Hypertension Change Package Algorithm

- Widely acceptable and effective algorithm using inexpensive combination therapy

- May lead to under-dosing of Hydrochlorothiazide (HCTZ) (failure to intensify dose)

- Effective dose for blood pressure (BP) reduction and cardiovascular (CV) outcome for HCTZ is 25-50 mg day, not 12.5-25 mg/day commonly used in primary care settings

- Evidence of increased BP control rates and reduction in BP control

- However, BP control gap exists between African American and non-African American hypertensives with use of this algorithm

CARDI·OH
Ohio Cardiovascular Health Collaborative

Set Blood Pressure (BP) goal and initiate therapy with:
1. Lifestyle modification
2. Low dose Angiotensin-converting enzyme inhibitors (ACEi)/diuretic or Angiotensin receptor blocker (ARB) /diuretic combination*

YES / NO

Up-titration of combination therapy successfully to the highest dose

Reinforce lifestyle modification

Encourage self-monitoring of home BP

YES / NO

Continue current therapy

Add dihydropyridine calcium channel blocker and up-titrate

Reinforce lifestyle modification

Encourage self-monitoring of home BP

YES / NO

Add spironolactone (25-50 mg/day), consider changing Hydrochlorothiazide (HCTZ) to chlorthalidone

Reinforce lifestyle modification

Encourage self-monitoring of home BP

Add beta blocker **, alpha blocker or guanfacine ***

If BP is still elevated...
Consider medication non-adherence
Consider white coat effect
Consider adding hydralazine in addition to above medications
Consider interfering agents (e.g. Nonsteroidal anti-inflammatory drugs (NSAIDs), excess alcohol)
Consider secondary etiologies
CONSIDER CONSULTATION WITH A HYPERTENSION SPECIALIST

* If pregnant or pregnancy potential, avoid using ACEi or ARB spironolactone

** Avoid starting a beta blocker if pulse <70 or on a non-dihydropyridine calcium channel blocker

*** Guanfacine has similar mechanism of action as clonidine and is once daily instead of 3 times per day