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BEHAVIORAL ECONOMICS AND MEDICATION ADHERENCE FOR HYPERTENSION: A RANDOMIZED CLINICAL TRIAL

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TALK OVERVIEW

- Medication nonadherence
- BETTER-BP trial (as presented at AHA 2025)
- Context of BETTER-BP within other trials
- Discussion

MEDICATION NONADHERENCE

- For patients with cardiovascular disease: ~50% are nonadherent with their medications
- This occurs across conditions (hypertension, dyslipidemia, post-acute myocardial infarction)
- Multiple reasons (cost, side effects, lack of symptoms, inconvenience)
- BETTER-BP aimed to test behavioral economics intervention for antihypertensive adherence

Sources: *Prog Cardiovasc Dis.* 2013;55(6):590–600; *Circ Cardiovasc Qual Outcomes* 2015;8,(4):347-356

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Scientific Sessions

PRIMARY RESULTS OF THE BEHAVIORAL ECONOMICS TRIAL TO ENHANCE REGULATION OF BLOOD PRESSURE (BETTER-BP)

John A. Dodson, MD, MPH | Associate Professor, NYU Grossman School of Medicine

American Heart Association.

#AHA25

BACKGROUND/ METHODS

BACKGROUND

- Nonadherence to antihypertensive medications remains a longstanding problem
- To date, many strategies designed to improve medication adherence are resource-intensive and difficult to replicate
- Barriers to medication adherence are especially high in socioeconomically disadvantaged populations[1,2]

1. Chang TE et al. *Hypertension* 2019;74:1324-32
2. Ferdinand KC et al. *JACC* 2017;69: 437-51

BACKGROUND

- Behavioral economics leverages innate human tendencies that are not always rational, including preference for immediate gains, inclination towards maintaining the status quo, and aversion to loss
- This field represents a novel and potentially scalable approach to improve antihypertensive medication adherence

PRIMARY OBJECTIVES

1. To test the effect of a mobile health text-based lottery incentive, using behavioral economics principles, on antihypertensive medication adherence
2. To evaluate the impact of this lottery on systolic blood pressure (SBP)

DESIGN

- Phase 2, multisite, randomized clinical trial
- Conducted within safety-net clinic system in NYC
- Randomization was 2:1 (incentive lottery vs. control)

FUNDING AND ORGANIZATION

Funded by the U.S. National Institutes of Health / NHLBI

R01 HL148275

Coordinating center

NYU Grossman School of Medicine

Study sites

- Bellevue Hospital
- Gouverneur Hospital
- NYU FHC Brooklyn (Federally Qualified Health Center)

TRIAL POPULATION

Inclusion

- Age ≥18 years
- Diagnosis of hypertension
- Prescribed antihypertensive medication
- Ambulatory SBP ≥140 mmHg[1]
- Missed at least 2 doses of medication in prior week[2]
- English or Spanish-speaking

Exclusion

- Clear barrier to technology use (e.g. vision or hearing impairment)
- Projected life expectancy <12 months
- Pregnant
- Incarcerated

1. Office BP within the past year; mean duration was 52 days from screened BP value to baseline visit
2. Based on self-report survey (Voils et al. *Med Care* 2012;50:1013-9)

STUDY FLOW DIAGRAM

Trial Eligible

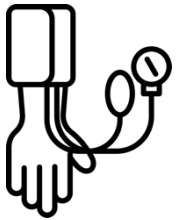
Baseline visit:
- BP measurement
- Randomized (2:1)

Intervention arm (incentive lottery)

Control Arm

6 months

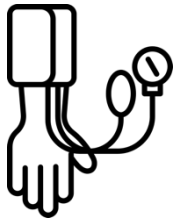
Primary clinical outcome: change in systolic BP
0 to 6 mos.



Primary process outcome: ≥80% days adherent: 0 to 6 mos.

12 months

Secondary clinical outcome: change in systolic BP
6 to 12 mos.



Secondary process outcome: ≥80% days adherent: 6 to 12 mos.

STUDY MONITORING

- Participants in both arms received an electronic monitoring device (EMD)[1]
- Cellular connectivity; registered signal when opened
- If prescribed multiple antihypertensive medications, a single agent was chosen for the device
  - Hierarchy: ACEi/ARB > calcium channel blocker > beta blocker > diuretic > other

1. EMD manufactured by Adheretech (Summit, NJ)

STUDY INTERVENTION

- Intervention arm received daily incentive lottery from baseline to 6 months, based on prior day's adherence
  - Double digit number was set for participant at start of study
  - Each day, lottery randomly generated number from 00 to 99[1]
  - If adherent, received financial reward if one number ($5) or two numbers ($50) matched
  - If nonadherent but number match, received "regret" message
  - Winnings conveyed via SMS text message, deposited monthly
- Intervention arm received passive monitoring from 6 to 12 months

1. Lottery administered by Way 2 Health (Philadelphia, PA)

STUDY INTERVENTION

Four potential conditions for incentive lottery

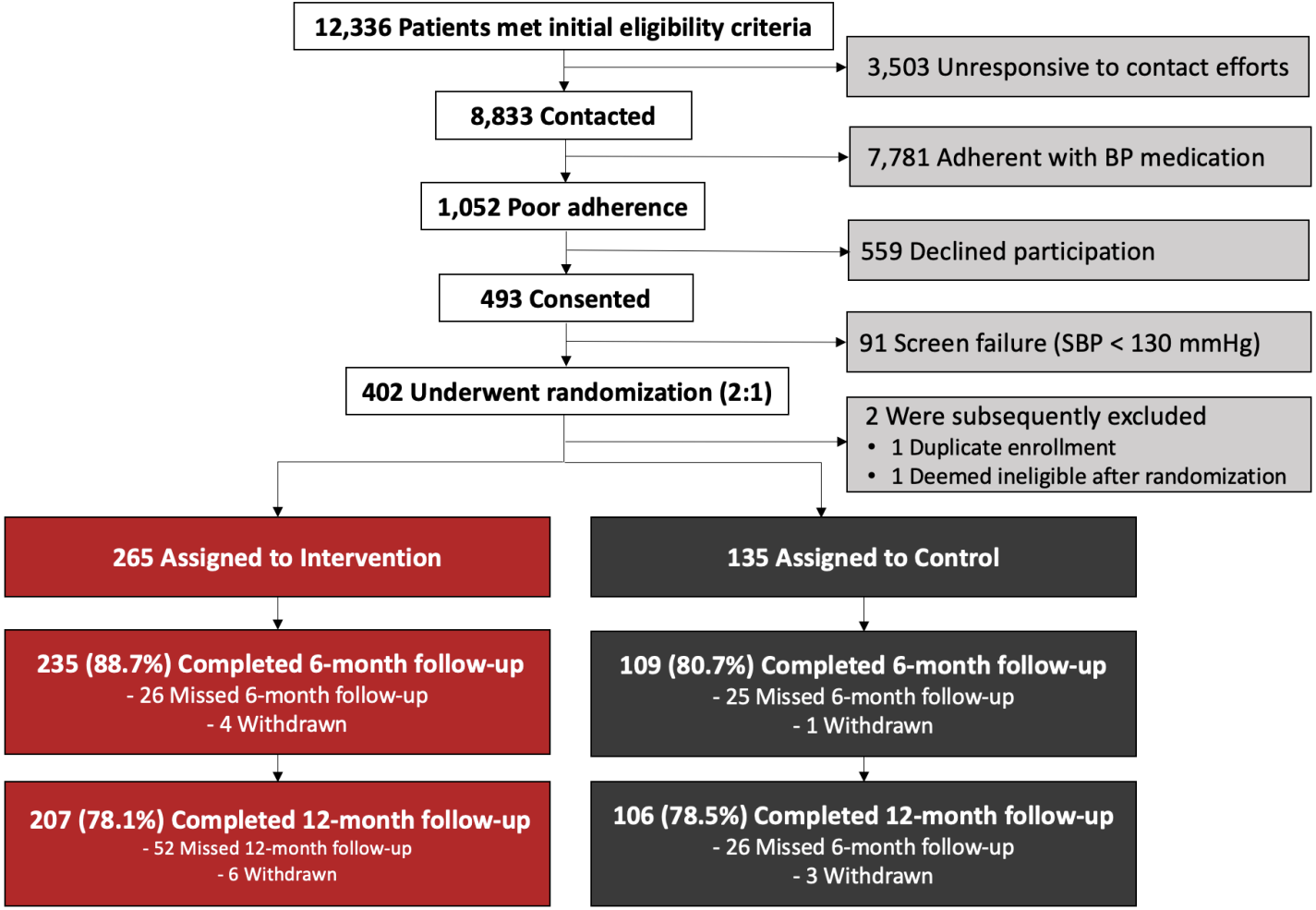
	Adherent 	Not adherent 
Wins lottery 	Lottery eligible, winning message Congratulations! You took your medication and won the lottery. The number drawn was 47 and your number is 49. You won $5. Keep up the good work!	Lottery ineligible, winning message ("regret" condition) You missed your medication yesterday. The number drawn was 47 and your number is 49. If you took your medication you would have won $5. Don't miss out!
Loses lottery 	Lottery eligible, losing message You took your medication yesterday, but your numbers weren't picked. The number drawn was 47 and your number is 21. Keep it up! Tomorrow is a new chance to win!	Lottery ineligible, losing message The number picked was 47 and your number is 21. You never know when your numbers may be chosen. Remember to take your medication every day and you may win!

POWER AND STATISTICAL ANALYSIS

- Required 401 participants (20% attrition) for 85% power to detect clinically significant change in SBP of ≥10 mmHg between intervention and control
- Primary analysis based on intention-to-treat
- Estimated mean difference for SBP, and risk ratio for adequate adherence, between treatment arms
- Performed hierarchical testing for endpoints, with 6 month SBP as the first test, using threshold of P <0.05
- Multiple imputation for missing data

RESULTS

ENROLLMENT AND FOLLOW-UP



STUDY SAMPLE CHARACTERISTICS

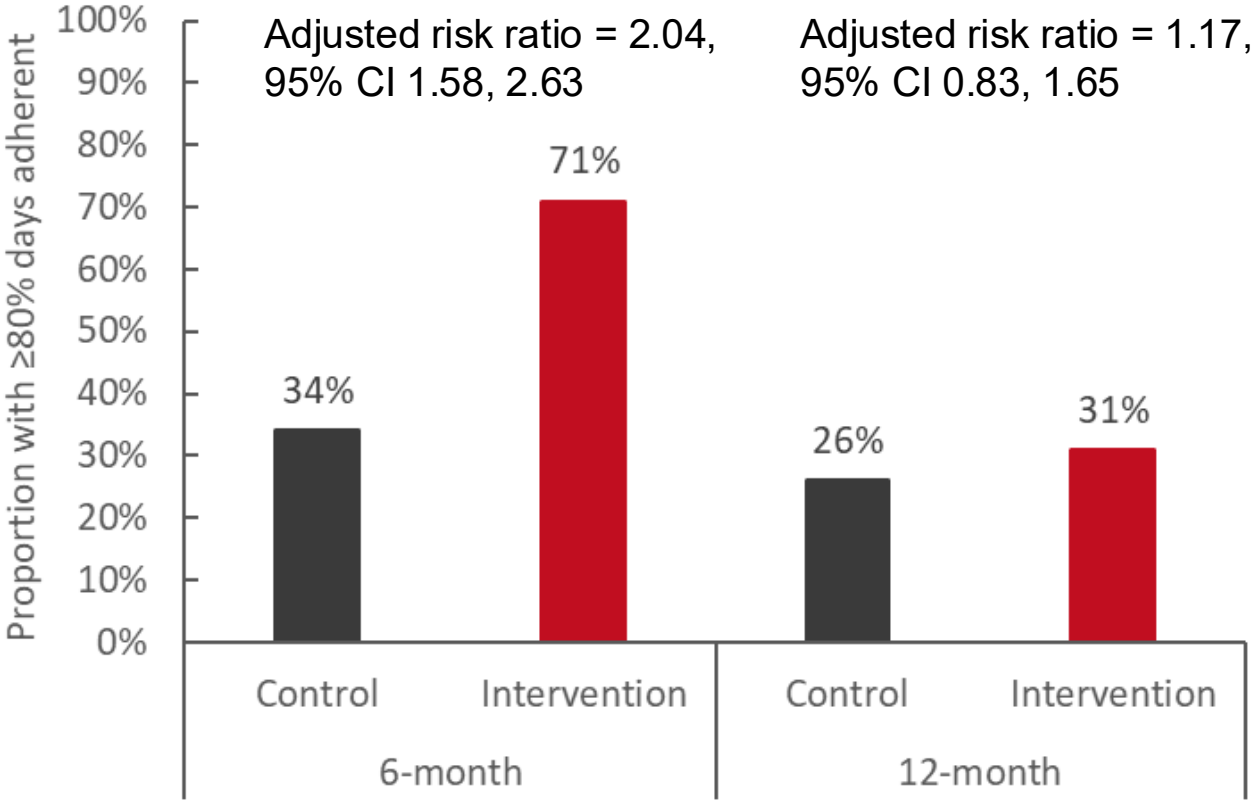
Characteristic	Intervention (N=265)	Control (N=135)
Median age, range (yr)	57 (20, 93)	56 (23, 87)
Female sex – no. (%)	157 (59.2%)	85 (63.0%)
Race and Ethnicity – no. (%)		
Hispanic	163 (61.5%)	83 (61.5%)
Non-Hispanic Asian	8 (3.0%)	3 (2.2%)
Non-Hispanic Black	61 (23.0%)	20 (14.8%)
Non-Hispanic White	7 (2.6%)	6 (4.4%)
Non-Hispanic Other or multiple	26 (9.8%)	23 (17.0%)
Insurance – no. (%)		
Commercial	38 (14.3%)	11 (8.1%)
Medicaid	102 (38.5%)	46 (34.1%)
Medicare	38 (14.3%)	22 (16.3%)
Uninsured	87 (32.8%)	56 (41.5%)
Diabetes – no. (%)	119 (44.9%)	67 (49.6%)
Obesity (BMI ≥30) – no. (%)	144 (54.3%)	74 (54.8%)
Chronic kidney disease – no. (%)	28 (10.6%)	10 (7.4%)
Tobacco use (current) – no. (%)	32 (12.1%)	11 (8.1%)

STUDY SAMPLE CHARACTERISTICS

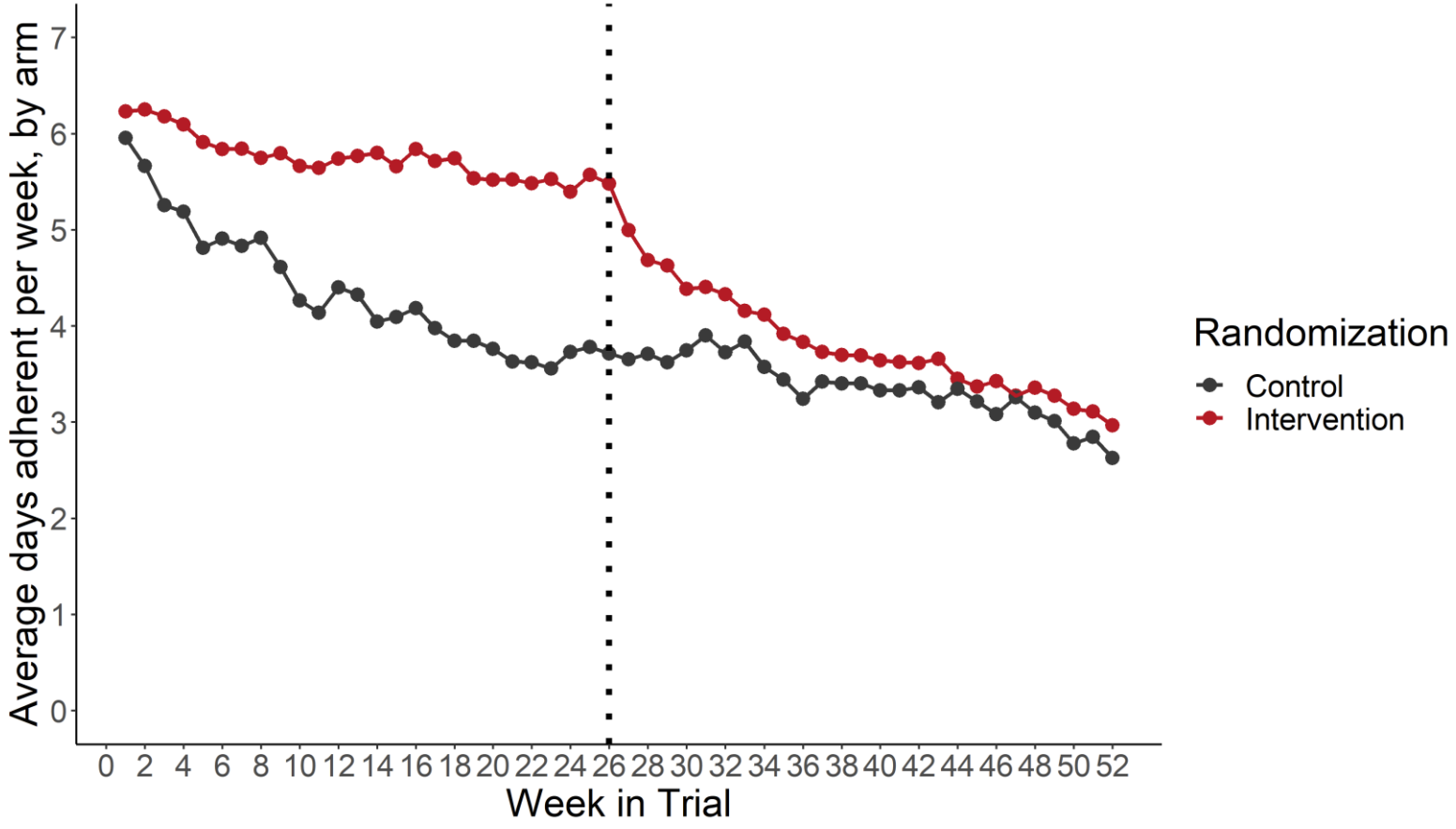
Characteristic	Intervention (N=265)	Control (N=135)
Systolic BP, mean (SD)	137.9 (19.3)	140.5 (18.6)
Diastolic BP, mean (SD)	82.1 (13.1)	82.9 (13.6)
Antihypertensive medications, mean (SD)	1.7 (0.9)	1.7 (0.8)
On >1 antihypertensive medication (%)	124 (46.8%)	64 (47.4%)
Total medications, mean (SD)	5.7 (3.3)	5.2 (3.0)
Medication chosen for monitoring		
ACE inhibitor or ARB	154 (58.1%)	76 (56.3%)
Calcium channel blocker	65 (24.5%)	40 (29.6%)
Beta blocker	10 (3.8%)	2 (1.5%)
Diuretic (thiazide or aldo antagonist)	10 (3.8%)	1 (0.7%)
Combination pill	26 (9.8%)	16 (11.9%)
Short-form 12 PCS,[1] mean (SD)	40.5 (10.2)	42.6 (10.9)
Short-form 12 MCS,[2] mean (SD)	48.3 (12.5)	47.3 (12.5)
Mean lottery payout at 6 mos., range	$212 ($10, $515)	N/A

1. PCS = physical component score
2. MCS = mental component score

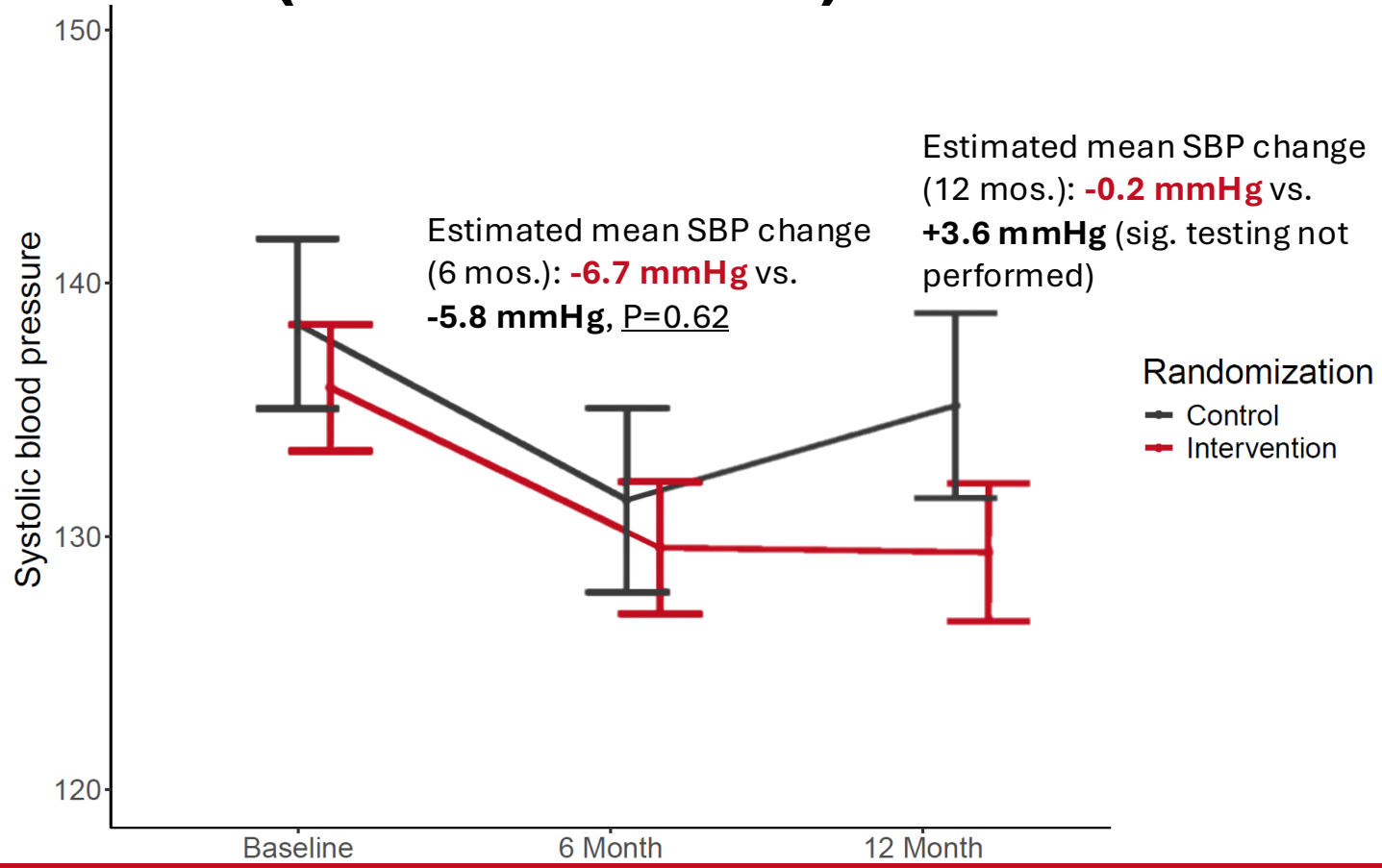
ADEQUATE ANTIHYPERTENSIVE ADHERENCE (6 & 12 MONTHS)



ANTIHYPERTENSIVE MEDICATION ADHERENCE (WEEKLY)

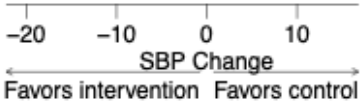


SYSTOLIC BP (6 AND 12 MONTHS)



TREATMENT EFFECT BY SUBGROUP (6 MONTH SBP)

Variable	Subgroup	b (95% CI)
Overall		−0.86 (−4.33 to 2.59)
Age	20.0–51.9 yrs	−3.78 (−9.92 to 2.36)
	52.0–60.9 yrs	2.96 (−3.83 to 9.75)
	61.0–93.0 yrs	−1.08 (−6.52 to 4.36)
Sex	Male	−0.87 (−6.68 to 4.95)
	Female	−1.09 (−5.38 to 3.19)
Race	Hispanic	1.94 (−2.23 to 6.10)
	NH Asian	4.12 (−8.55 to 16.79)
	NH Black	−7.26 (−16.54 to 2.02)
	NH White	−2.81 (−22.21 to 16.59)
	NH Other/Multiple	−8.39 (−18.65 to 1.86)
Obesity	No	0.51 (−4.79 to 5.80)
	Yes	−2.00 (−6.53 to 2.53)
Depression	No	−0.99 (−5.07 to 3.08)
	Yes	−0.74 (−7.56 to 6.09)
Charlson Index	1.0–1.9	−0.80 (−6.83 to 5.22)
	2.0–2.9	2.37 (−3.57 to 8.32)
	3.0–12.0	−1.53 (−7.36 to 4.30)
Polypharmacy	No	0.01 (−5.11 to 5.14)
	Yes	−1.35 (−6.08 to 3.39)
SF−12 PCS	11.4–36.5	0.71 (−5.32 to 6.73)
	36.6–47.1	−3.94 (−11.66 to 3.79)
	47.2–63.9	−0.88 (−5.94 to 4.18)
SF−12 MCS	10.5–41.7	0.26 (−5.28 to 5.79)
	41.8–56.5	−4.69 (−11.17 to 1.80)
	56.6–70.2	1.97 (−4.48 to 8.41)



LIMITATIONS

- Study intervention focused on single medication
- Primary outcome was in-office measurement (not home-based BP measurements)
- Usage of electronic monitoring device for adherence (rather than chemical testing)

CONCLUSIONS

- **In a safety-net population, a behavioral economics-based lottery doubled adequate antihypertensive medication adherence from baseline to 6 months.**
- This did not translate to a significant reduction in office-measured SBP versus control at 6 months.
- Increased adherence was not sustained after the lottery was removed.
- These findings suggest that other strategies will be required for long-term behavior change.

CONCLUSIONS

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THANK YOU

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BETTER-BP IN CONTEXT

BETTER-BP IN CONTEXT

- Media coverage
- Pragmatic spectrum
- Other behavioral economics studies

Chance to win cash doubled medication use, yet led to similar blood pressure reductions

American Heart Association Scientific Sessions 2025, Late-Breaking Science Abstract 4391838

Study: Cash lottery rewards ineffective in lowering blood pressure

Yahoo!, 12 Nov 2025

Bribing folks with tickets to a cash lottery got them to take their blood pressure medicines more reliably, but did nothing to...

Cash Bribes Don't Help Lower High Blood Pressure, Study Finds

Drugs.com, 12 Nov 2025

By Dennis Thompson HealthDay Reporter Medically reviewed by Drugs.com via HealthDay WEDNESDAY, Nov.

Cash Bribes Don't Help Lower High Blood Pressure, Study Finds

TheSuburban.com, 12 Nov 2025

Key Takeaways A cash lottery didn’t help people improve their blood pressure People offered the cash incentives took their meds...

Cash Bribes Don't Help Lower High Blood Pressure, Study Finds

Guam Pacific Daily News, 12 Nov 2025

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Cash Bribes Don't Help Lower High Blood Pressure, Study Finds

USNews.com, 12 Nov 2025

By Dennis Thompson HealthDay ReporterWEDNESDAY, Nov. 12, 2025 (HealthDay News) — Bribing folks with tickets to a cash lottery...

Cash Bribes Don't Help Lower High Blood Pressure, Study Finds

Appalachian News Express, 12 Nov 2025

From Lottery to Lasting Change

Lessons From BETTER-BP and the Behavioral Economics of Adherence

Hayden B. Bosworth, PhD

Despite decades of pharmacologic progress, medication adherence remains the Achilles' heel of hypertension control. Nationally, fewer than one-half of adults with treated hypertension achieve target blood pressure, with the greatest burden among low-income and racially minoritized groups.[1] In this issue of *JACC*, the BETTER-BP (Behavioral Economics Trial to Enhance Regulation of Blood Pressure) by Dodson et al[2] offers an innovative, rigorously executed behavioral economics approach to this long-standing challenge—testing whether a "regret lottery" could motivate adherence among adults with uncontrolled hypertension receiving care in New York City safety net clinics.

More than 400 participants—most publicly insured or uninsured—were randomized 2:1 to either a daily text-based lottery incentive or usual care with electronic monitoring. After 6 months, the lottery group achieved markedly higher adherence (71% vs 34%) but similar systolic blood pressure reductions (−6.7 mm Hg vs −5.8 mm Hg).[2] When incentives ceased, adherence quickly declined. This finding illustrates both the promise and limitation of behavioral nudges for chronic disease management.

WHY ADHERENCE IMPROVED BUT BLOOD PRESSURE DID NOT

The apparent paradox—higher adherence without BP improvement—invites several explanations. First, only 1 antihypertensive agent per participant was monitored despite 47% being prescribed >1 antihypertensive medication; partial adherence gains may not yield physiologic change. Second, incentive-linked electronic monitoring may capture "bottle openings," not ingestion. Third, the mean baseline BP (~139 mm Hg) left little room for further reduction. Finally, behavioral nudges without titration or clinical feedback rarely sustain physiologic benefit.[3]

> *"External motivation seldom transforms into intrinsic habit."*

Importantly, future research must better distinguish patients who are truly uncontrolled from those whose apparent lack of control reflects measurement or adherence misclassification. In our own prior work, we found that when blood pressure was

Bosworth HB et al. *J Am Coll Cardiol* 2026 Jan 7:S0735-1097(25)10277-5.

pioneered by Volpp et al,[6] informs participants when they would have won if they had been adherent, using regret to enhance salience and accountability. BETTER-BP extends this concept to racially diverse, low-income populations, proving feasibility of such interventions in safety-net settings. However, as in prior incentive trials,[7] adherence gains evaporated once payments stopped. External motivation seldom transforms into intrinsic habit. Sustained improvement likely requires coupling behavioral cues with intrinsic motivation, social reinforcement, and system-level redesign.

EQUITY AND FEASIBILITY: A QUIET TRIUMPH

The greatest achievement of BETTER-BP may be operational rather than clinical. Recruiting >400 adults—>60% Hispanic, >70% publicly insured—through 3 community clinics demonstrates equitable, scalable engagement. By using simple SMS delivery, bilingual staff, and real-world integration, the trial exemplifies digital health equity.[8]

FROM LOTTERY TO LIFELINE: SUSTAINING CHANGE

At ~$42 per participant per month, incentives may be justified if they prevent cardiovascular events, but sustainability is uncertain. Future approaches could combine incentives with AI-enabled reminders, pharmacy dashboards, or limited-time "adherence studies must explicitly test implementation strategies—training, facilitation, stakeholder engagement—to move beyond proof of concept toward sustainable, system-level adoption.

CLINICAL AND POLICY IMPLICATIONS

Financial incentives can catalyze short-term improvements in adherence but must ultimately be embedded within team-based, multifaceted care models that include medication titration, lifestyle support, and ongoing feedback loops. Although adherence is a necessary first step, it represents only a proxy for clinical benefit. Incentive programs that directly link rewards to measurable outcomes—such as achieving or maintaining target blood pressure—may promote stronger and more sustained engagement by reinforcing the ultimate goal of improved cardiovascular control rather than intermediate behaviors.

If the ethical and practical challenges of implementing financial incentives can be addressed—ensuring equity, avoiding coercion, and maintaining intrinsic motivation—these outcome-based models could complement value-based payment frameworks. By aligning behavioral incentives with clinically meaningful endpoints, health systems and policymakers can help ensure that such interventions not only change behavior but also translate into improved population health and reduced disparities.

FUTURE RESEARCH: BEYOND THE NUDGE

The NEW ENGLAND JOURNAL of MEDICINE

CURRENT ISSUE SPECIALTIES TOPICS

REVIEW ARTICLE | THE CHANGING FACE OF CLINICAL TRIALS

Pragmatic Trials

Authors: Ian Ford, Ph.D., and John Norrie, M.Sc. Author Info & Affiliations

Published August 4, 2016 | N Engl J Med 2016;375:454-463 | DOI: 10.1056/NEJMra1510059 | VOL. 375 NO. 5

Pragmatism in clinical trials arose from concerns that many trials did not adequately inform practice because they were optimized to determine efficacy.[1] Because such trials were performed with relatively small samples at sites with experienced investigators and highly selected participants, they could be overestimating benefits and underestimating harm. This

Table 1. Nine Dimensions for Assessing the Level of Pragmatism in a Trial, as Proposed in the Pragmatic–Explanatory Continuum Indicator Summary 2 (PRECIS-2) Tool.*

Dimension	Assessment of Pragmatism
Recruitment of investigators and participants	
Eligibility	To what extent are the participants in the trial similar to patients who would receive this intervention if it was part of usual care?
Recruitment	How much extra effort is made to recruit participants over and above what would be used in the usual care setting to engage with patients?
Setting	How different are the settings of the trial from the usual care setting?
The intervention and its delivery within the trial	
Organization	How different are the resources, provider expertise, and organization of care delivery in the intervention group of the trial from those available in usual care?
Flexibility in delivery	How different is the flexibility in how the intervention is delivered from the flexibility anticipated in usual care?
Flexibility in adherence	How different is the flexibility in how participants are monitored and encouraged to adhere to the intervention from the flexibility anticipated in usual care?
The nature of follow-up	
Follow-up	How different is the intensity of measurement and the follow-up of participants in the trial from the typical follow-up in usual care?
The nature, determination, and analysis of outcomes	
Primary outcome	To what extent is the primary outcome of the trial directly relevant to participants?
Primary analysis	To what extent are all data included in the analysis of the primary outcome?

* Information in the table is adapted from Loudon et al.[22]

PRAGMATIC COMPONENTS

- Minimal exclusion criteria
- Real-world setting (public hospital ambulatory clinics)
- Use of existing medications
- Study visits paired with regular ambulatory visits
- Use of EHR for ascertainment of some measures

NON-PRAGMATIC COMPONENTS

- Traditional informed consent
- Intervention (incentive lottery) and monitoring (electronic pill bottles) were not usual practice
- Primary outcome: in-person (research-grade) assessment of blood pressure

Ford I & Norrie J. *N Eng J Med* 2016;375:454-463

JAMA Internal Medicine | Original Investigation

Effect of Electronic Reminders, Financial Incentives, and Social Support on Outcomes After Myocardial Infarction
The HeartStrong Randomized Clinical Trial

Kevin G. Volpp, MD, PhD; Andrea B. Troxel, ScD; Shivan J. Mehta, MD, MBA, MSHP; Laurie Norton, MA; Jingsan Zhu, MS, MBA; Raymond Lim, MA; Wenli Wang, MS; Noora Marcus, MA; Christian Terwiesch, PhD; Kristen Caldarella, MHA; Tova Levin, MBA; Mike Relish, MA; Nathan Negin, MD; Aaron Smith-McLallen, PhD; Richard Snyder, MD; Claire M. Spettell, PhD; Brian Drachman, MD; Daniel Kolansky, MD; David A. Asch, MD, MBA

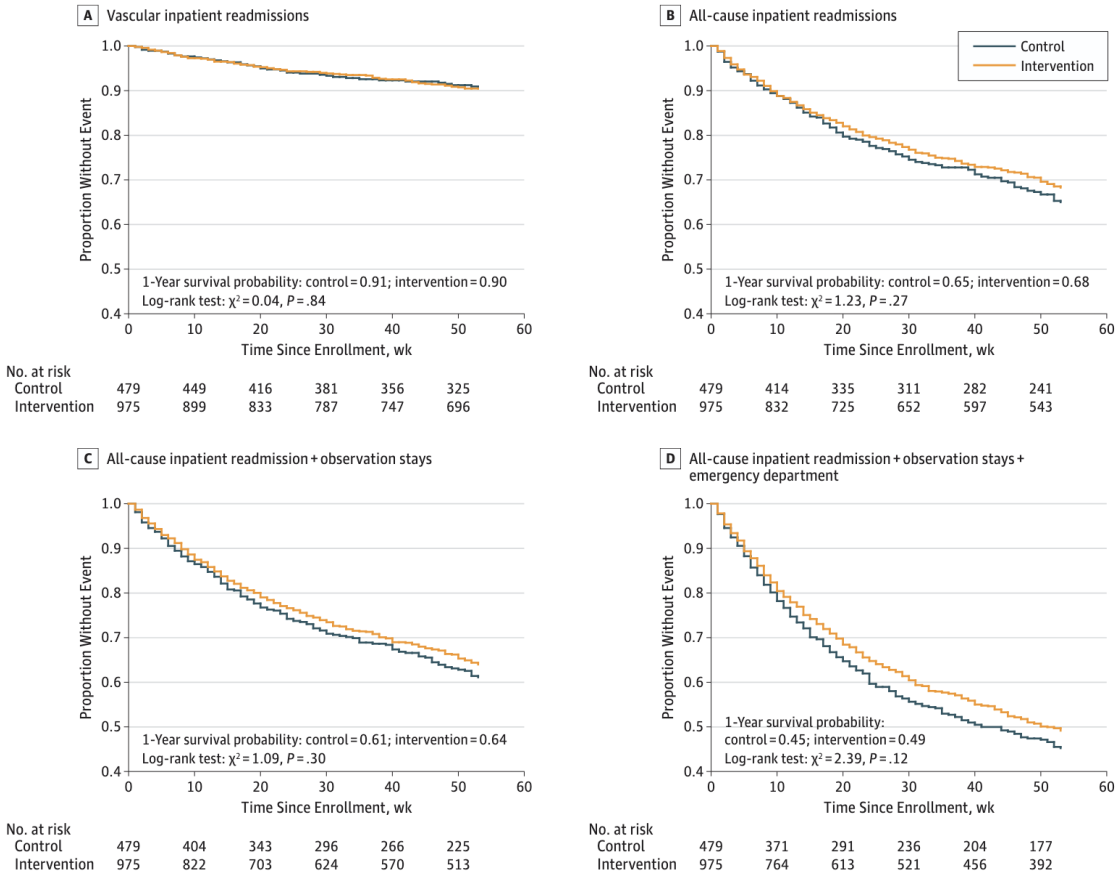
Volpp et al. *JAMA Intern Med*. 2017;177(8):1093-1101. doi:10.1001/jamainternmed.2017.2449

METHODS (VOLPP ET AL.)

- Randomized 1501 patients after acute myocardial infarction (AMI)
- Up to 4 medications (BB, statin, ASA, P2Y12)
- 2 treatment arms:
  - Electronic pill bottles + lottery incentives + social support
  - Usual care
- Primary outcome: vascular event or death
- Secondary outcome: medication adherence

Volpp et al. *JAMA Intern Med*. 2017;177(8):1093-1101. doi:10.1001/jamainternmed.2017.2449

Figure 2. Kaplan-Meier Curves for Hospitalization



Volpp et al. *JAMA Intern Med*. 2017;177(8):1093-1101. doi:10.1001/jamainternmed.2017.2449

Table 3. Annual Medication Adherence, Proportion of Days Covered (PDC)

Medication	Control		Intervention		Difference (95% CI)	*P* Value
	No.	PDC, Mean (SD)	No.	PDC, Mean (SD)		
Strict definition						
Statin	337	0.69 (0.36)	682	0.72 (0.35)	0.03 (−0.02 to 0.07)	.23
β-Blocker	337	0.67 (0.37)	682	0.69 (0.36)	0.02 (−0.03 to 0.07)	.38
Antiplatelet agent	337	0.61 (0.41)	682	0.64 (0.40)	0.03 (−0.20 to 0.08)	.25
All 3 medications[a]	337	0.42 (0.39)	682	0.46 (0.39)	0.04 (−0.01 to 0.09)	.10
Intermediate definition						
Statin	298	0.78 (0.27)	611	0.80 (0.26)	0.02 (−0.02 to 0.06)	.26
β-Blocker	297	0.76 (0.30)	606	0.77 (0.29)	0.02 (−0.02 to 0.06)	.38
Antiplatelet agent	267	0.77 (0.30)	558	0.79 (0.29)	0.01 (−0.03 to 0.06)	.54
All 3 medications[a]	246	0.58 (0.35)	516	0.61 (0.33)	0.04 (−0.01 to 0.09)	.16
Relaxed definition						
Statin	298	0.81 (0.26)	611	0.83 (0.25)	0.02 (−0.02 to 0.06)	.27
β-Blocker	297	0.80 (0.28)	606	0.81 (0.27)	0.02 (−0.02 to 0.05)	.43
Antiplatelet agent	267	0.80 (0.29)	558	0.81 (0.28)	0.01 (−0.03 to 0.05)	.50
All 3 medications[a]	246	0.63 (0.34)	516	0.66 (0.33)	0.03 (−0.02 to 0.08)	.19

[a] Calculated by the proportion of days in which a patient has an active medication for all 3 medications. It is not the weighted average of individual medication adherence.

Volpp et al. *JAMA Intern Med*. 2017;177(8):1093-1101. doi:10.1001/jamainternmed.2017.2449

JAMA | Original Investigation

Personalized Patient Data and Behavioral Nudges to Improve Adherence to Chronic Cardiovascular Medications

A Randomized Pragmatic Trial

P. Michael Ho, MD, PhD; Thomas J. Glorioso, MS; Larry A. Allen, MD, MHS; Richard Blankenhorn, MSDA, BSF; Russell E. Glasgow, PhD; Gary K. Grunwald, PhD; Amber Khanna, MD; David J. Magid, MD, MPH; Joel Marrs, PharmD, MPH; Sylvie Novins-Montague, BA; Steven Orlando, PharmD; Pamela Peterson, MD, MSPH; Mary E. Plomondon, PhD; Lisa M. Sandy, MA; Joseph J. Saseen, PharmD; Katy E. Trinkley, PharmD, PhD; Shawni Vaughn, MAS; Joy Waughtal, MPH; Sheana Bull, PhD

Ho et al. *JAMA*. 2025;333(1):49-59. doi:10.1001/jama.2024.21739

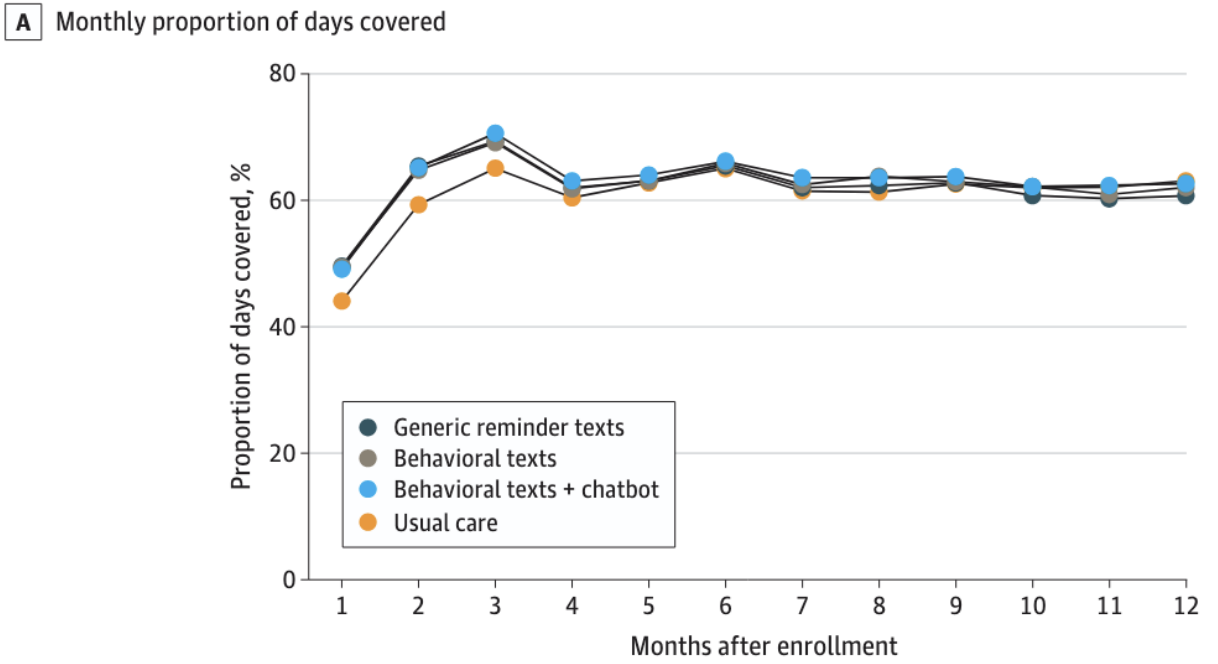
METHODS (HO ET AL.)

- Randomized pragmatic trial of 9501 pts with CVD who did not fill meds for 7 days
- 4 treatment arms:
  - Generic text refill reminders
  - Behavioral nudge text refill reminders
  - Behavioral nudge text refill reminders + chatbot
  - Usual care
- Primary outcome: proportion of days covered (PDC)

Ho et al. *JAMA*. 2025;333(1):49-59. doi:10.1001/jama.2024.21739

Day	Generic Reminders	Behavioral	Behavioral +Chatbot
1	You are due to refill your {{drug_name}}. If you have already filled your prescription let us know by replying DONE.	Hi {{First_Name}} We noticed you haven't refilled your {{drug_name}}. Reply 1= I'll get them refilled in the next 2 days. Reply 2= I'm still working on a plan to get this done If you have already filled your prescription let us know by replying DONE.	Hi {{First_Name}} We noticed you haven't refilled your {{drug_name}}. Reply 1= I'll get them refilled in the next 2 days. Reply 2= I'm still working on a plan to get this done If you have already filled your prescription let us know by replying DONE.
3	You are due to refill your {{drug_name}}. If you have already filled your prescription let us know by replying DONE.	Hi {{First_Name}} Patients like you often take a number of medications, but are happy they help them stay out of the hospital and at home. Can you commit to refilling your meds today? Reply 1=Yes I can commit today. Reply 2 = I will commit later this week If you have already filled your prescription let us know by replying DONE.	Hi {{First_Name}} Patients like you often take a number of medications, but are happy they help them stay out of the hospital and at home. Can you commit to refilling your meds today? Reply 1=Yes I can commit today. Reply 2 = I will commit later this week If you have already filled your prescription let us know by replying DONE.
5	You are due to refill your {{drug_name}}. If you have already filled your prescription let us know by replying DONE.	Hi {{First_Name}} It's easy to forget to get your meds - that's what we're here for! Reply 1= I have a plan to get your prescription Reply 2= I'll get to it later this week If you have already filled your prescription let us know by replying DONE.	Hi {{First_Name}} We care about you. Your medications are important! Tell us which of these might affect you? (choose one) a. If I feel better or worse I stop b. Tough to remember c. I don't understand what to take d. Other Follow up message asking about 1-10 scale If you have already filled your prescription let us know by replying DONE.
7	You are due to refill your {{drug_name}}.	Hi {{First_Name}}	Hi {{First_Name}}

Figure 2. Proportion of Days Covered



No. of patients												
Generic reminder texts	2324	2285	2262	2228	2181	2126	2033	1906	1869	1778	1768	1738
Behavioral texts	2305	2260	2240	2213	2173	2120	2019	1896	1858	1757	1741	1721
Behavioral texts + chatbot	2319	2275	2244	2218	2178	2123	2017	1890	1845	1745	1726	1711
Usual care	2321	2305	2291	2268	2223	2173	2070	1941	1901	1803	1789	1764

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Medication Adherence and Blood Pressure Control: A Scientific Statement From the American Heart Association

Niteesh K. Choudhry, MD, PhD, Chair, Ian M. Kronish, MD, MPH, FAHA, Wanpen Vongpatanasin, MD, Keith C. Ferdinand, MD, FAHA, Valory N. Pavlik, PhD, Brent M. Egan, MD, FAHA, Antoinette Schoenthaler, EdD, Nancy Houston Miller, BSN, and David J. Hyman, MD, MPH on behalf of the American Heart Association Council on Hypertension; Council on Cardiovascular and Stroke Nursing; and Council on Clinical Cardiology | AUTHOR INFO & AFFILIATIONS

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“Given the multitude of reasons for nonadherence and the heterogeneity of reasons underlying nonadherence in individual patients, it is not surprising that the most potent interventions have been intensive, multicomponent interventions that address multiple barriers concurrently.”

Coundhry NK et al. *Hypertension*. 2022;79(1):e1-e14

SUMMARY

- Many trials of behavioral economics in CVD medication adherence have not had durable effects on either adherence or clinical outcomes
- Even with trials that are positive, no intervention is a “home run”

FOR DISCUSSION

- Is there a role for more studies of behavioral economics and medication adherence in hypertension? (or not?)
- Is the future something different?
- How pragmatic should these trials be? (e.g. with BP outcome assessment)?