

This IssueViews **18,128** | Citations **1** | Altmetric **383**

PDF



Full Text



CME & MOC



Share



Original Investigation

May 26, 2020

Effect of Antihypertensive Medication Reduction vs Usual Care on Short-term Blood Pressure Control in Patients With Hypertension Aged 80 Years and Older

The OPTIMISE Randomized Clinical Trial

James P. Sheppard, PhD¹; Jenni Burt, PhD²; Mark Lown, MRCGP³; [et al](#)[» Author Affiliations](#)

JAMA. 2020;323(20):2039-2051. doi:10.1001/jama.2020.4871

Visual
AbstractEditorial
Comment

Key Points

Question Among older adults taking multiple antihypertensive medications, is a strategy of antihypertensive medication reduction noninferior to usual care with regard to short-term blood pressure control?

Findings In this randomized clinical trial that included 569 patients aged 80 years and older, the proportion with systolic blood pressure lower than 150 mm Hg at 12 weeks was 86.4% in the intervention group and 87.7% in the control group (adjusted relative risk, 0.98), a difference that met the noninferiority margin of a relative risk of 0.90.

Meaning The findings suggest antihypertensive medication reduction can be achieved without substantial change in blood pressure control in some older patients with hypertension.

Our website uses cookies to enhance your experience. By continuing to use our site, or clicking "Continue," you are agreeing to our [Cookie Policy](#) | [Continue](#)

Abstract

Importance Deprescribing of antihypertensive medications is recommended for some older patients with polypharmacy and multimorbidity when the benefits of continued treatment may not outweigh the harms.

Objective This study aimed to establish whether antihypertensive medication reduction is possible without significant changes in systolic blood pressure control or adverse events during 12-week follow-up.

Design, Setting, and Participants The Optimising Treatment for Mild Systolic Hypertension in the Elderly (OPTIMISE) study was a randomized, unblinded, noninferiority trial conducted in 69 primary care sites in England. Participants, whose primary care physician considered them appropriate for medication reduction, were aged 80 years and older, had systolic blood pressure lower than 150 mm Hg, and were receiving at least 2 antihypertensive medications were included. Participants enrolled between April 2017 and September 2018 and underwent follow-up until January 2019.

Interventions Participants were randomized (1:1 ratio) to a strategy of antihypertensive medication reduction (removal of 1 drug [intervention], n=282) or usual care (control, n=287), in which no medication changes were mandated.

Main Outcomes and Measures The primary outcome was systolic blood pressure lower than 150 mm Hg at 12-week follow-up. The prespecified noninferiority margin was a relative risk (RR) of 0.90. Secondary outcomes included the proportion of participants maintaining medication reduction and differences in blood pressure, frailty, quality of life, adverse effects, and serious adverse events.

Results Among 569 patients randomized (mean age, 84.8 years; 276 [48.5%] women; median of 2 antihypertensive medications prescribed at baseline), 534 (93.8%) completed the trial. Overall, 229 (86.4%) patients in the intervention group and 236 (87.7%) patients in the control group had a systolic blood pressure lower than 150 mm Hg at 12 weeks (adjusted RR, 0.98 [97.5% 1-sided CI, 0.92 to ∞]). Of 7 prespecified secondary end points, 5 showed no significant difference. Medication reduction was sustained in 187 (66.3%) participants at 12 weeks. Mean change in systolic blood pressure was 3.4 mm Hg (95% CI, 1.1 to 5.8 mm Hg) higher in the intervention group compared with the control group. Twelve (4.3%) participants in the intervention group and 7 (2.4%) in the control group reported at least 1 serious adverse event (adjusted RR, 1.72 [95% CI, 0.7 to 4.3]).

Our website uses cookies to enhance your experience. By continuing to use our site, or clicking "Continue," you are agreeing to our [Cookie Policy](#) | [Continue](#)

Conclusions and Relevance Among older patients treated with multiple antihypertensive medications, a strategy of medication reduction, compared with usual care, was noninferior with regard to systolic blood pressure control at 12 weeks. The findings suggest antihypertensive medication reduction in some older patients with hypertension is not associated with substantial change in blood pressure control, although further research is needed to understand long-term clinical outcomes.

Trial Registration EudraCT Identifier: [2016-004236-38](#); ISRCTN identifier: [97503221](#)

Editorial

Deprescribing Antihypertensive Medications for Patients Aged 80 or Older

 **Full Text**

Advertisement

Read More About

Clinical Pharmacy and Pharmacology

Geriatrics

Hypertension

 **Coronavirus Resource Center**

SCHEDULED MAINTENANCE

Our websites may be periodically unavailable between 11:00PM CT June 20, 2020 and 4:00PM CT June 21, 2020 for regularly scheduled maintenance.

Trending

Our website uses cookies to enhance your experience. By continuing to use our site, or clicking "Continue," you are agreeing to our [Cookie Policy](#) | [Continue](#)

Research 

Clinical Characteristics of Children With SARS-CoV-2-Associated Pediatric Inflammatory Multisystem Syndrome

June 8, 2020

Review 

Determining How Public Health Measures Might Be Slowing COVID-19 Using the Reproduction Number (R_t)

June 2, 2020

Research 

Second-Trimester Miscarriage in a Pregnant Woman With COVID-19

June 2, 2020

Select Your Interests

Advertisement



JOB LISTINGS ON JAMA CAREER CENTER®

General Internal Medicine Physician

Lebanon, New Hampshire

Primary Care Opportunities Near Boston, MA

Our website uses cookies to enhance your experience. By continuing to use our site, or clicking "Continue," you are agreeing to our [Cookie Policy](#) | [Continue](#)

Chief of the Division of Medicine at UPMC Shadyside Hospital
Pittsburgh, Pennsylvania

Chief Medical Officer- Mass General Brigham Community Physicians Organization (CPO)
Somerville, Massachusetts

Internal Medicine Physician
Scarborough, Maine

See more at JAMA Career Center

Trending

Assessment of Hypokalemia and Clinical Characteristics in Patients With COVID-19 in Wenzhou, China

JAMA Network Open |
Research | June 11, 2020

Neuropathogenesis and Neurologic Manifestations of Coronaviruses in the Age of COVID-19

JAMA Neurology |
Review | May 29, 2020

Clinical Characteristics of Children With SARS-CoV-2-Associated Pediatric Inflammatory Multisystem Syndrome

JAMA | *Research* |
June 8, 2020

Our website uses cookies to enhance your experience. By continuing to use our site, or clicking "Continue," you are agreeing to our [Cookie Policy](#) | [Continue](#)