# Physician/Clinic Collaborative Practice Agreement

Effective October 1, 2010, Connecticut Senate Bill 428 (PA 10-117) extends to all settings and medical conditions the opportunity for licensed pharmacists to enter into a patient-specific collaborative drug therapy management agreement with licensed physicians. Pharmacists may participate in the practice of managing, modifying, initiating, and refilling drug therapy according to a written protocol between a specific pharmacist and the physician(s) responsible for the patient's care.

The following collaborative practice agreement, between (pharmacist) and (physician) describes the clinical privileges granted to (pharmacist) in compliance with the Connecticut Pharmacy Practice Act. By signing this document, (physician) enters into this agreement.

This written agreement outlines the process and procedures for collaborative patient care for hypertension management. This agreement will be reviewed at least annually by (physician) and Physician/Clinic .

COLLABORATIVE PRACTICE AGREEMENT APPROVED BY:

| | |
|---|---|
| _____ | _____ |
| , RPh | (Physician) |
| Participating Pharmacist | Consulting Physician, Medical Director |

DATE OF IMPLEMENTATION:

DATES OF ANNUAL REVIEW COMPLETED:

**I. PURPOSE**

The purpose of this agreement is to optimize patient outcomes in the areas of hypertension by integrating medication therapy management into the care of patients via a collaborative practice agreement between a pharmacist and a physician.

**II. PATIENT POPULATION**

This collaborative practice agreement will apply to all patients referred to (Pharmacist) by their referring primary care physician.

**III. TRAINING**

Each participating pharmacist, pharmacy student or pharmacy resident will complete the necessary training prior to providing any CDTM services.

Procedures for all activities including provider roles and responsibilities are detailed in the Hypertension Protocols.

**IV. PROCEDURES**

In order to enhance patient care, (Pharmacist) is given authority to implement, modify, refill or discontinue drug therapy that have been prescribed for patients at Physician/Clinic when appropriate. Additionally, this written agreement authorizes (Pharmacist) to order associated laboratory test and administer drugs per protocols attached to the aforementioned patient population.

New prescriptions and refills will be transmitted electrically to the patient specified pharmacy under the referring physician's name.

This agreement does not authorize (Pharmacist) to implement, modify, refill, administer or discontinue drug therapy that does not pertain to hypertension treatment. Laboratory tests not associated with aforementioned disease states may not be ordered per this written agreement. If additional medication therapy management or laboratory tests are needed, for disease states other than hypertension, a request will be presented to the authorizing physician and only implemented if written approval from that authorizing physician is granted.

**V. GUIDELINES FOR REFERRAL**

The provider(s) at Physician/Clinic may refer any patient:

- With uncontrolled hypertension
- Recently diagnosed with hypertension
- Receiving multiple medications and carrying a hypertension diagnosis
- Experiencing an adverse effect secondary to drugs used to treat hypertension
- Having difficulty understanding and/or adhering to their hypertension medication regimen

Patient may self-refer. Referrals are made by selecting the medication therapy management option on the check-out sheet.

**VI. CLINIC VISITS**

All care for the patient(s) will take place at the Physician/Clinic. Patients may be scheduled and seen on the same day as referring provider visits or on separate days.
All no shows will be handled according the Physician/Clinic "no show" policy.

Patients who are referred for MTM services will be followed by the pharmacist until the patient has met their treatment goals. After meeting their identified treatment goals, the patient may be referred back to the (physican) and will receive an annual comprehensive medication review by (Pharmacist).

**VII. QUALITY ASSURANCE**

This protocol will be reviewed annually by (Pharmacist), physician providers, and Physician/Clinic.

**Clinical activities performed by (Pharmacist) at each visit per this written protocol:**

***I. Patient Assessment***

- Review demographics and reason for referral
- Review past medical history to include: social/recreational drug use, recent hospitalization, illnesses, surgical procedures, injuries, pregnancies and deliverers as well as historical prescription drug therapy
- Review allergies and adverse events
- Review current nutritional status to include food/dietary restrictions/needs
- Review of vital signs to include blood pressure, heart rate, respiratory rate, and temperature

***II. Drug Therapy Assessment***

- Assess current and past medication experiences
    - General attitude towards medications
    - Patients' expectation of therapy
    - Patients' concerns related to therapy
    - Patients' understanding of therapy
    - Cultural, religious and/or ethical issues influencing willingness to take medications
    - Description of medication-taking behavior

- Perform medication reconciliation at all patient visits
- Review each medication for appropriateness of use to include indication, effectiveness, safety and adherence. Particular attention will be given to medications use to treat hypertension.

***III. Pharmaceutical Plan of Care***

- Identify individualized goals of therapy for hypertension per attached protocols
- Resolve any drug therapy problems associated with hypertension
- Identify any therapeutic alternatives for the treatment of hypertension that may be used
- Identify any additional drug therapy problems, changes or interventions not associated with the aforementioned disease states that may need to be addressed
- Implementation, modification, and/or discontinuation of drug therapies used to treat hypertension in accordance with the attached written protocol
- Order laboratory test as needed for assessing or monitoring of drug therapy per established protocol
- Establish monitoring parameters and time frame for follow-up

***IV. Terms and conditions under which hypertension drug therapy may be implemented, modified or discontinued in accordance with treatment protocols***

- Duplicate therapy
- Treating avoidable adverse drug reaction
- Untreated medical condition
- Preventative or prophylactic

- Synergistic/potentiating
- More effective drug available
- Drug-Drug interaction
- Allergic reaction or adverse drug reactions
- Contraindications present
- Drug-Disease interaction
- Cost effectiveness
- Patient prefers not to take or cannot take due to pill burden or size
- Drug product not available

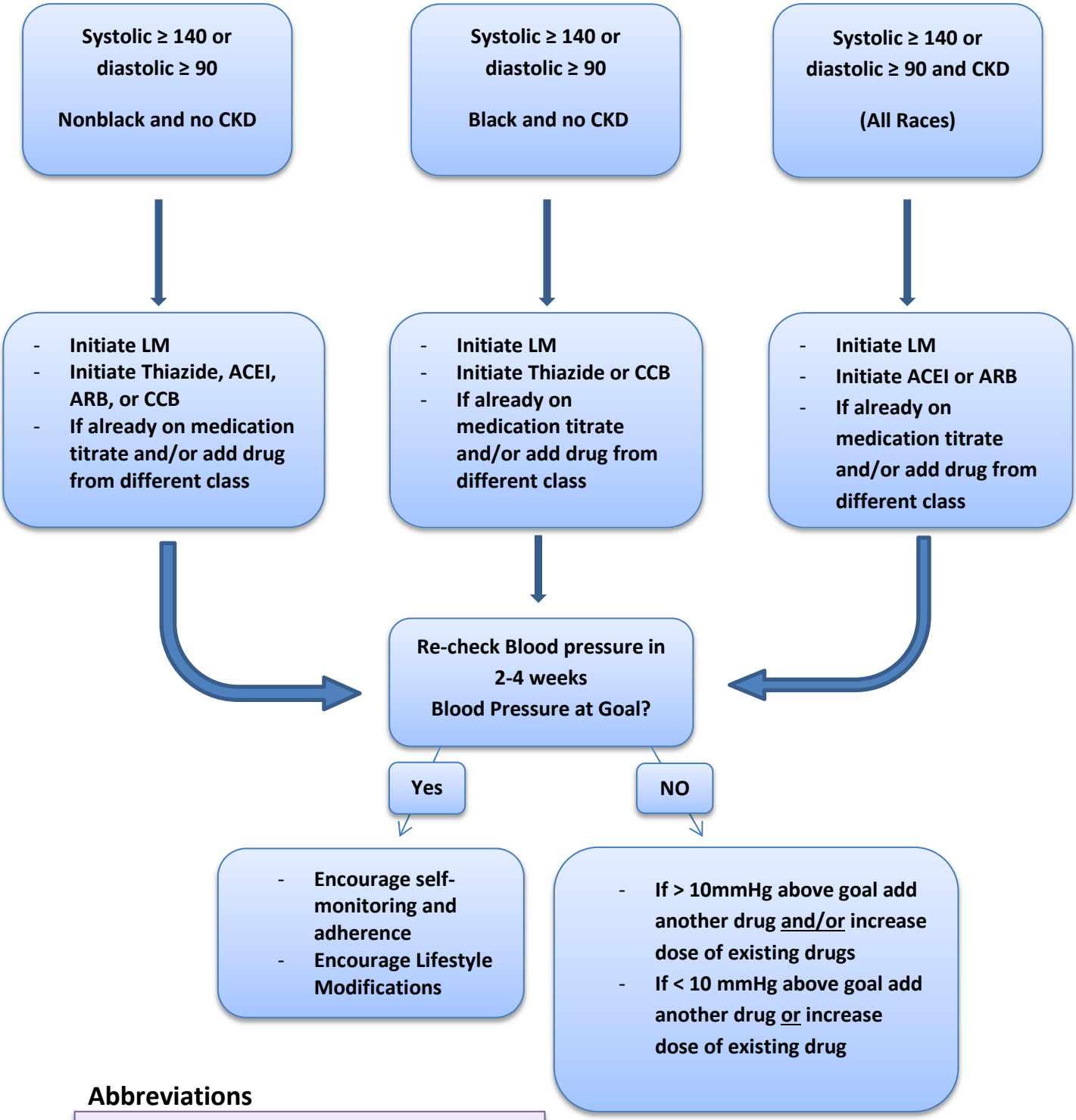
***V. Conditions and events upon which (Pharmacist) is required to notify the primary care physician:***

- In instances where drug therapy is discontinued, the treating physician will be notified no later than twenty-four hours from the appointment.
- Patients will be referred to other appropriate health providers when:
  - New medical issues requiring intervention are detected
  - The patient's medical needs are more complex than can be managed by medication therapy management intervention

***VI. Documentation:***

- All pharmaceutical care services along with any additional recommendations to be reviewed by referring physician will be documented in the patient's electronic medical record under the Medication Therapy Management Note
- A copy of the referral and the collaborative practice agreement will be scanned into the patient's medical record
- (Pharmacist) shall report at least every thirty days to the referring physician regarding the patient's drug therapy management.
- A billing encounter form will be completed for each patient. The encounter form will indicate: patient's diagnosis, level of service preformed, and a listing of other services preformed (education, point of care testing, etc).

# Hypertension Protocol




## Abbreviations

LM = Life style Modifications

ACEI = Angiotensin Converting Enzyme Inhibitor

ARB = Angiotensin II Receptor Blocker

CCB = Calcium Channel Blocker

BB = Beta Blocker

# Lifestyle Modifications

| Modification | Recommendation | Approximate SBP Reduction |
|---|---|---|
| Weight Reduction | Maintain normal BMI (18.5-24.9 kg/m2) | 5-20 mm Hg/10kg |
| DASH Diet (Diet Approach to Stop Hypertension) | Consume a diet rich in fruits, vegetables, and low fat dairy products with a reduced content of saturated and total fat | 8-14 mm Hg |
| Dietary Sodium Restriction | Reduce Sodium intake to no more than 2.4 g sodium per day | 2-8 mm Hg |
| Physical Activity | Engage in 30 mins of aerobic exercise for most days of the week | 4-9 mm Hg |
| Moderation of alcohol consumption | Limit alcohol consumption to 2 drinks per day in men and 1 drink per day in women | 2-4 mm Hg |

## Recommendations

1. If patient has Diabetes, consider use of ACEI/ARB to protect kidneys.
2. If Systolic ≥ 160 mm Hg or Diastolic ≥ 100 mm Hg, consider initiating 2 medications from different classes
3. Check Serum Creatinine on follow up if ACEI or ARB was initiatied
    a. If Scr has increased 30-50% from baseline, halve the dose and recheck in 7-10 days.
    b. If SCr has increased by more than 50% from baseline, discontinue ACEI or ARB.

## Labs

1. BUN/SCr
2. Chem 7

# Dosage for Antihypertensive Medications

| *Class* | Drug | *Starting Dose* | *Maximum Dose* | *Dose Limitations (max dose)* |
|---|---|---|---|---|
| **Thiazides** | Chlorthalidone (Thalitone) | 12.5 mg daily | 25 mg daily | **Severe Renal Impairment (SCr >2.5):** should not be used |
| | Hydrochlor-thaizide (HCTZ, Microzide) | 12.5 mg daily **Geriatrics:** 12.5-25 mg daily | 50 mg daily | **Renal Impairment (CrcL < 15 mg/dL):** should not be used |
| **ACE Inhibitors** | Ramipril (Altace) | 2.5 mg daily | 20 mg daily | **Renal Impairment:** 1.25-5 mg daily |
| | Captopril (Capoten) | 25 mg BID – TID | 450 mg daily | **Renal Impairment**: reduce initial dose |
| | Benazepril (Lotensin) | 10 mg daily | 80 mg daily | **Diuretic:** discontinue diuretic prior to starting benazepril, may resume if BP remains uncontrolled or initially 5 mg daily **Renal Impairment (CrCl < 30 mg/dL):** 5-40 mg daily |
| | Lisinopril (Prinivil & Zestril) | 10 mg daily | 80 mg daily | **Renal Impairment:** • **(CrCl 10-30 mg/dL)** - initially 5 mg daily; MAX 40 mg daily • **(CrlCl <10 mg/dL )** - initially 2.5mg dialy; MAX 40 mg daily |
| | Enalapril (Vasotec) | 2.5 mg BID | 20 mg BID | **Renal Impairment (CrCl < 30 mg/dL):** reduce initial dose (2.5 mg daily) |
| **ARBs** | Losartan (Cozaar) | 50 mg daily **Volume-depleted patients:** 25 mg daily | 100 mg daily | **Hepatic Impairment:** initially 25 mg daily |
| | Valsartan (Diovan) | 80-160 mg daily | 320 mg daily | |
| | Irbesartan (Avapro) | 150 mg daily **Volume Depleted Patients:** 75 mg daily | 300 mg daily | |
| | Olmesartan (Benicar) | 20 mg daily **Geriatric:** 5-10 mg daily | 40 mg daily | |
| | Candesartan (Atacand) | 16 mg daily (1-2 divided doses) | 32 mg daily (1-2 divided doses) | **Volume Depleted Patients:** Consider correcting volume before starting therapy if possible and starting with a lower dose (4-8 mg daily). |
| **Beta Blockers** | Atenolol (Tenormin) | 50 mg daily **Geriatric:** 25 mg daily | 100 mg daily | **Hemodialysis:** 25-50 mg after each session **Renal Impairment:** **(CrCl 15-35 mg/dL) -** 50 mg daily **(CrCl <15 mg/dL)-** 25 mg daily |

| | | | | |
|---|---|---|---|---|
| | Metoprolol Tartrate (Lopressor) | 25-50 mg BID | 200 mg BID | **Hepatic Impairment:** slow dose titration suggested |
| | Metoprolol Succinate (Toprol XL) | 25-100 mg daily | 400 mg daily | **Hepatic Impairment:** slow dose titration suggested |
| | Carvedilol (Coreg) | 6.25 mg daily | 25 mg BID | **Hepatic Impairment:** 20% reduction in initial dosage |
| | Labetalol (Trandate) | 100 mg BID | 400mg BID | **Hepatic impairment:** dosage adjustments may be needed |
| **Calcium Channel Blockers** | Amlodipine (Norvasc) | 5 mg daily | 10 mg daily | **Hepatic impairment:** 2.5 mg daily<br>**Fragile, elderly:** 2.5 mg daily |
| | Nifedipine (Adalat) | 30-60 mg daily | 120 mg daily | |
| | Diltiazem (Cardizem) | 120-240 mg daily | 480 mg daily | **Simvastatin:** 240 mg daily |
| | Diltiazem (Dalita) | 120-240 mg daily | 540 mg daily | |
| | Verapamil (Iosptin) | IR: 80 mg TID<br>XR: 180 mg daily<br>Geriatrics:<br>IR: 40 mg TID<br>XR: 100 mg daily | IR: 480 mg daily<br>XR: 240 mg BID | **Hepatic Impairment: 20-50% dosage reduction** |
| **Other** | Hydralazine (Apresoline) | 10 mg QID | 300 mg daily | **Renal Impairment: increase dosing interval to every 8-12 hrs.** |
| | Clonidine (Catapress | 0.1 mg transderm patch daily<br>0.1 mg BID | 0.6 mg transderm patch daily<br>2.4 mg daily | **Increase by 0.1 mg/day at weekly intervals**<br>**Renal Impairment: dosage adjustment based on degree of renal impairment** |
| | Methyldopa (Aldomet) | 250 mg BID - TID | 3000 mg daily | **For treatment of hypertension in pregnant patients, only**<br>**Hemodialysis: 250 mg following session**<br>**Renal Impairment:**<br>**• GFR > 50 ml/min dosage interval to every 8 hours**<br>**• GFR 10-50 ml/min dosage interval every 12 hours**<br>**• GFR < 10 ml/min dosage interval every 24 hours** |
| | Spironolactone | 50 mg daily | 400 mg daily | **Hepatic Insufficiency: 100-400 mg daily**<br>**Renal Impairment:**<br>**• GFR > 50 ml/min dosing interval 6-12 hrs**<br>**• GFR 10-50 ml/min dosing interval 12-24 hrs**<br>**• GFR < 10 ml/min should not be used** |
| **Combination** | HCTZ/ Triamterene (Dyazide) | 25/37.5 mg daily | 25/37.5 mg daily | **Renal Impairment: use is contraindicated in patients with anuria** |
| | Atenolol/ | 50/25 mg | 100/50 | **Renal Impairment:** |

| | | | | |
|---|---|---|---|---|
| | Chlorthalidone | daily | mg daily | • **(CrCL 15-35 mg/dL)- 50/25 mg daily**<br>• **(CrCL <15 mg/dL)- 50/25 daily** |
| | Lisinopril/HCTZ (Zestoretic, Prinzide) | 10/12.5 mg daily | 20/25 mg daily | **Renal Impairment (CrCl < 30 ml/min): should not be used** |
| | Benazepril/HCTZ (Lotensin HCT) | 10/12.5 mg daily | 20/25 mg daily | **Renal Impairment (CrCl < 30 ml/min): should not be used** |
| | Amlodipine/ Benazepril (Lotrel) | 2.5/10 mg daily<br>Geriatric: 2.5/10 mg daily | 10/40 mg daily | **Renal Impairment (CrCl < 30 ml/min): should not be used**<br>**Hepatic Impairment: 2.5/10 mg daily** |
| | Aliskiren/ Valsartan (Valturna) | 150/160 mg daily | 300/320 mg daily | |
| | Enalapril/HCTZ | 5/12.5 mg daily | 10/25 mg daily | **Renal Impairment (CrCl < 30 ml/min): should not be used** |
| | Losartan/HCTZ | 50/12.5 mg daily | 100/25 mg daily | **Renal Impairment (CrCl < 30 ml/min): should not be used** |
| | Valsartan/HCTZ (Diovan/HCT) | 160/12.5 mg daily | 320/25 mg daily | **Renal Impairment (CrCl < 30 ml/min): should not be used** |
| | Olmesartan/ HCTZ Benicar HCT | 20/12.5 mg daily | 40/25 mg daily | **Renal Impairment (CrCl < 30 ml/min): should not be used** |