UPDATED AUGUST 2025 - CAPSULE 1

Simple Steps to Improve Medication Adherence for Blood Pressure Control

CONTRIBUTING AUTHORS: Shari Bolen, MD, MPH, Case Western Reserve Univeristy; Michael Holliday, MD, University of Cincinnati; Shireen Khoury, MD, MPH, Case Western Reserve University; Jackson T. Wright, Jr., MD, PhD, Case Western Reserve University, on behalf of Team Best Practices

CARDI•OH
Ohio Cardiovascular and Diabetes Health Collaborative

CAPSULE

Medication adherence is a major obstacle to achieving blood pressure (BP) control. Within in the first year of treatment, 30% to 80% of patients do not adhere to their medication regimens.[1] One simple step prescribers can take to improve adherence is to select once-daily and longer-acting blood pressure medications (such as chlorthalidone or amlodipine), which make adherence less challenging for patients. Additionally, single-pill combinations (SPCs) of two or three medications can be helpful.

Ohio Medicaid covers several SPCs, including two triple-therapy combinations: amlodipine-valsartan-hydrochlorothiazide and amlodipine-olmesartan-hyrdrochlorothiazide. Cardi-OH has developed three treatment algorithms that highlight once-daily, low-cost medications (Figure 1).

KEY TAKEAWAY:

Within in the first year of treatment,

30% to 80%

of patients do not adhere to their medication regimens.

Cardi-OH has developed three treatment algorithms that highlight once-daily, low-cost medications.

Chlorthalidone tablets, some of which can be split for dose adjustment.

Figure 1. Cardi-OH Adapted Treatment Algorithms

Cardi-OH Algorithm	Adapted from	Initial Treatment	Step 2	Step 3
Hypertension Algorithm: Amlodipine-RAAS Combination Start	AMA[2]	▪ **Amlodipine**-ACEi SPC ▪ **Amlodipine**-ARB SPC	▪ Thiazide ▪ Amlodipine-ARB-HCTZ SPC	Change HCTZ to **chlorthalidone** +/- spironolactone*
Modified Kaiser Hypertension Algorithm: RAAS-Diuretic Combination Start	Kaiser[3]	▪ ACEi-HCTZ SPC ▪ ARB-HCTZ SPC	**Amlodipine**	Change ACEI-HCTZ SPC to ACEi + **chlorthalidone** +/-spironolactone*
Modified SPRINT Hypertension Algorithm: Monotherapy Start	SPRINT[4]	**Chlorthalidone** or **amlodipine**	ACEi or ARB	**Amlodipine or chlorthalidone** (if not used for initial treatment)

Medications with longer half-life are in **bold.**
*Spironolactone 25-50 mg for added BP control or to prevent hypokalemia due to chlorthalidone.

ACEi = angiotensin converting enzyme inhibitor, ARB = angiotensin receptor blocker, HCTZ = hydrochlorothiazide, SPC = single-pill combination.

References

1. Choudhry NK, Kronish IM, Vongpatanasin W, et al. Medication adherence and blood pressure control: A scientific statement from the American Heart Association. Hypertension. 2022;79(1):e1-e14. doi:10.1161/HYP.0000000000000203.
2. Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. J Am Coll Cardiol. 2018;71(19):e127-e248. doi:10.1016/j.jacc.2017.11.006.
3. Jaffe MG, Lee GA, Young JD, Sidney S, Go AS. Improved Blood Pressure Control Associated With a Large-Scale Hypertension Program. JAMA. 2013;310(7):699–705.
4. SPRINT Study Research Group. The design and rationale of a multi-center clinical trial comparing two strategies for control of systolic blood pressure: the Systolic Blood Pressure Intervention Trial (SPRINT). Clin Trials. 2014;11(5):532-546. doi:10.1177/1740774514537404.

The Ohio Cardiovascular and Diabetes Health Collaborative is funded by the Ohio Department of Medicaid and administered by the Ohio Colleges of Medicine Government Resource Center. The views expressed in this document are solely those of the authors and do not represent the views of the state of Ohio or federal Medicaid programs.

For more information head to Cardi-OH.org.

© 2020 Cardi-OH