RCHC/RCCO

Sharing Promising Practices: WCHC Hypertension Control

Categories: ☒ Clinical Practice ☐Operations ☐Compliance ☐ Finance

Aim:

Improve Blood Pressure control among hypertensive patients. WCHC has seen an increase of 10%, from 61.4% in 2011 to 71.0% in 2015 (determined via UDS data).

Target Population:

Adult patients between 18 to 85 with a diagnosis of Hypertension

Promising Practice Overview:

WCHC increased Hypertensive Control rates from 61% in 2011 to 71% in 2015 (UDS data) by implementing the following changes:

- Adding a repeat BP test at the end of the visit for patients with elevated BP at intake; emphasizing BP awareness in EHR.
- Training patient care team to avoid clinical inertia and act on elevated BP every time
- Training patient care team to do monthly reviews of BP lists and outreach
- Providing support classes and groups for HTN control and lifestyle at Forestville Wellness Center
- Instituting a Provider Performance Incentive with HTN as a Quality Measure metric

Measures:

- Adequately control (BP<140/90) patients between the ages of 18 to 85 with a diagnosis of hypertension
- Utilize clinical practice guidelines for hypertension
- Build awareness for ancillary BP services such as Forestville Wellness Center.

Pre-existing infrastructure:

WCHC had a pre-existing infrastructure that assisted with controlling Hypertensive BP rates:

- Patient Care Team
    - Monthly BridgeIT reports for each care team
        - Includes HTN list with last blood pressure in control based on age and diagnosis

  - Network of support to assist with BP control including:
    - RN Case Management
    - Behavioral Health Support
    - Forestville Wellness Center
    - Care Groups
- HTN Clinical Practice Guidelines
  - Included in Companion Documents
- Tableau Dashboard
  - Data visualization dashboard that aggregates various clinical measures
  - Ability to drill down into outcomes, control percentage, and patients in numerator and denominator
  - Identifies specific patients for outreach
  - Allows for Provider comparisons and encourages healthy competition
- Forestville Wellness Center
  - Collaborative community wellness center for WCHC patients
  - Focus on educating and supporting patients in maintaining a healthy lifestyle

Changes:

WCHC made the following changes to improve blood pressure control and awareness:

- **EHR**
  - Encouraged MA/Care team to enter the exact numbers of the blood pressure reading (i.e. 142,138..etc) instead of rounding (i.e. 140/90)
    - MA Training Protocols and "Measure Up Pressure Down" Videos included in Companion Documents
  - If blood pressure is elevated, to put "Elevated Blood Pressure" in the Chief Complaint area
    - This helps to get the attention of the provider who otherwise may not notice the vitals, which are buried in the progress note view
- **Forestville Wellness Center- BP Support Classes**
  - Primary Care staff utilizes Tableau dashboard to target specific populations and recommend FWC classes for HTN control
  - Variety of High Blood Pressure resources made available at FWC, including:
    - Yoga Basics Group
    - Medical Qigong Group
    - Beyond Stress Group
    - HeartMath Consult
    - Integrative Health Consult
  - Eliminated need for formal referrals to FWC and introduced friendly "RX Pads"
    - "RX Pads" contain information regarding FWC and the programs offered
    - Able to be utilized by all members of the staff for referring patients

- Emphasis on educating all levels of staff regarding programs and services provided by FWC
  - FWC “advertising” during staff meetings
- FWC patients are given the opportunity for direct provider access during any class
  - Basic verbal assessment conducted with each patient before every class

- **Medical Provider Performance Bonus System**
  - Monetary incentive program for WCHC providers based on a weighted score and a variety of metrics
    - Includes Quality Improvement Measures with a QI Clinical Measure for UDS HTN Control (70%)
      - Quality Improvement Measures account for 20% of Total Score
- **Patient Care Team**
  - Encourage team to address blood pressure issues right away, with a variety of methods:
    - Have patient return for a MA BP recheck
    - Increase medication
    - Refer to anxiety class
    - Encourage increased exercise
    - Refer to weight loss BH support
  - Encouraging utilization of care team specifically for blood pressure control and improvement
  - Focus on HTN lists within monthly BridgeIT reports to review with care team
    - Follow up with phone calls and outreach
- **Clinical Office Care**
  - If blood pressure for intake test is elevated, perform a second test at the end of the visit
    - The best blood pressure of the two should be the one placed into the EHR for the visit
  - Utilize WCHC clinical practice guidelines for hypertension
  - BP Control Infographic displayed on Apple TVs in exam and waiting rooms.
    - Instead of a rigid template, a flexible outline is provided for staff to work within
  - Quick impromptu video “interviews” with high performing HTN Providers, regarding their methods, taken and imbedded into dashboard

Conclusions:

- WCHC has improved hypertension control from **61% in 2011 to 71% in 2015** (UDS data) as a direct result of WCHC focus on HTN
- All HTN training documentation and protocols ported to dashboard for new staff clinical orientation

- Embrace and utilization of FWC resources by all members of primary care support staff
- Will continue to explore new methods for HTN control, including loaning out blood pressure monitors and implementing further RN level training

Companion Documents:

- RCHC Clinical Guideline for HTN Control
    - WCHC referenced RCHC clinical guidelines but choose to emphasize MA retraining for proper BPs, abnormal BP repeats, and incentivizing rather than focusing on RX recommendation/titration.
    - Included is the most recent 2016 revision, still in the process of being updated

- The Hypertension MA Training Guides used by West County Health Centers are available on the RCHC Portal under Population Health and Care Innovation (http://www.rchc.net/members/).

- MA Training Protocols are available under:
  PROGRAM: Evidence Based Care->Hypertension->Training ->MA Training

- Measure Up Pressure Down Videos are available under:
  PROGRAM: Evidence Based Care->Hypertension->Training ->Measure Up Pressure Down Video

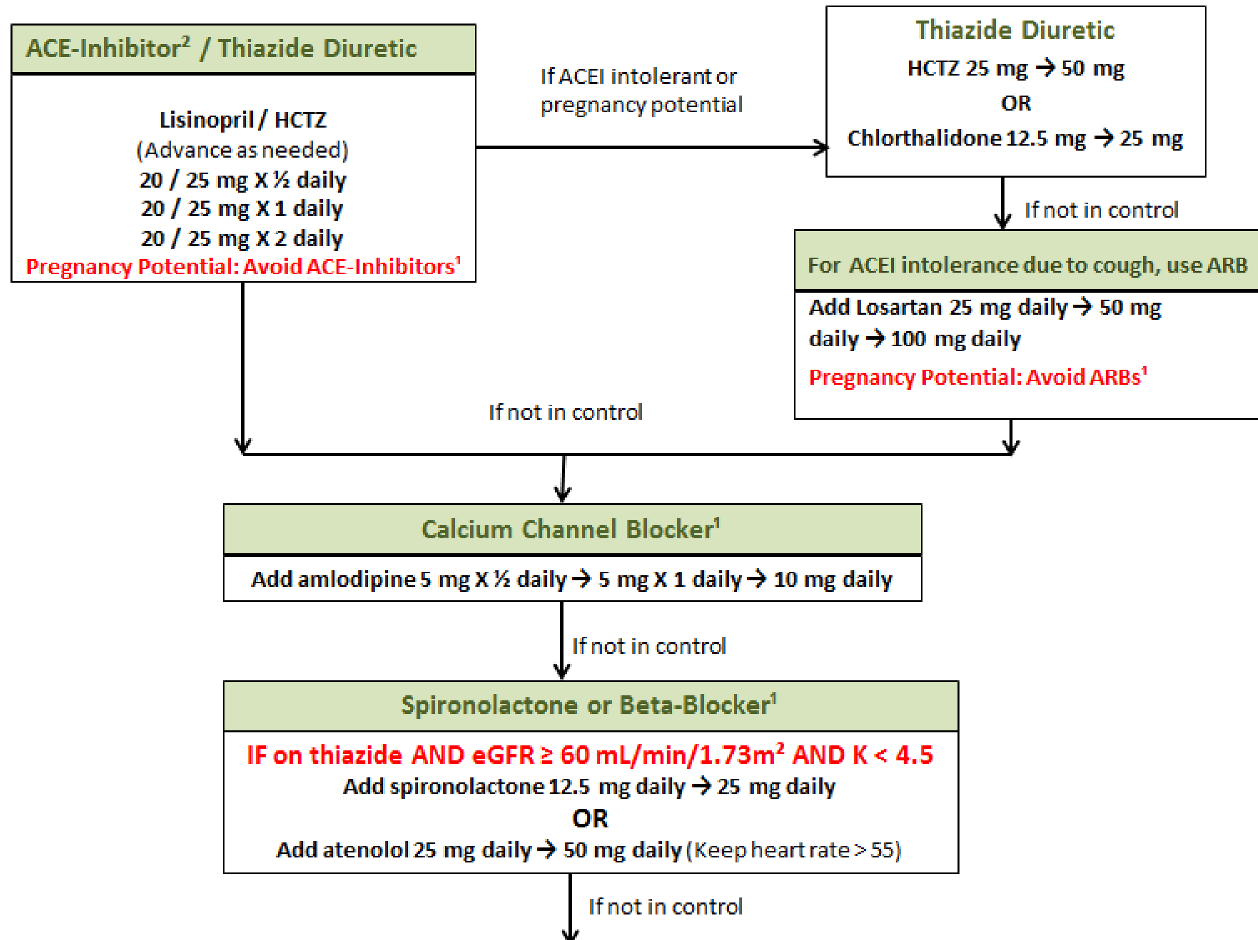
NNT CVA[4] = 63
NNT MI[4] = 86
NNT CVA or MI[4] = 36

Management of

ADULT HYPERTENSION

BLOOD PRESSURE (BP) GOALS

<140/90 mm Hg – for age 18-59, & age 60 and over with Chronic Kidney Disease (CKD)[3] or Diabetes
Optional for other patients at high risk of cardiovascular events[2]
<150/90 mm Hg – for age 60 and over in the absence of Chronic Kidney Disease (CKD)[3] or Diabetes



- Consider medication non-adherence.
- Consider interfering agents (e.g., NSAIDs, excess alcohol).
- Consider white coat effect. Consider BP checks by medical assistant (e.g., two checks with 2 readings each, 1 week apart).
- Consider discontinuing lisinopril / HCTZ and changing to chlorthalidone 25 mg plus lisinopril 40 mg daily. Consider additional agents (hydralazine, terazosin, reserpine, minoxidil)
- Consider stopping atenolol and adding diltiazem to amlodipine, keeping heart rate > 55.
- **Avoid using clonidine, verapamil, or diltiazem together with a beta blocker.** These heart-rate slowing drug combinations may cause symptomatic bradycardia over time.
- Consider secondary etiologies.
- Consider consultation with a hypertension specialist.

1. ACE-inhibitors and ARBs are contraindicated in pregnancy and not recommended in most women of childbearing age. Calcium Channel Blockers and Spironolactone (Pregnancy Risk Category C), and Beta-Blockers (Pregnancy Risk Category D) should only be used in pregnancy when clearly needed and the benefits outweigh the potential hazard to the fetus.
2. Patients at high risk include those with acute coronary syndromes, or a history of MI, stable or unstable angina, coronary or other arterial revascularization, stroke, TIA, clinically significant peripheral arterial disease presumed to be of atherosclerotic origin, such as claudication or revascularization, or Black race.

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Updated April 2015

Adapted from Kaiser Permanente Medical Care Program and JNC8 Recommendations

3. CKD is defined as albuminuria (>30 mg of albumin/g of creatinine) at any age and any level of GFR, or an estimated GFR or measured GFR < 60 mL/min/1.73 m^2 in people aged < 70 years. When weighing the risks and benefits of a lower BP goal for people aged 70 years or older with estimated GFR < 60 mL/min/1.73 m2, antihypertensive treatment should be individualized, taking into consideration factors such as frailty, comorbidities, albuminuria, and estimation of non-age related eGFR decline (for example eGFR + ½ age < 85).
4. NNT = number needed to treat to prevent one event, maintaining hypertension control for at least 5 years.

- **Medication up-titrations are recommended at 2–4 week intervals (for most patients) until control is achieved. Consider follow-up labs (electrolytes and renal function) when up-titrating or adding lisinopril / HCTZ, chlorthalidone, HCTZ, or spironolactone.**
- **Use lipid lowering therapy according to AHA/ACC Pooled Cohort Equation:** http://my.americanheart.org/cvriskcalculator **and** http://tools.cardiosource.org/ASCVD-Risk-Estimator/
- **Women using ACEI/ARB should be advised to stop these medications and contact their OB/GYN provider immediately if they become pregnant. Women using ACEIs/ARBs for heart failure or cardiomyopathy and become pregnant should be advised to NOT stop these medications and to contact their cardiologist immediately so that they can substitute a suitable alternative (such as hydralazine) to avoid decompensation.**

Lifestyle changes are recommended for all patients:

- DASH diet.
- Sodium restriction (≤ 2.4 gm sodium daily).
- Weight reduction if BMI ≥ 25 kg/m^2.
- Exercise at a moderate pace to achieve 150 min./week (e.g., 30 min /day, 5 days/week).
- Limit daily alcohol to no more than 1 drink (women) or 2 drinks (men).
- Smoking cessation is strongly recommended; counsel tobacco users on the health risks of smoking and the benefits of quitting.

Recommendations for patients with ACEI intolerance due to cough:

- HCTZ 25 mg, then 50 mg to achieve BP goal.
- Add losartan 25 mg, then 50 mg, then 100 mg to achieve BP goal.
- Add amlodipine 2.5 mg, then 5 mg, then 10 mg to achieve BP goal.

Table: Dosage Range for Selected Antihypertensive Medications

SELECTED ANTIHYPERTENSIVE MEDICATION		Usual Dosage Range
Thiazide Diuretics	Chlorthalidone (Hygroton) Hydrochlorothiazide (HCTZ) (Esidrix)	12.5 – 25 mg daily 25-50 mg daily
Thiazide Diuretics Combos	HCTZ (Prinzide) Spironolactone/HCTZ (Aldactazide)	10/12.5, 20/12.5, 20/25 mg daily 25/25 mg daily
ACE Inibitors (ACEI)	Lisinopril (Zestril, Prinivil) Captopril (Capoten)	10 – 40 mg daily 12.5 – 50 mg BID
Long-Acting Dihydropyridine Calcium Channel Blockers (CCB)	Amlodopine (Norvasc) Felodipine ER (Plendil) Nifedipine ER (Nifedipine XL)	2.5 – 10 mg daily 2.5 – 20 mg daily 30 – 90 mg daily
Angiotensin II Receptor Blockers (ARB)	Losartan (Cozaar)	25 – 100 mg daily
Aldosterone Receptor Blocker	Spironolactone (Aldactone)	12.5 – 25 mg daily
Beta-Blockers (BB)	Atenolol (Tenormin) Bisoprolol (Zebeta) Carvedilol (Coreg) Metoprolol (Lopressor) Metoprolol ER (Toprol XL)	25 – 100 mg total, taken daily or BID 5 – 10 mg daily 3.125 – 25 mg BID 25 -100 mg BID 25 – 200 mg daily

This guide is based on the 2014 National Hypertension Guideline. It is not intended or designed as a substitute for the reasonable exercise of independent clinical judgment by practitioners.

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