaker, ventricular assist device or transplant in patients with LVEF<35%, NYHA Class III-V patients and those with worsening CHF ◆ Consider referral to an advanced heart failure management program ◆ Discuss goals of care, prognosis and advanced directives with all patients

[1] Contraindications include: life-threatening adverse reactions (angioedema or anuric renal failure), pregnancy, hypotensive patients at immediate risk of cardiogenic shock, systolic blood pressure < 80 mm Hg, serum creatinine > 3 mg/dL, bilateral renal artery stenosis, or serum potassium > 5.5 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; D = opinion of expert panel

This guideline lists core management steps. It is based on the 2009 Focused Update: ACCF/AHA Guidelines for the Diagnosis and Management of Heart Failure in Adults: A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines: Developed in Collaboration with the International Society for Heart and Lung Transplantation. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors December 2002; January 2005, 2007, 2009, 2011, 2013

Michigan Quality Improvement Consortium

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
Males ≥ 35 years of age Females ≥ 45 years of age Males and Females age ≥ 18 years of age if risk factors	Risk Assessment	◆ Screening: Initial fasting lipid profile (i.e., total, LDL-C, HDL-C, triglycerides); If in normal range, 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: ◆ Cigarette smoking ◆ Diabetes mellitus ◆ Hypertension (BP ≥ 140/90), or on antihypertensives ◆ HDL-C: < 40 (HDL-C ≥ 60 = negative risk factor) ◆ Family history (first degree) of premature CHD ◆ Age (men ≥ 45 years; women ≥ 55 years)
		CHD Risk Equivalents: ◆ Other clinical forms of atherosclerotic disease (e.g., peripheral arterial disease, abdominal aortic aneurysm, and/or symptomatic carotid artery disease) ◆ CHD and CHD risk equivalents give a > 20% risk of a CHD event within 10 years
	Risk Stratification	◆ **Calculate short-term risk for patients with ≥ 2 risk factors using Framingham projection of 10-year absolute risk [D] (http://cvdrisk.nhlbi.nih.gov/calculator.asp):**
		Categorical Risk / Goal for LDL-C ◆ CHD or ≥ 2 risk factors and 10-year risk: > 10% — < 100 mg/dL ◆ ≥ 2 risk factors and 10-year risk: ≤ 10% — < 130 mg/dL ◆ 0 - 1 risk factor — < 160 mg/dL
	Education and risk factor modification	Educate patient/family regarding Therapeutic Lifestyle Changes (TLC): ◆ Reduce saturated fats and cholesterol **[A]**, increase plant stanols/sterol (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]**.
	Pharmacologic interventions	◆ Therapeutic Lifestyle Changes (TLC) for all. Drug therapy based on the LDL-C level. ◆ Statin therapy based on risks and goals, or if the LDL-C is not at goal by 3 months after TLC have begun in earnest. ◆ Statin therapy for all patients with CHD, CHD risk equivalents, regardless of baseline lipid level. When starting or raising dose, check ALT. ◆ LFT at physician discretion for patients with liver disease or risk factors. ◆ For prolonged myalgias, consider dosage reduction or statin change. ◆ Evaluate and adjust drug therapy every 3 months until goal achieved. If statins not tolerated or ineffective, consider alternate medical therapy.

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, Twelfth Edition, November 2011 (**icsi.org**). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Michigan Quality Improvement Consortium

Michigan Quality Improvement Consortium Guideline

Medical Management of Adults with Hypertension

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

Eligible Population	Key Components	Recommendation and Level of Evidence
Adult patients ≥ 18 years of age. Not pregnant. **Classification based on mean of 2 or more seated BP readings on each of 2 or more office visits.** Normal BP <120/<80 Prehypertension 120-139/80-89 Hypertension: **Stage 1** 140-159/90-99 **Stage 2** ≥160/≥100	Initial assessment	◆ 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 on initial visit plus one or more follow-up visits using regularly calibrated equipment with the appropriate sized cuff and separated by at least 2 minutes with the patients seated and standing,verification in contralateral arm, funduscopic exam, neck exam (bruits), heart and lung exam, abdominal exam for bruits or aortic aneurysm, extremity pulses and neurological assessment. **[D]**[1] ◆ Tests prior to initiating therapy: Potassium, creatinine, glucose, hematocrit, calcium, sodium, urinalysis, lipid panel, EKG. **[D]**
	Patient education and nonpharmacologic interventions	◆ 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 consumption[2]. **[A]** ◆ Consider self BP monitoring. Check accuracy of home measurement device regularly. Home readings are often 5 mmHg lower than office.
	Goals of Therapy	◆ If no other risk factors: target BP <140/90. ◆ Patients with risk factors, including diabetes: target BP <140/80 (<130/80 for patients with kidney disease). **[D]** ◆ Caution: low diastolic or orthostatic symptoms may limit ability to control systolic. Use extreme caution if diastolic is below 60. For diabetics, mortality increases if diastolic is below 70.
	Pharmacologic interventions	◆ Hypertension, **Stage 1** (140-159/90-99): start with thiazide-type diuretics for most patients. ACE-I, BB, and DHP-CCB[3] are first-choice additional agents. Use angiotensin-receptor blockers (ARB) if ACE-I not tolerated. ◆ Hypertension, **Stage 2** (≥160/≥100): consider two-drug combination (thiazide plus ACE-I or DHP-CCB). ◆ In general, diuretics and DHP-CCB 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. ◆ Intensify treatment until treatment 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]**	◆ Prehypertension without other risk factors: annual BP check with lifestyle modification counseling. ◆ Hypertension, **Stage 1**: initiate therapy and recheck within two months 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. ◆ Once BP controlled with medication: recheck at each visit, at least annually. ◆ Check serum potassium and creatinine at least annually for patients on diuretics/ACE-I/ARB.

[1]American Medical Association. Essential Guide to Hypertension: Accurate Blood Pressure Readings (http://mqic.org/pdf/BP_Readings.pdf)

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

[3]ACE-I = angiotensin converting enzyme inhibitor, BB = beta blocker, DHP-CCB = long-acting dihydropyridine calcium channel blocker (e.g. amlodipine, felodipine)

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: The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7), December 2003 (**nhlbi.nih.gov/guidelines/hypertension/**); and Hypertension Diagnosis and Treatment, Institute for Clinical Systems Improvement, November 2012 **(icsi.org)**. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Michigan Quality Improvement Consortium

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	Screening & Diagnosis **[D]**	For patients at increased risk for CKD (e.g., diabetes mellitus, hypertension, family history of kidney disease, etc.) assess for markers of kidney damage: • Measure blood pressure **[A]** • Obtain serum creatinine and estimated GFR[1]. If < 60 mL/min, repeat within 90 days. • Protein-to-creatinine ratio or albumin-to-creatinine ratio (first morning or random spot urine specimen) • Urinalysis, fasting lipid profile, electrolytes, BUN	• Semi-annual blood pressure monitoring; more frequent monitoring if indicated • Monitor GFR every 1-2 years
	Risk Factor Management & Patient Education	• Evaluation and management of comorbid conditions (e.g. diabetes mellitus, hypertension, urinary tract obstruction, cardiovascular disease)[2] • Educate on therapeutic lifestyle changes based on GFR: weight maintenance if BMI < 25, weight loss if BMI ≥ 25, exercise and physical activity, dietary counseling, moderation of alcohol intake, smoking cessation	At each routine health exam
Adults with CKD	Core Principles of Treatment **[D]**	• Review medications for dose adjustment, drug interactions, adverse effects, therapeutic levels • Update vaccines: HBV, influenza, Tdap and Pneumovax • Dietary sodium intake < 2.4 g/d recommended for patients with CKD and hypertension **[A]** • Incorporate self-management behaviors into treatment plan at all stages of CKD **[B]** • Develop clinical action plan for each patient, based on disease stage as defined by the National Kidney Foundation, Kidney Disease Outcomes Quality Initiative (K/DOQI[3]) **[B]**	
		• **Stage 1 (GFR ≥ 90 mL/min):** Monitor GFR annually, smoking cessation, consider ACE and/or ARB therapy, BP goal <130/80, LDL-C goal < 100. Avoid NSAIDs. • **Stage 2 (GFR 60-89 mL/min):** Nephrology referral if GFR decline > 4mL/min/yr, maintain BP and lipid goals as above. • **Stage 3 (GFR 30-59 mL/min):** Nephrology consult if abnormalities of anemia, PTH, VitD, Ca, and phosphorus, or GFR < 45 mL/min. Avoid contrast, if possible. Low-dose ASA allowed. • **Stage 4 (GFR 15-29 mL/min):** Nephrology referral. CKD education classes. Avoid ASA. • **Stage 5 (GFR < 15 mL/min):** Renal replacement therapy.	As indicated

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

[2] Reference MQIC guidelines on diabetes, hypertension, hypercholesterolemia, and obesity (www.mqic.org).

[3] http://www.kidney.org/professionals/kdoqi/

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 Screening for, Monitoring, and Treatment of Chronic Kidney Disease Stages 1 to 3: A Systematic Review for the U.S. Preventive Services Task Force and for an American College of Physicians Clinical Practice Guideline. *Ann Intern Med*. 2012;156:570-581. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Michigan Quality Improvement Consortium

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)	• ***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	• ***Advise*** to quit **[A]**/avoid second-hand smoke.
		• ***Assess*** patient willingness to attempt to quit. **[C]**
		  ◦ The Prochaska and DiClemente's Stages of Change Model:
		  Pre-contemplation, Contemplation, Preparation, Action, Maintenance, Relapse
		• ***Assist:*** Try to move patients along one stage. If ready to quit:
		  ◦ Establish a quit date.
		  ◦ Provide self-help materials.
		  ◦ Offer nicotine replacement therapy[1] (adults only) and/or non-nicotine medications, e.g. sustained release bupropion **[A]** (adolescents and adults).
		  ◦ Recommend a smoking cessation program (e.g. MI Quit Line 1-800-784-8669 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]**:
		  ◦ First week after quit date.
		  ◦ First month after quit date.
			At each periodic health exam, more frequently at the discretion of the physician
			
			Patient may be more receptive to quit during respiratory illness

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 may cause or exacerbate depression. Stopping smoking may affect the pharmacokinetics of certain psychiatric drugs. Clinicians should monitor closely the actions or side effects of psychiatric medications in smokers/tobacco users who are attempting to quit.
- **Smokers taking other medications:** Nicotine withdrawal alters pharmacokinetics of other medications, e.g. beta blockers, warfarin, theophylline.

[1]E-cigarettes not approved as nicotine replacement therapy.

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 VA/DoD Clinical Practice Guideline for Management of Substance Use Disorders (SUD), Department of Veterans Affairs, Department of Defense, 2009 Aug. 158 p. (http://www.healthquality.va.gov/sud/sud_full_601f.pdf); and Treating Tobacco Use and Dependence: 2008 Update - Clinical Practice Guideline, Fiore MC, Jaen CR, Baker TB, et al. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors October 2001, September 2003, 2005, 2007, 2009, 2011, 2013 **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.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Adults 18 years or older	Assessment of Body Mass Index (BMI)	• Measure height and weight, and calculate patient's BMI[1] to determine if patient is overweight or obese, and pattern of weight change **[C].** • If overweight, assess for complicating risk factors: • Hypertension • High triglycerides, high LDL or low HDL • Impaired fasting glucose • Diabetes mellitus • Family history of premature CHD • Presence of atherosclerotic disease • Sleep apnea • Smoking • Assess current eating, exercise behaviors, history of weight loss attempts and psychological factors or medications that contribute to weight gain[2].	At each periodic health exam; more frequently at the discretion of the physician
Patients with BMI ≥ 25	Interventions to promote weight management	**Help your patients establish their own realistic and specific lifestyle goals:** • Help your patient set a 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 choices (such as increasing low-caloric density foods). • Help your patient set a goal for physical activity: at a minimum, more activity than present; ideally 30 minutes of moderate physical activity such as brisk walking most days of the week **[A].** • Recommend weight loss strategies and resources as needed. (**See www.mqic.org/physician-tools.htm.)**	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	**All of the above plus:** • Consider referral to intensive multicomponent behavioral interventions that provide guidance on nutrition, physical activity and psychosocial concerns **[D]**. • 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).	
BMI ≥ 40 or BMI ≥ 35 with uncontrolled comorbid conditions[3]	Surgical treatment	• 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 conditions[3] **[B].** • Evaluate for psychological readiness for surgical intervention and post-surgical lifestyle commitment.	

[1] BMI is an accurate proxy for body fat in average adults but may be misleading in muscular individuals.

[2] Weight gain may be associated with medications: antidiabetics, SSRI and tricyclic antidepressants, atypical antipsychotics, anticonvulsants, beta-blockers and corticosteroids.

[3] Serious comorbidities including: Severe cardiac disease (CHD, pulmonary hypertension, congestive heart failure, and cardiomyopathy); type 2 diabetes; obstructive sleep apnea and other respiratory disease (chronic asthma); hypoventilation syndrome (Pickwickian syndrome); end-organ damage; pseudo-tumor cerebri; hypertension; hyperlipidemia; severe joint or disc disease if interferes with daily functioning

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 the Prevention and Management of Obesity (Mature Adolescents and Adults), Institute for Clinical Systems Improvement, April 2011; United States Preventive Services Task Force Screening for and Management of Obesity in Adults, June 2012; 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, NIH Publication No. 00-4084, October 2000 (www.nhlbi.nih.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Michigan Quality Improvement Consortium

Michigan Quality Improvement Consortium Guideline

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 ≥ 85th percentile	Identify presence of weight related risk factors and complications	**Reinforce Prevention Recommendations** *(See MQIC Prevention and Identification of Childhood Overweight Guideline)* **History and physical exam [D]**: • Pulse and blood pressure, using appropriate technique and cuff size for age • Family history, patient or parental concern about weight, and history of medication use including nutritional supplements • Symptoms of gallbladder disease, diabetes, obstructive sleep disorders, hypothyroidism, weight-related orthopedic problems • Be alert to secondary causes of obesity. If aberrant findings are noted (short stature, hypotonia, hirsutism, hypogonadism, acanthosis nigricans, etc.) then consider genetic, endogenous, or syndrome-associated causes of obesity. **Testing:** Screening lipid profile **Reinforce lifestyle and behavior modifications [D]:** • Focus is avoiding weight gain as the child grows; monitor BMI percentile • Family must be involved • Small, gradual lifestyle changes are recommended • Monitor for the development of risk factors or complications.	• Each periodic health exam, more frequently as case requires • Consider management of childhood obesity as a medium- to long-term intervention
Children 2 years or older with a BMI ≥ 85th-94th percentile with risk factors or complications	Lifestyle intervention with treatment of risk factors and complications as needed	**All of the above, plus:** • 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 a moderate- to high-intensity multidisciplinary approach in the treatment of childhood obesity. **Testing:** AST, ALT, and fasting glucose every two years for children ≥ 10 years of age	
Children 2 years or older with BMI ≥ 95th percentile (obese) with or without risk factors or complications	Weight loss with concomitant treatment of risk factors and complications as needed	**All of the above, plus:** • 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. **Testing:** BUN and creatinine every two years	

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 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 November 2006; June 2008, 2010, 2012

Michigan Quality Improvement Consortium

Michigan Quality Improvement Consortium Guideline

Prevention and Identification of Childhood Overweight and Obesity

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
All children and their parents	Education and prevention of risk	**Age specific prevention messages to promote healthy weight:** **Infant/Toddler:** • Encourage breastfeeding; 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 under age 2 **[D].** **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 or 1%, avoid high-calorie, nutrient-poor beverages (soda, fruit punch, juice drinks); limit intake of 100% juice to < 6 ounces per day. • 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. • Promote physical activity including unstructured play at home, during child care and in the community. **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.	At each periodic health exam
	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 x 703)/inches^2][1] • 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	

[1] See http://apps.nccd.cdc.gov/dnpabmi/calculator.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, 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 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

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	Recommendation and Level of Evidence	

Adults with clinical suspicion or confirmed diagnosis of osteoarthritis	Initial evaluation	• Detailed history (aspirin use, pain control with over-the-counter medications, activity tolerance and limitations)
		• Physical examination
		• Assess gastrointestinal (GI) risk:
		  • 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	

	Non-pharmacologic modalities	Multi-faceted treatment plan should include: • 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, **http://www.arthritis.org/resources/community-programs/**) For select patients: • Assistive devices for ambulation and activities of daily living	
		Pharmacologic Therapy	
	Therapies other than NSAIDs	• **Initial drug of choice:** Acetaminophen at minimum effective dose, lower dose for patients with risk factors for toxicity (hepatic toxicity risk factors, aspirin, warfarin)[2]. Warn patients that many over-the-counter products and prescription analgesics contain acetaminophen and to monitor dose carefully. Reassess and taper as tolerated.	
	NSAID analgesics:	**Low GI risk**	**High GI risk**
		• NSAID • Add PPI[1] if on aspirin, or if risk warrants GI protection	• NSAID plus PPI[1] • 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 PPI[1][D].**
		Use with caution in patients with HTN and stable CV disorders only when the individual clinical benefit outweighs the cardiovascular risk. If aspirin is used daily, COX-2 offers no advantage over NSAID.	
	Other pharmacologic agents	• Nonacetylated salicylate, tramadol, opioids, intra-articular glucocorticoids or hyaluronate, topical lidocaine, methylsalicylate or topical preparations.	

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

[2] Maximum recommended acetaminophen dose from all sources < 4 g/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 and is based on the following sources: The American College of Rheumatology 2012 Recommendations for the Use of Nonpharmacologic and Pharmacologic Therapies in Osteoarthritis of the Hand, Hip, and Knee, Arthritis Care & Research Vol. 64, No. 4, April 2012, pp 465–474 (www.rheumatology.org); American Academy of Orthopaedic Surgeons. Treatment of Osteoarthritis of the Knee (non-Arthroplasty). December 6, 2008; and, Scheiman JM. Summing the Risk of NSAID Therapy. Lancet 2007; 369:1580-1. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Michigan Quality Improvement Consortium

Michigan Quality Improvement Consortium Guideline
Management of Acute Low Back Pain

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	Assessment to identify potential serious pathology **(red flags)**	• **Cauda Equina** (severe or progressive neurologic deficit, recent bowel or bladder dysfunction, saddle anesthesia) • **Cancer** (especially if age > 50; insidious onset; no relief at bedtime or worsening when supine; constitutional symptoms, e.g. fever, unexplained weight loss; male with diffuse osteoporosis or compression fracture) • **Fracture** (especially women age > 50; traumatic injury or onset, cumulative trauma; steroid use history) • **Infection** (more likely with these risks: steroid use history; diabetes mellitus; immune suppression; history UTI or other infection; no relief at bedtime or worsening when supine; HIV; previous surgery; insidious onset; IV drug use; history of TB; severe or progressive neurologic deficit) • **Anticoagulation** • **Recent instrumentation**
	Patients with low risk of serious pathology (no red flags)	**Reassure:** • 90% of episodes resolve within 6 weeks regardless of treatment **[C].** Advise that minor flare-ups may occur in the subsequent year. **Therapy:** • Stay active and continue ordinary activity within the limits permitted by pain. Avoid bed rest **[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. **Referral:** • Before considering surgery refer patient for physiatry consult **[B]**, or manual therapy **[D]**. • If persistent disability at 2 weeks, consider referral for non-invasive therapy for improving flexibility and strength, **not** modalities such as heat, traction, ultrasound, TENS. • If persistent disability at 6 weeks, consider referral to a program that provides a multidisciplinary approach for back pain, especially if psychosocial risks to return to work exist. • Surgical referral usually not required. **Medication Strategies:** • **Prescribe medications on a time-contingent basis, not pain-contingent basis.** • No drug categories have been proven to be more effective in pain control, consider side-effect profiles. • Opiates are generally not indicated as first-line treatment. Although opiates relieve pain, early opiate use may be associated with longer disability, even after controlling for case severity [D]. • If prescribed, opiate use should be limited to short-term (i.e. two weeks). **Testing:** • Diagnostic tests or imaging usually not required. Consider imaging if red flags are present, or if no improvement after 6 weeks.
	Patients with high risk of serious pathology (red flags and high index of suspicion)	• Cauda Equina syndrome or severe or progressive neurologic deficit — Refer for emergency studies and definitive care **[C].** • Spinal fracture or compressions — Plain LS spine X-ray **[B]**. After 10 days, if fracture still suspected or multiple sites of pain, consider either bone scan **[C]** or referral **[D]** before considering CT or MRI. • Cancer or infection — CBC, urinalysis, ESR **[C]**. If still suspicious, consider referral or seek further evidence (e.g. bone scan **[C]**, other labs - negative plain film X-ray does not rule out disease).

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 Adult Acute and Subacute Low Back Pain Guideline, Institute for Clinical Systems Improvement, 2012 (**www.icsi.org**). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

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	■ Calculate FRAX (http:/www.**shef.ac.uk/FRAX/index.jsp**) to assess fracture risk and to determine need for BMD testing. Record result. ■ Assess fracture risk and other risk factors: • Age • Sex • Weight (kg) • Height (cm) • Previous fracture • Parent fractured hip • Current smoking • Glucocorticoids • Rheumatoid arthritis • Secondary osteoporosis [type 1 diabetes, osteogenesis imperfecta in adults, untreated long-standing hyperthyroidism, hypogonadism or premature menopause (<45 years), chronic malnutrition, or malabsorption, and chronic liver disease) • Alcohol 3 or more units per day • Femoral neck BMD (g/cm^2) • Calcium or Vitamin D deficiency • Depo-Provera use • Family history of osteoporosis • Transplant or pending organ transplant • Drugs to treat malignancy • Inadequate physical activity ■ Assess for loss of height (>1.5 inches) and back pain. ■ Bone mineral density (BMD) testing using DXA for white women >65 years or men/women with similar or higher fracture risk (>9.3%/10 years by FRAX). The USPSTF recommends this service for women. ■ CT scan for screening is not recommended.	• Adult height assessments at periodic well exams
	Core Principles of Treatment and Prevention	**Regardless of risk factors:** • Dietary calcium 1200 mg/d and 800 - 1000 IU vitamin D_3 **[B]** • Weight-bearing exercise **[A]** • Address modifiable risk factors above	• Repeating DXA within 8 years does not improve prediction of fractures
Patients requiring therapy to reduce high risk of fracture	Patient Selection for Pharmacological Management Based on Risk	• Treat patients on corticosteroid therapy with a T-score ≤ -1.0. **[A]** • Treat patients with a history of an osteoporotic fracture or fracture of the hip or spine. **[A]** • Patients without a history of fractures but with a T-score of -2.5 or lower. **[A]** • Patients with a T-score between -1.0 and -2.5 if FRAX major osteoporotic fracture probability is ≥ 20% or hip fracture probability is ≥ 3%. **[A]**	
	Pharmacological Management	• Consider oral bisphosphonate, generic if available[1]. • If not tolerated or ineffective, consider other agents. • 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.	
Patients with fracture	Diagnosis and Treatment	■ Calculate FRAX and record result: • If >20% prediction, prescribe a drug to treat osteoporosis (e.g. bisphosphonate) • If <20% prediction, obtain a BMD if not done in the past year. Re-calculate FRAX with BMD result, and treat as above. ■ Fall prevention	

[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).

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 The Guide to Clinical Preventive Services 2010-2011, Recommendations of the U.S. Preventive Services Task Force (www.preventiveservices.ahrq.gov); and the Diagnosis and Treatment of Osteoporosis Guideline, Institute for Clinical Systems Improvement, 2011 (www.icsi.org). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Michigan Quality Improvement Consortium

Michigan Quality Improvement Consortium Guideline

Acute Pharyngitis in Children 2 - 18 Years Old

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

Eligible Population	Key Components	Recommendation and Level of Evidence
Children 2-18 years old with pharyngitis and / or tonsillitis	Possible Etiologies	• Viruses account for 70-80% of pharyngitis in children. Group A β-hemolytic Strep (GABHS) accounts for 15-30%. • Less common etiologies: Groups C and G Strep, Ebstein-Barr Virus, N. gonorrhoeae, C. diphtheriae.
	Diagnosis	• Factors favoring GABHS: 5-15 years old, winter or early spring, Strep exposure, fever, sudden onset sore throat, severe pain on swallowing, absence of cough, tonsillitis, tonsillar exudate, beefy red swollen uvula, palatal petechiae, tender enlarged anterior cervical nodes, scarletiniform rash. • Signs and symptoms of Strep vs. non-Strep overlap broadly. Suspected Strep must be confirmed by testing. • Obtain either Strep culture or Rapid Strep Antigen testing, swabbing both tonsils and posterior pharynx. [Note: In most cases, "Strep culture" is all that is needed (GABHS vs. No Strep), rather than complete "Throat culture".] • Negative Rapid Strep testing should be validated by Strep culture.
	Treatment of GABHS	• Counsel re: contagion, hand washing, hygiene, and need to complete full 10-day antibiotic regimen. • Provide symptomatic treatment: rest, non-acidic fluids, soft foods, salt water gargles, lozenges and analgesics (no aspirin < 21 years old). • Decision to treat with antibiotics should be based on test results. If clinical judgment is to initiate treatment prior to culture results, treatment should be discontinued if culture is negative. • If asymptomatic after 10-day treatment, there is no need to re-culture or re-treat (except in patients with history of Rheumatic Fever). Preferred Treatment for Strep Pharyngitis (**all require 10 days** to reduce Rheumatic Fever risk **[D]**, except Azithromycin): • Penicillin V: Children: 250 mg BID-TID x 10 days; Adolescents: 250 mg QID or 500 mg BID x 10 days. • Amoxicillin: 50 mg/kg once daily x 10 days (max = 1000 mg/day). • Benzathine Penicillin G IM x 1: <27 kg: 600,000 U; ≥ 27 kg: 1.2 million U. • If allergic to Penicillin: Cephalexin 20 mg/kg/dose BID x 10 days (max = 500 mg/dose), or Azithromycin 12 mg/kg once daily x 5 days (max = 500 mg/day).
	Clinical Failure	• Child should be seen if failure to respond clinically after 24-48 hours of treatment, or symptoms worsen. • Consider: Poor compliance, viral etiology in Strep carrier (would explain positive culture), antibiotic resistance, Infectious Mononucleosis (can co-exist with GABHS), peritonsillar or retropharyngeal abscess (requires prompt ENT evaluation).
Rheumatic Fever Considerations		• Risk of Rheumatic Fever is greatly reduced if antibiotics started within 9 days after symptoms began (allowing time to check culture results prior to initiating antibiotics). • There is no need to test or treat asymptomatic household contacts unless the index case has Rheumatic Fever.

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 is based on several sources, including: Clinical Practice Guideline for the Diagnosis and Management of Group A Streptococcal Pharyngitis: 2012 Update by the Infectious Diseases Society of America; and the American Heart Association: Prevention of Rheumatic Fever and Diagnosis and Treatment of Acute Strep Pharyngitis (Circulation 2009; 119:1541-1551; www.ahajournals.org/cgi). Individual patient considerations and advances in medical science may supersede or modify these recommendations.

Approved by MQIC Medical Directors Dec. 2003; Nov. 2006; Jan. 2007, 2009, 2011, 2013

Michigan Quality Improvement Consortium

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	Assessment	• Perform thorough history (including tobacco use status **[A]**) and physical exam • Assess the likelihood of uncomplicated acute bronchitis using the following items: - Acute respiratory infection (ARI) manifested predominantly by cough, with or without sputum production lasting no more than 3 weeks - No clinical evidence of pneumonia, not immunocompromised - Common cold, reflux esophagitis, acute asthma, or exacerbation of COPD have been considered - Consider other diagnoses if cough persists greater than 3 weeks
	Diagnosis	**Clinical Information and Testing:** • Presumed diagnosis of acute bronchitis: - 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]** • **Purulent sputum is not predictive of bacterial infection and by itself is not an indication for a chest x-ray** • Chest x-ray can be considered if **[B]**: - Heart rate **>** 100 beats/min - Respiratory rate **>** 24 breaths/min - Oral temperature **>** 38° C (100.4° F) - Lung examination suggestive of focal consolidation
	Treatment	•**Avoid antibiotics [A]** • Symptomatic treatment only. • Beta$_2$agonist bronchodilators should not be routinely used to alleviate cough. In select patients with significant wheezing, short-term treatment with beta$_2$agonist bronchodilators may be useful **[C]** • Antitussive agents can be offered for short-term symptomatic relief of coughing **[C]** • Mucolytic agents are not recommended (no consistent favorable effect) **[D]**
	Education and counseling	**Educate patient/family regarding:** • **Use of antibiotics is not recommended [A]** • Condition is a self-limited respiratory disorder • Inform patient that cough may last for 3 weeks • Rest and increase oral 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 Antibiotics for acute bronchitis (Review), Smith SM, Fahey T, Smucny J, Becker LA, The Cochrane Collaboration, 2012, Issue 4; and Inhaled corticosteroids for stable chronic obstructive pulmonary disease (Review), Yang IA, Clarke MS, Sim EHA, Fong KM. The Cochrane Collaboration, 2012, Issue 7; and, 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 advances in medical science may supersede or modify these recommendations.

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