DASH Diet Intervention at Carter Burden Senior Centers

LiveOn NY

30th Annual Conference

January 30,2020

Partnerships to Conduct Community Based Research

Carter Burden Network formed a partnership in 2015 with The Rockefeller University and the Clinical Directors Network to conduct community-based research about seniors aging in place

This work is funded by grant # HHS-2018-ACL-AOA-INNU00300 Administration on Aging Innovations in Nutrition Programs and Services, Department of Health and Human Services, Administration for Community Living, with additional support from the NCATS/CCTS grant UL1 TR001866

cbn carter burden network

leading the way in aging services

The **Carter Burden Network (CBN)** promotes the wellbeing of seniors 60 and older through a continuum of services, advocacy, arts and culture, health and wellness, and volunteer programs, all oriented to individual, family, and community needs. CBN is dedicated to supporting the efforts of older people to live safely and with dignity. Established in 1971 by New York City Council Member Carter Burden, the organization began as a single employee in the Council office and has since transformed into a network of 12 programs in 7 locations, serving 5,000 people annually.

Carter Burden Network Senior Center Programs

Leonard Covello Senior Program 312 East 109th Street 10029

cbn carter burden network
leading the way in aging services

Lehman Village Senior Center 1641 Madison Ave, 10029

Roosevelt Island 546 Main Street 10044

Luncheon Club 351 East 74th Street 10021

CBN provides nearly 300,000 meals annually to seniors in New York City through congregate and home delivered meals subsidized by the NYC Department for the Aging (DFTA).

The Rockefeller University

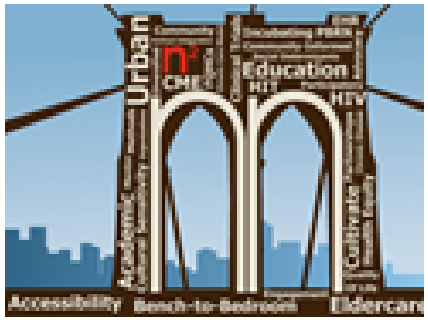
- Unique structure
  - 82 heads of labs
  - 100+ year tradition of translational research
  - 40 bed research-only hospital
  - AAHRPP-accredited
- 250 protocols
  - 80% investigator - initiated
  - 20% phase I, II, III or device trials
  - Community based participatory research
- NIH funded CTSA-award funded
  Center for Clinical Translational Science since 2006
  - Action Committee for Community Engaged Research
  - Community Engaged Research Core
    - Engaging communities and basic scientists early in the design of research
    - Engaging diverse communities
    - Research across the Life Span

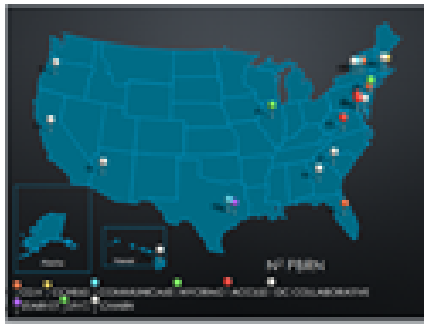
Clinical Directors Network, Inc.

CDN N²: Building a Network of Safety Net PBRNs

AHRQ Center of Excellence for Practice-based Research and Learning

- **A Practice-based Research Network (PBRN)** that works with Federally Qualified Health Centers (FQHCs) and other Primary Health Care Safety-net Practices
- **Research Infrastructure to build a Learning Healthcare System**
- **A collaboration among:**
  - Access Community Health Network (ACCESS)
  - Alliance of Chicago (ALLIANCE)
  - Association of Asian Pacific Community Health Organization (AAPCHO)
  - Center for Community Health Education Research and Service (CCHERS)
  - **Clinical Directors Network (CDN) [LEAD PBRN]**
  - Community Health Applied Research Network (CHARN)
  - Fenway Institute (FENWAY)
  - New York City Research and Improvement Group (NYCRING)
  - Oregon Community Health Information Network (OCHIN)
  - South Texas Ambulatory Research Network (STARNet)
  - One Florida





Funded by AHRQ Grant: P30 HS 021667
Principal Investigator: Jonathan N. Tobin, PhD (CDN)

www.CDNetwork.org

DASH Intervention Team and Advisory Committee

October 2019: The Project Team and Advisory Committee members are wearing the study's signature orange Healthy Eating Healthy Heart aprons.

- A 2016-18 *Healthy Aging* pilot study was conducted by the partnership to assess the health status and health priorities of seniors receiving CBN services
- A high prevalence of uncontrolled hypertension was observed among the seniors

Healthy Aging Pilot 2016-2018

Carter Burden Network

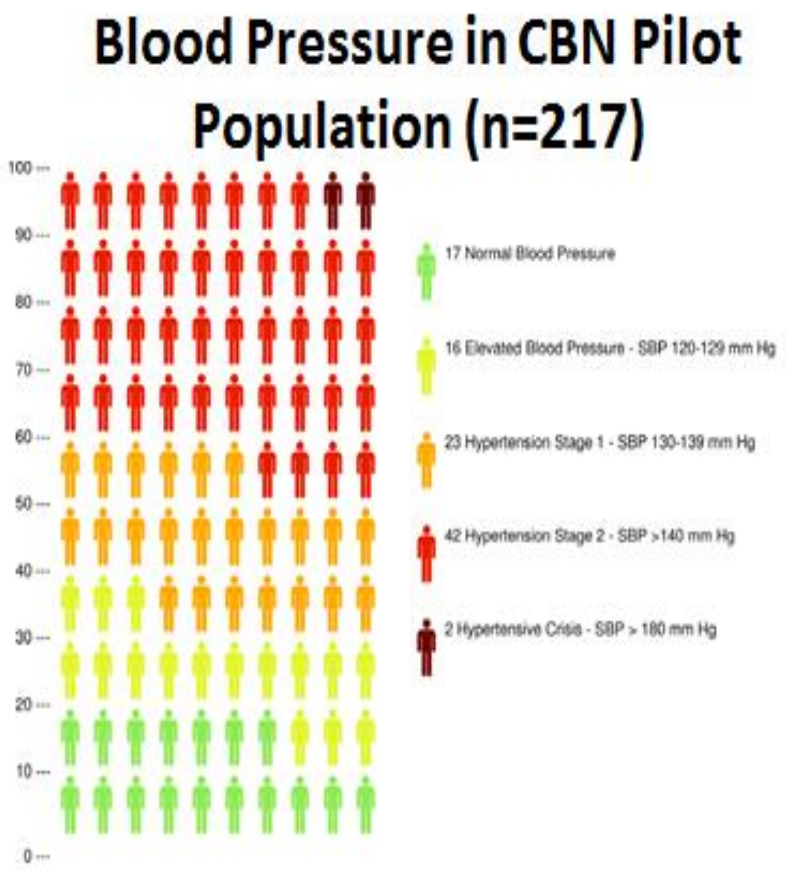
RU/CBN/CDN - Carter Burden Healthy Aging Pilot 2016-2018

Purpose: To collect information on the health of CBN seniors to assess the impact of services on health

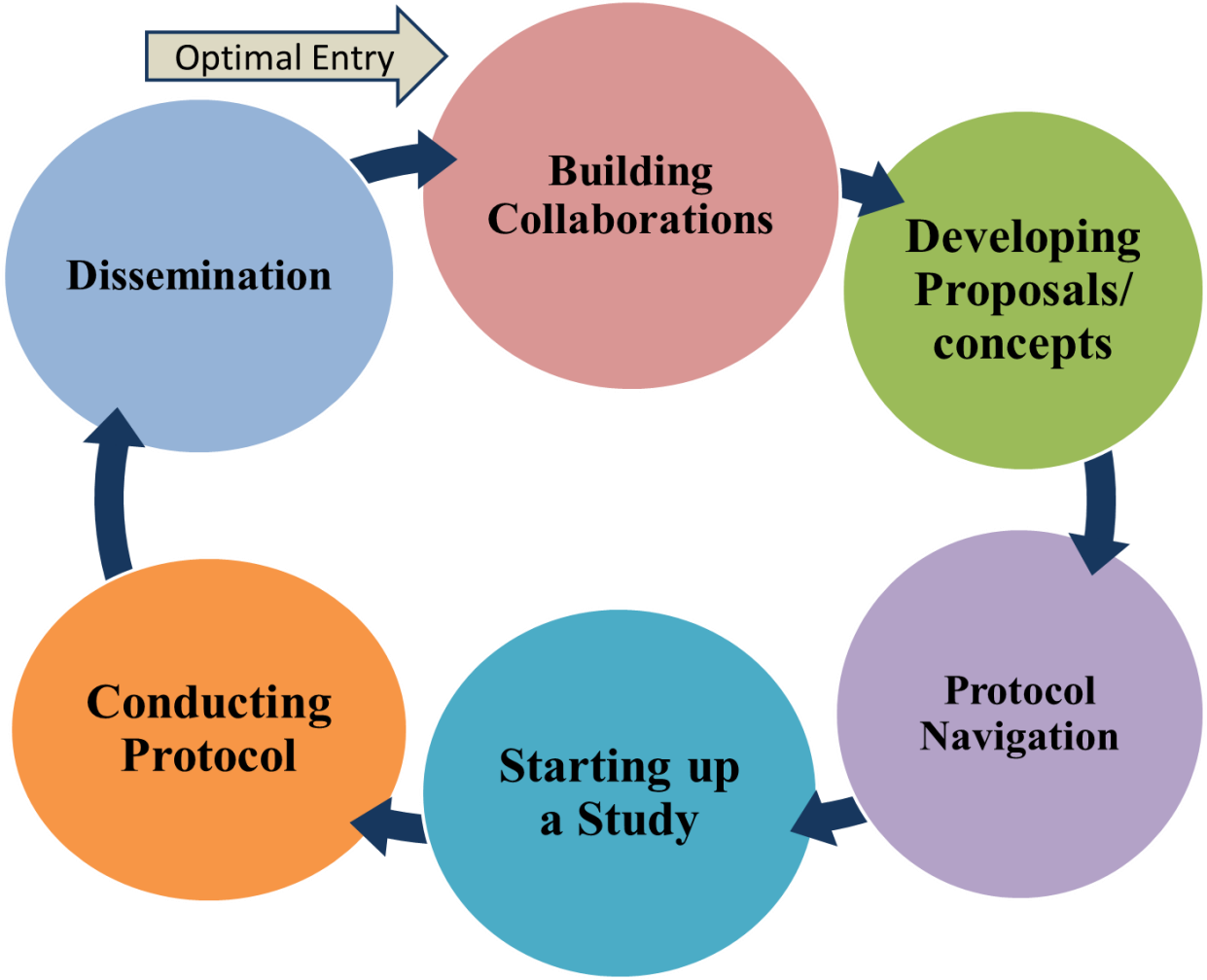
Method: Pulse, Blood Pressure, Walk/Balance Test, Surveys on Health, Nutrition, and Social Factors etc.

Highlights:

- Enthusiastic enrollment of 218 seniors
- 99% completed the study
- An important finding about blood pressure.....
- *Funded by the Rockefeller University Center for Clinical Translational Science (UL1TR001866)*



Community-Engaged Research Navigation



Innovation in Nutrition

- The Dietary Approaches to Stop Hypertension (DASH) diet has been proven in research settings to lower blood pressure in as little as 14 days. However, its implementation has never been tested among seniors in congregate meal settings.
- The DASH Diet Intervention Project offers senior centers an opportunity to measure the impact of a congregant meal on health outcomes associated with a chronic health condition.
- A community-academic partnership to study seniors aging in place through diet, education and in-home blood pressure monitoring.
- Clients from two CBN sites, the Leonard Covello Senior Program and the 74th Street Luncheon Club, report aspects of food insecurity within the past 12 months. 25% of Covello clients report cutting the size of their meals or skipping meals for financial reasons.

Disrupting food insecurity for seniors living in the community and making an impact on health outcomes!

Dietary Approaches to Stop Hypertension (DASH) Diet Intervention Project- Administration for Community Living (ACL)

Primary Aim: To determine whether implementation of the DASH diet delivered through the congregate meal programs (with educational and behavioral support) can lower blood pressure in seniors receiving the program.

Project Locations:

- Luncheon Club- CBN's first senior center
- Leonard Covello Senior Program-NYC Dept. for the Aging innovative senior center (open 7 days per week) in East Harlem

DASH Diet Intervention Project at CBN Senior Centers

Primary Outcomes:

a) Change in mean systolic BP at 1 month after the full after implementation of the DASH-aligned congregate meals, compared to baseline

b) Increase in the proportion of individuals whose blood pressure is controlled according to JNC-8 guidelines, for age > 60 years, SBP/DBP < 150/90

DASH Diet Intervention at CBN Senior Centers: Goals and Objectives

a) Leverage and grow a sustainable, multi-stakeholder partnership
b) Adapt existing New York City Department for the Aging-approved/CBN-designed menus
c) Optimize client acceptance of the DASH Intervention
d) Support cognitive and behavioral change
e) Provide positive feedback and enhance self-efficacy
f) Enhance the value of nutritional service programs by reducing waste
g) Implement a scalable and sustainable monitoring and evaluation system
h) Help to inform more broadly the senior center menu locally and nationally

Study design:

Enroll 200 seniors receiving congregate meals at two CBN senior centers. Participants will receive:

1) meals at the centers that are aligned with the evidence-based Dietary Approaches to Stop Hypertension (DASH)-diet model

2) health and nutrition education sessions, on-site blood pressure monitoring

3) support for self-home blood pressure monitoring. Each participant will receive an Omron10 series blood pressure device for in-home monitoring

DASH Diet Intervention Data Collection Tool

- **Time points:** Baseline, Month 1, Month 3, and Month 6:
  - **Biometric:** Blood Pressure, Pulse, Weight and Height
  - **Surveys:** Food Behavior, Food Insecurity, Quality of Life, Social Isolation, Hypertension Medication Adherence and Self-Efficacy
- Self-home blood pressure monitoring occurs throughout the study

Dietary Approaches to Stop Hypertension (DASH)

Dietary Approaches to Stop Hypertension (DASH)

Sample Menu Analysis and Revision

Covello Original	Action	Covello Revised
chicken piccata w/ lemon sauce (p)	→	chicken piccata w/ lemon sauce (p)
	+	parsley (fl)
Bowtie noodles (g)	Δ	WW noodles (g)
1 slice WW bread (g)	Δ	1 whole grain rolls (g)
Normandy blend mixed vegetables (v)	→	Normandy blend mixed vegetables (v)
	+	sauteed spinach (v)
Kiwi (f)	→	kiwi (f)
	+	Canned peaches (f)
	+	flavored H20 (fl)
1% milk (d)	→	1% milk (d)
butter (O/F)	Δ	olive oil spread (O/F)

Summary of changes

3/6 protein	→	3/6 protein	(p)
2/6 grains	Δ	2/6 grains	(g)
1/4 veggies	+	2/4 veggie	(v)
1/4 fruit	+	2/4 fruit	(f)
1/3 dairy	→	1/3 dairy	(d)
1/3 fat	Δ	1/3 fat	(O/F)
			added flavor

DASH Nutrition Education Class

Rockefeller University Bionutrition Registered Dietician conducts the first DASH nutrition education class.

Where Are We Today… (January 2020)

DASH Diet Intervention
Enrollment Data–as of 12/17/2019

ACCRUAL		GENDER/AGE			HISTORY	
Site	**Enrolled**	**% Male**	**% Female**	**Avg Age**	**% Hospitalized 12M**	**Falls 12M %**
Covello Center	48	25%	75%	72	23%	21%
Luncheon Club	20	35%	65%	76	30%	30%
TOTALS	**68**					
Data through 12-17-2019						

Demographics	English Speaking Cohort n=54	Spanish speaking cohort n=11
Age (mean years, (SD)	71.5 (6.96)	73.5 (11.92)
Hispanic	26.4%	100%
White	38.9%	55.6%
Persons of color	56.5%	33.3%
Married/member of a couple Separated or divorced Widowed Never married	18.9% 32.1% 26.4% 18.9%	0 36.4% 54.5% 9.1%
Highest education attained • No school or kindergarten only • Grades 1-8 • Grades 9-11 • Grade 12 or GED • Some college • College 4 years	 0 1.9% 5.6% 24.1% 22.2% 44.4%	 9.1% 36.4% 9.1% 27.3% 0 18.2%
Employment • Self-employed • Retired	 7.4% 83.8%	 0 81.8%
Yearly household income • <$10,000 • $10,000- $14,999 • $15,000-$19,999 • $20,000-$24,9999 • $25,000-$34,999 • >$35,000	 14.8% 11.1% 11.1% 9.3% 18.5% 22.3%	 18.2% 45.5% 9.1% 0 9.1% 0

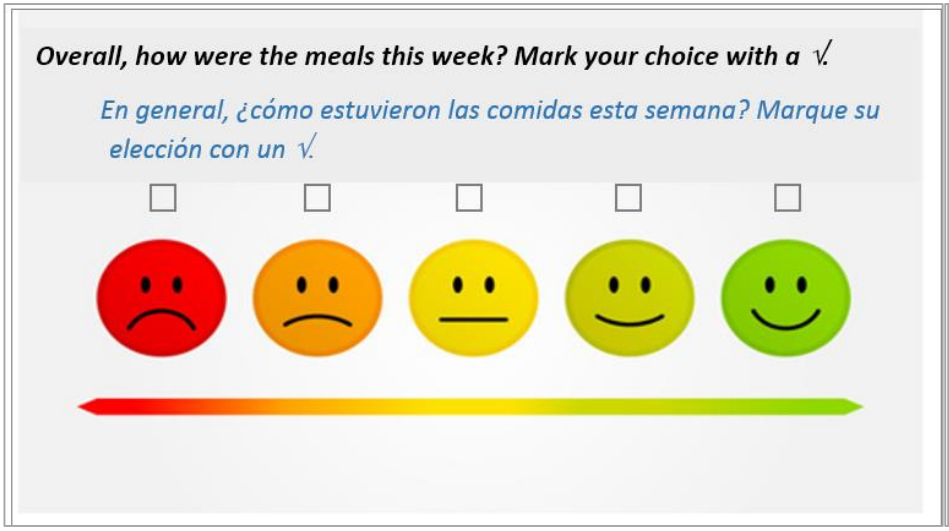
DASH Diet Implementation Study
Preliminary BP Data – Baseline, Month 0

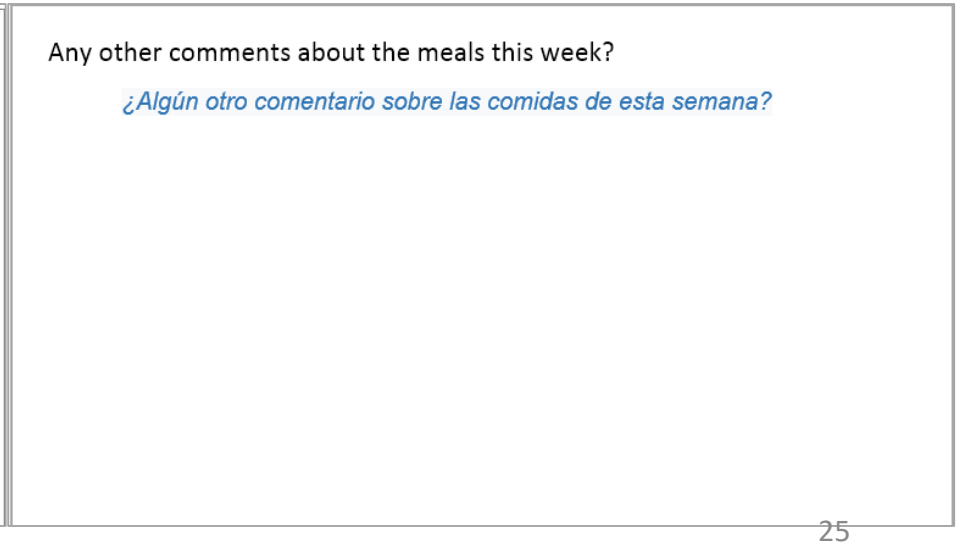
Systolic BP	Diastolic BP	Blood Pressure Category	Participants in BP range, Covello (n=45)	Participants in BP range, Luncheon Club (n=20)
≥ 180 and/or	≥120	Hypertensive Crisis	3 (7%)	1 (5%)
≥ 140 and/or	≥90	Stage 2 Hypertension	16 (36%)	5 (30%)
130-139 or	80-89	Stage 1 Hypertension	14 (31%)	9 (45%)
120-129	< 80	Elevated Blood Pressure	6 (13%)	1 (5%)
< 120 and	<80	Normal	6 (13%)	4 (20%)
Uncontrolled BP, Age ≥65, SBP≥150 OR DBP≥80			21 (48%)	8 (40%)

Meal Satisfaction

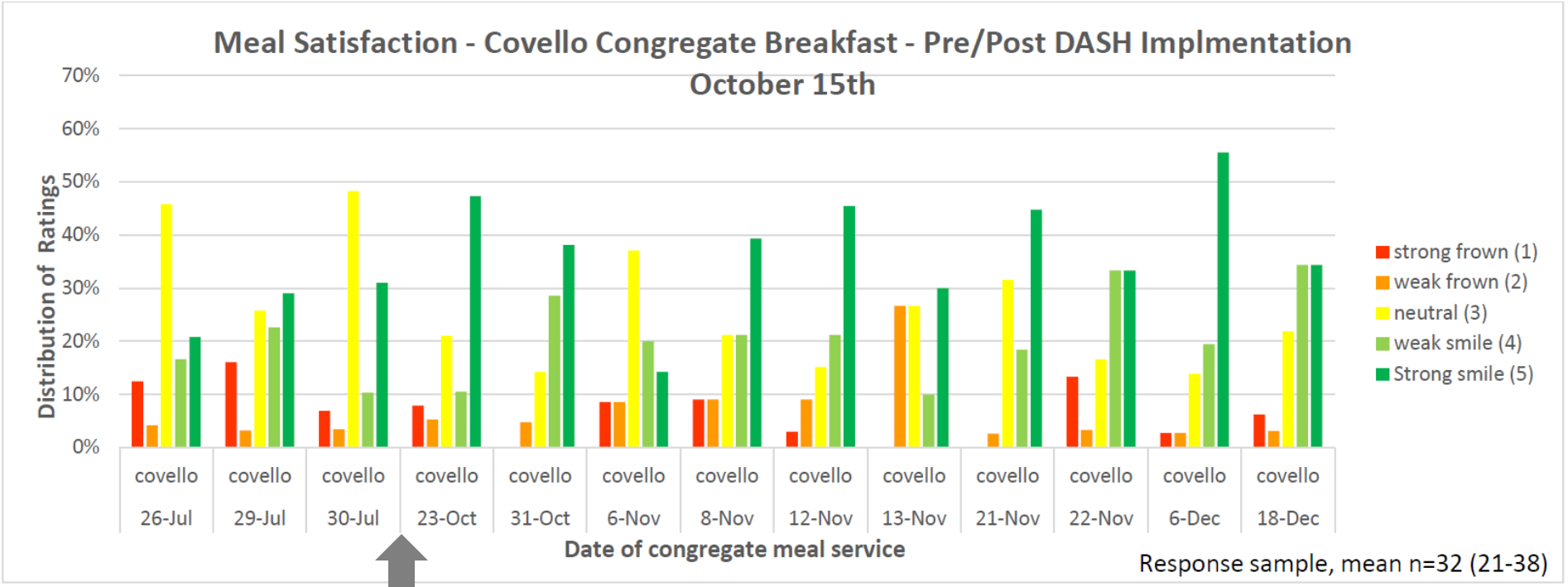
Menu Satisfaction, before and after DASH implementation

Smiley Likert Card:





Meal Satisfaction - Breakfast



DASH meals start, October 15th

Plate Waste Assessment

Data collection tool……

	Record ID	29				
	Percentage is the amount of food remaining on the plate, not the amount consumed.					
	Plate Waste Data					
		0%	25%	50%	75%	100%
Protein →	flounder	◉	○	○	○	○
Grain 1 →	brown rice	◉	○	○	○	○
Grain 2 →	whole grain bread	◉	○	○	○	○
Veggie 1 →	Baby carrots	○	○	◉	○	○
Veggie 2 →	steamed spinach	○	○	◉	○	○
Fruit 1 →	apple	◉	○	○	○	○
Fruit 2 →	Mandarin oranges	◉	○	○	○	○

Plate Waste Data

Date	Proteins		Grains				Vegetables				Fruits			
date	foodp1	wastep1	foodg1	wasteg1	foodg2	wasteg2	foodv1	wastev1	foodv2	wastev2	foodf1	wastef1	foodf2	wastef2
10/17/2019	pepper steak	0.0	linguine	7.5	linguine	6.3	broccoli	7.5	broccoli	3.8	peach	0.0	kiwi	0.0
10/18/2019	flounder	3.8	brown rice	1.3	whole grain bread	3.8	Baby carrots	20.0	steamed spinach	26.3	apple	0.0	Mandarin oranges	0.0
10/22/2019	salmon	6.3	whole wheat bread	0.0	veggie barley	30.0	california blend vegetables	11.3	veggie barley	28.8	apple	0.0	canned apricots	10.0
10/23/2019	Western frittata	6.3	barley chickpea salad with dried fruit	26.3	whole wheat bread	11.3	sauted asparagus	25.0	Western frittata	7.5	banana pudding	0.0	.	
10/23/2019	sancocho	26.3	brown rice	46.3	whole grain wheat bread	0.0	vegetable mix	45.0	.		tangerine	3.8	raisins	0.0
10/28/2019	flounder	0.0	brown rice	21.3	quinoa	31.3	Italian blend vegetables	15.0	spinach	31.3	apple	0.0	fruit cocktail	0.0

0% - 10% mean plate waste of this item

11% - 15% mean plate waste of this item

16-25% mean plate waste of this item

26% - 40% mean plate waste of this item

41% - 100% mean plate waste of this item

Plate Waste Data

Date	Dairy		Fats/oils		Seeds, beans, lentils		Sweets		
date	foodd1	wasted1	food6	wastefo	food7	wasten	food8	wastes	num
10/17/2019	milk 1%	0.0	olive oil spread	0.3	.	.	.	.	20
10/18/2019	milk 1%	0.4	olive oil spread	1.3	.	.	.	.	20
10/22/2019	milk 1%	0.1	olive oil spread	0.4	.	.	.	.	20
10/23/2019	milk 1%	0.3	olive oil spread	0.0	barley chickpea	1.1	banana pudding	0.0	20
10/23/2019	milk 1%	0.0	olive oil spread	0.3	.	.	.	.	20
10/28/2019	milk 1%	0.0	olive oil spread	0.0	.	.	.	.	20

0% - 10% mean plate waste of this item

11% - 15% mean plate waste of this item

16-25% mean plate waste of this item

26% - 40% mean plate waste of this item

41% - 100% mean plate waste of this item

Analyses we are looking forward to…..

- Primary outcome (change in SBP) for whole set
- Subset analysis comparing seniors who shared BP with provider versus those who didn't
- Home BP monitoring data – frequency and relationship to change in SBP
- Summary data analysis of plate waste – overall assessment of how well DASH diet components consumed /week
- Analysis of plate waste, changes to menu, food costs

Project Challenges – Early start up

- Hiring challenges (bilingual Research Assistants) altered the project timeline.
- Organizing workgroups, designing multi-institutional workflow, communication, data transfer platforms and other aspects of operationalizing the project was complex.
- Design, review and approval of revised DASH-concordant menus involved multiple stakeholders and layers of review by the RU Bionutrition team, CBN Food Services Manager, and New York City Dept. for the Aging (DFTA) Supervising Nutritionists. The process took 6 months longer than planned.

Project Challenges – Site and Operations

- Projecting and managing additional food costs within program budget
- Relocation of Luncheon Club site mid-study
- Loss of onsite kitchen; challenge of parallel meal prep – two menus/one kitchen
- Planning of visits and assessments duplicated across two locations with a small team, a large cohort, and the need to keep the two sites temporally aligned
- Managing a collaboration across stakeholders

Project Challenges – Population and Intervention

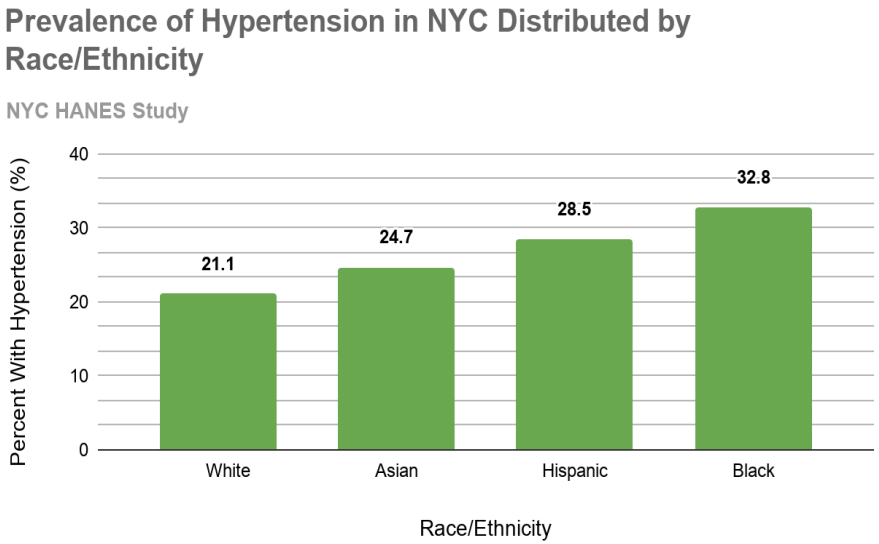
- Competing activities at the CBN sites challenge scheduling and attendance
- Seniors' busy outside lives affect interest/attendance
- Early recruitment saturation/study fatigue for seniors
- Stresses (childcare, social challenges) affect attrition
- Meal acceptance – satisfaction versus plate waste
- Limited coaching opportunities
- Limited connection to providers

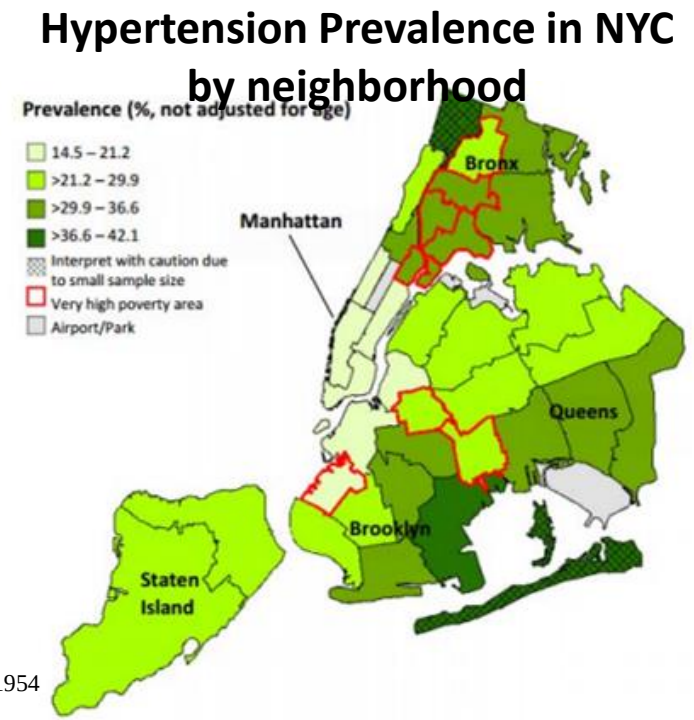
DASH Intervention
Celebration of the Chefs!

December 19, 2019: The Project Team celebrating the efforts of the Chefs and food services staff in implementing and sustaining the DASH-aligned menus for the study. The was selection of DASH-aligned treats was served. We were joined by a special guest Kathleen Otte, Administration on Community Living, Regional Administrator, Region I & II.

Why it Matters:
Epidemiology & Policy Implications of Implementing the DASH Diet in Congregate Meal Settings

Hypertension Prevalence Rates by Race/Ethnicity and SES, NYC



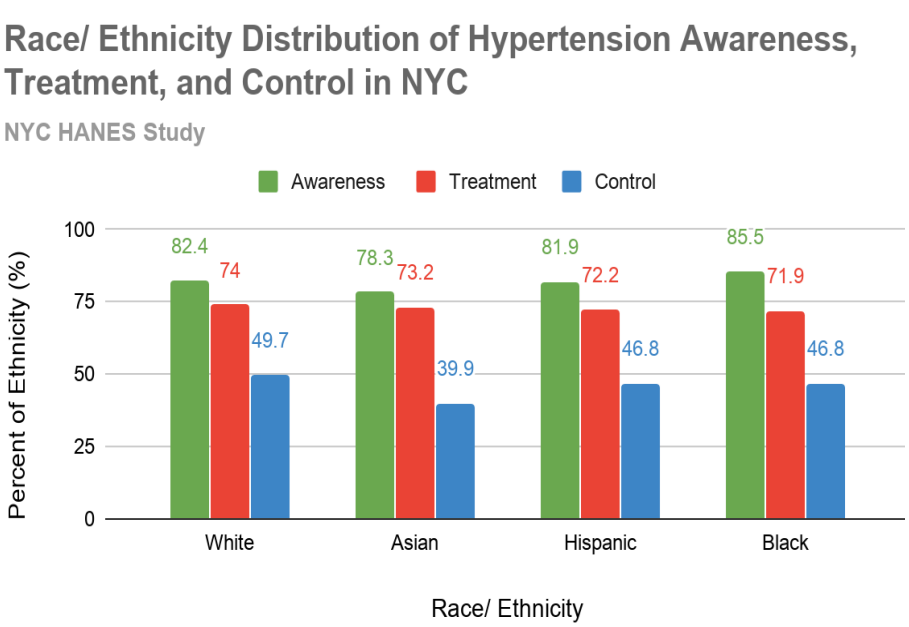


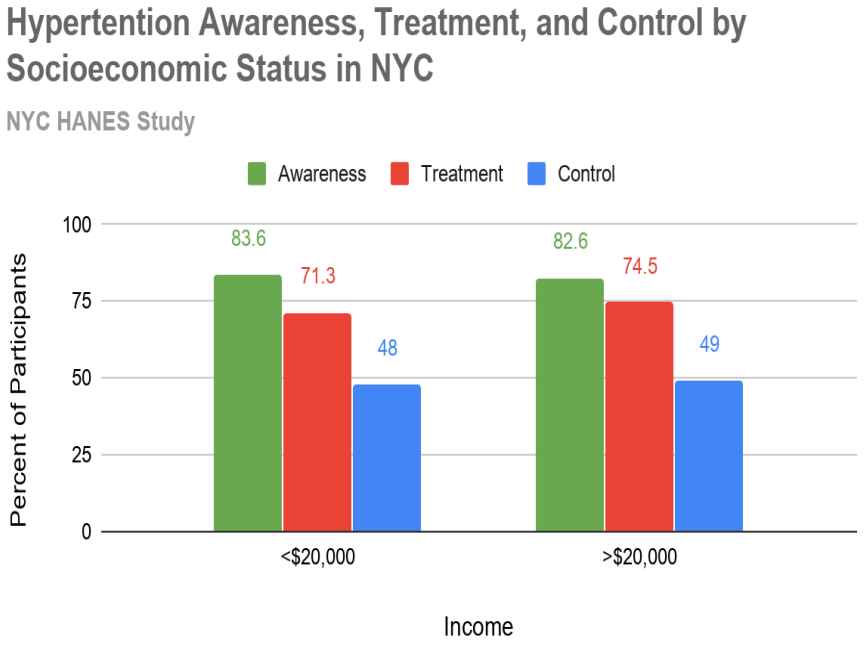
Angell SY, Garg RK, Gwynn RC, Bash L, Thorpe LE, Frieden TR. Prevalence, Awareness, Treatment, and Predictors of Control of Hypertension in New York City. *Circulation: Cardiovascular Quality and Outcomes*. 2008;1(1):46-53. doi:10.1161/circoutcomes.108.791954

https://www.ahajournals.org/doi/full/10.1161/circoutcomes.108.791954

Premature Heart Disease and Stroke Deaths Among Adults in New York City. Epi Data Brief. https://www1.nyc.gov/assets/doh/downloads/pdf/epi/databrief95.pdf Published November 2017
https://www1.nyc.gov/assets/doh/downloads/pdf/tcny/community-health-assessment-plan.pdf

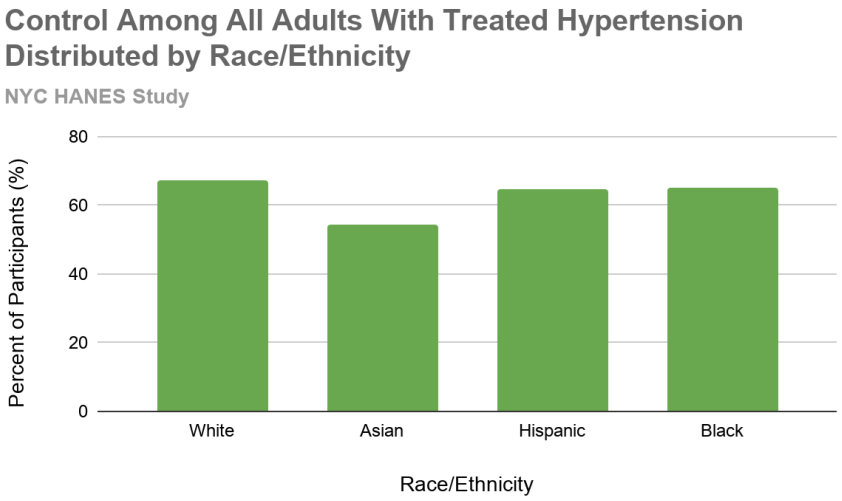
Hypertension Awareness-Treatment-Control Rates by Race/Ethnicity and SES, NYC

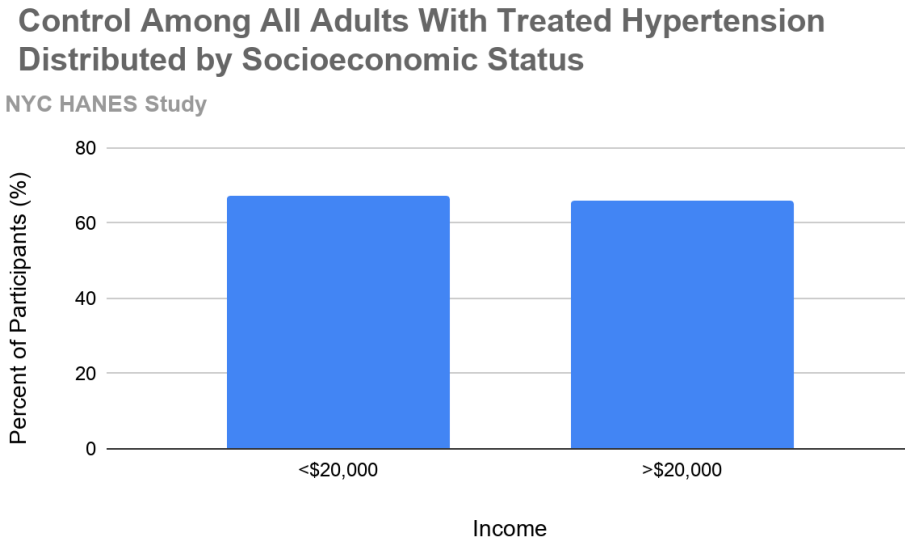




Angell, S., Garg, R., Gwynn, R., Bash, L., Thorpe, L. and Frieden, T. (2008).
Prevalence, Awareness, Treatment, and Predictors of Control of Hypertension in New York City |
Circulation: Cardiovascular Quality and Outcomes. [online] https://www.ahajournals.org/doi/full/10.1161/circoutcomes.108.791954 [Accessed 9 Jan. 2020].

Hypertension Control Rates by Race/Ethnicity and SES, NYC





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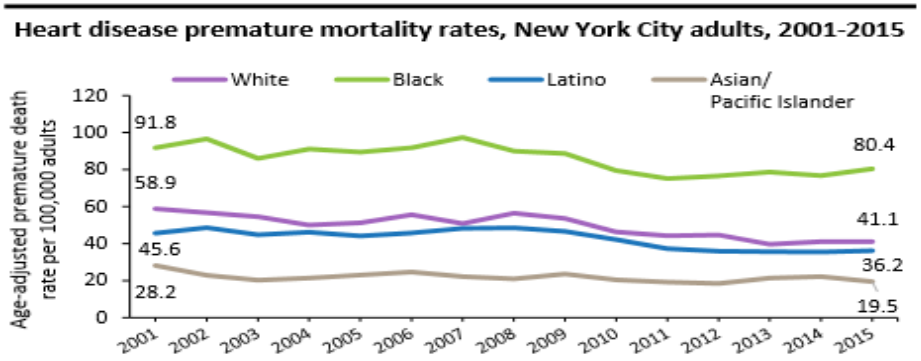
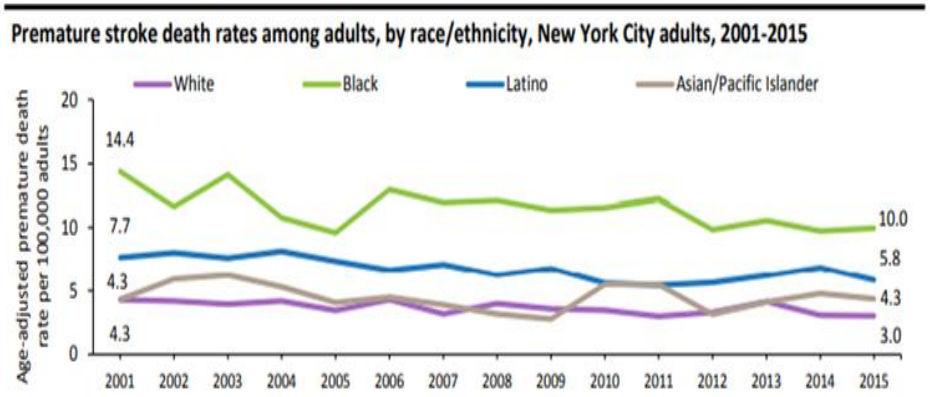
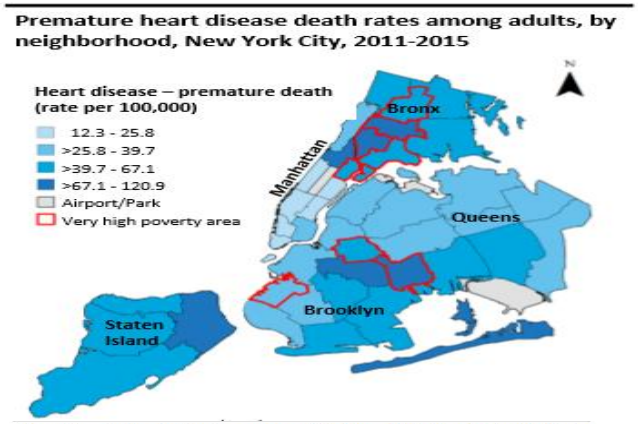
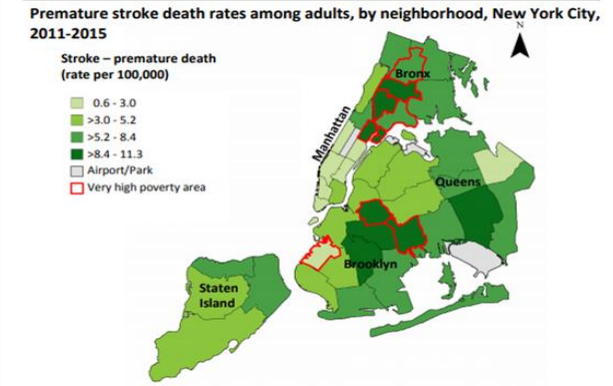
Cardiovascular and Cerebrovascular Death Rates (Mortality) by Race/Ethnicity and SES, NYC









Premature Heart Disease and Stroke Deaths amound Adults in New York City. Epi Data Brief. https://www1.nyc.gov/assets/doh/downloads/pdf/epi/databrief95.pdf Published November 2017

Racism and Ambulatory Blood Pressure in a Community Sample

Elizabeth Brondolo, PhD, Daniel J. Libby, MA, Ellen-ge Denton, MS, Shola Thompson, MA, Danielle L. Beatty, PhD, Joseph Schwartz, PhD, Monica Sweeney, MD, Jonathan N. Tobin, PhD, Andrea Cassells, MPH, Thomas G. Pickering, MD, and William Gerin, PhD

Objective: Racism has been identified as a psychosocial stressor that may contribute to disparities in the prevalence of cardiovascular disease. The goal of the present article was to investigate the relationship of perceived racism to ambulatory blood pressure (ABP) in a sample of American-born Blacks and Latinos. **Methods:** Participants included English-speaking Black or Latino(a) adults between the ages of 24 and 65. They completed daily mood diaries and measures of perceived racism, socioeconomic status, and hostility. Participants were outfitted with ABP monitors; 357 provided data on waking hours only, and 245 provided data on both waking and nocturnal ABP. **Results:** Perceived racism was positively associated with nocturnal ABP even when controlling for personality factors and socioeconomic status. **Conclusions:** The results suggest that racism may influence cardiovascular disease risk through its effects on nocturnal BP recovery. **Key words:** ambulatory blood pressure, racism, discrimination, cardiovascular disease, ecological momentary assessment, hypertension.

RACISM AND AMBULATORY BLOOD PRESSURE

Some participants were recruited from The Institute for the Puerto Rican/Hispanic Elderly (IPR/HE) at the Leonard Covello Senior Center

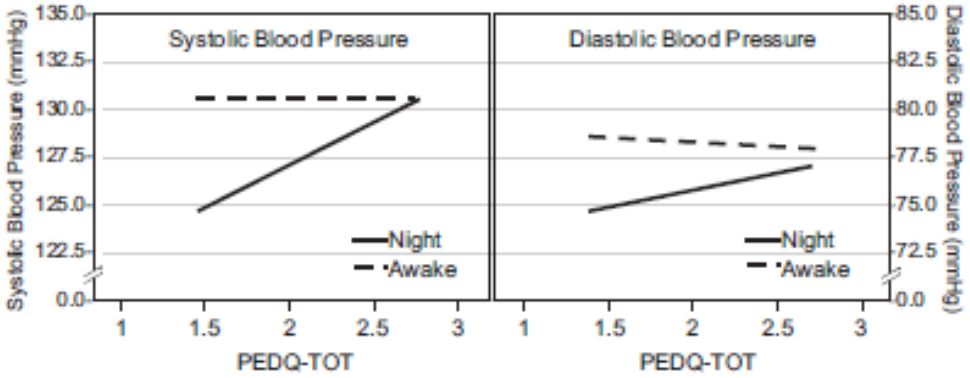


Figure 1. Predicted waking and nocturnal BP as a function of perceived racism (PEDQ-CV lifetime discrimination), adjusted for age, gender, race/ethnicity, body mass index, hostility, and individual SES.

Psychosom Med. 2008 Jan;70(1):49-56. https://www.ncbi.nlm.nih.gov/pubmed/18158368

Funding: NHLBI 1-R01-HL068590-01 A1 (Brondolo & Tobin)

NIH-NHLBI Systolic Blood Pressure Intervention Trial (SPRINT)

Original Investigation

Intensive vs Standard Blood Pressure Control and Cardiovascular Disease Outcomes in Adults Aged ≥75 Years
A Randomized Clinical Trial

Jeff D. Williamson, MD, MHS; Mark A. Supiano, MD; William B. Applegate, MD, MPH; Dan R. Berlowitz, MD; Ruth C. Campbell, MD, MSPH; Glenn M. Chertow, MD; Larry J. Fine, MD; William E. Haley, MD; Amret T. Hawfield, MD; Joachim H. Ix, MD, MAS; Dalane W. Kitzman, MD; John B. Kostis, MD; Marie A. Krousel-Wood, MD; Lenore J. Launer, PhD; Suzanne Oparil, MD; Carlos J. Rodriguez, MD, MPH; Christianne L. Roumie, MD, MPH; Ronald I. Shorr, MD, MS; Kaycee M. Sink, MD, MAS; Virginia G. Wadley, PhD; Paul K. Whelton, MD; Jeffrey Whittle, MD; Nancy F. Woolard; Jackson T. Wright Jr, MD, PhD; Nicholas M. Pajewski, PhD; for the SPRINT Research Group

IMPORTANCE The appropriate treatment target for systolic blood pressure (SBP) in older patients with hypertension remains uncertain.

OBJECTIVE To evaluate the effects of intensive (<120 mm Hg) compared with standard (<140 mm Hg) SBP targets in persons aged 75 years or older with hypertension but without diabetes.

DESIGN, SETTING, AND PARTICIPANTS A multicenter, randomized clinical trial of patients aged 75 years or older who participated in the Systolic Blood Pressure Intervention Trial (SPRINT). Recruitment began on October 20, 2010, and follow-up ended on August 20, 2015.

INTERVENTIONS Participants were randomized to an SBP target of less than 120 mm Hg (intensive treatment group, n = 1317) or an SBP target of less than 140 mm Hg (standard treatment group, n = 1319).

MAIN OUTCOMES AND MEASURES The primary cardiovascular disease outcome was a composite of nonfatal myocardial infarction, acute coronary syndrome not resulting in a myocardial infarction, nonfatal stroke, nonfatal acute decompensated heart failure, and death from cardiovascular causes. All-cause mortality was a secondary outcome.

RESULTS Among 2636 participants (mean age, 79.9 years; 37.9% women), 2510 (95.2%) provided complete follow-up data. At a median follow-up of 3.14 years, there was a significantly lower rate of the primary composite outcome (102 events in the intensive treatment group vs 148 events in the standard treatment group; hazard ratio [HR], 0.66 [95% CI, 0.51-0.85]) and all-cause mortality (73 deaths vs 107 deaths, respectively; HR, 0.67 [95% CI, 0.49-0.91]). The overall rate of serious adverse events was not different between treatment groups (48.4% in the intensive treatment group vs 48.3% in the standard treatment group; HR, 0.99 [95% CI, 0.89-1.11]). Absolute rates of hypotension were 2.4% in the intensive treatment group vs 1.4% in the standard treatment group (HR, 1.71 [95% CI, 0.97-3.09]), 3.0% vs 2.4%, respectively, for syncope (HR, 1.23 [95% CI, 0.76-2.00]), 4.0% vs 2.7% for electrolyte abnormalities (HR, 1.51 [95% CI, 0.99-2.33]), 5.5% vs 4.0% for acute kidney injury (HR, 1.41 [95% CI, 0.98-2.04]), and 4.9% vs 5.5% for injurious falls (HR, 0.91 [95% CI, 0.65-1.29]).

CONCLUSIONS AND RELEVANCE Among ambulatory adults aged 75 years or older, treating to an SBP target of less than 120 mm Hg compared with an SBP target of less than 140 mm Hg resulted in significantly lower rates of fatal and nonfatal major cardiovascular events and death from any cause.

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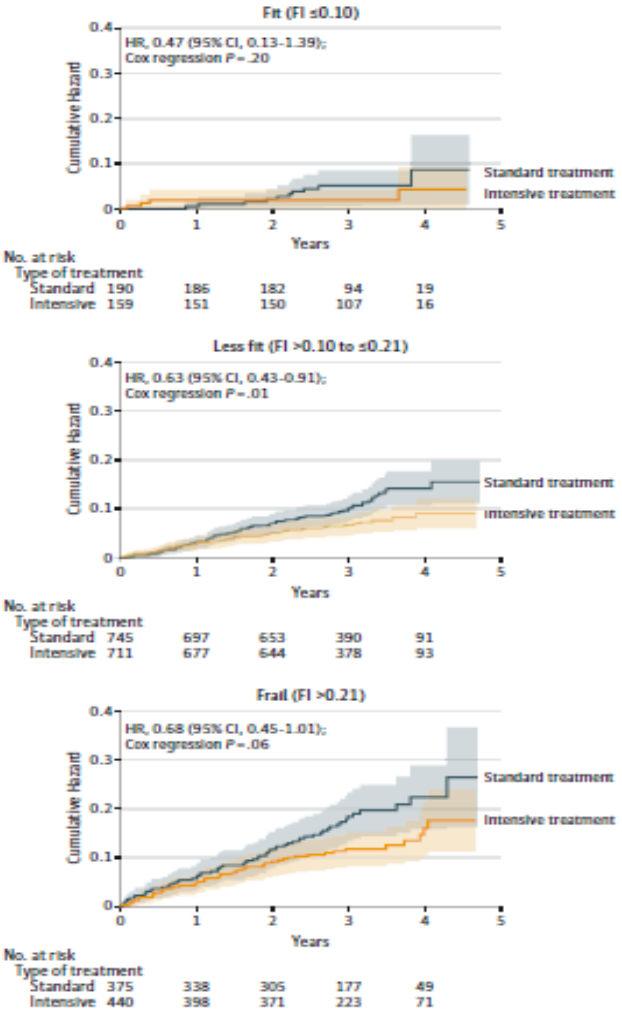
Author Affiliations: Author affiliations are listed at the end of this article.
Group Information: The members of the SPRINT Research Group have been published elsewhere.
Corresponding Author: Jeff D. Williamson, MD, MHS, Section on Gerontology and Geriatric Medicine, Sticht Center on Aging, Department of Internal Medicine, Wake Forest School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157 (jwilliam@wakehealth.edu).

Figure 2. Kaplan-Meier Curves for the Primary Cardiovascular Disease Outcome in Systolic Blood Pressure Intervention Trial (SPRINT) in Participants Aged 75 Years or Older by Baseline Frailty Status



Tinted regions indicate 95% confidence intervals; FI, 37-item frailty index; HR, hazard ratio. The primary cardiovascular disease outcome was a composite of nonfatal myocardial infarction, acute coronary syndrome not resulting in a myocardial infarction, nonfatal stroke, nonfatal acute decompensated heart failure, and death from cardiovascular causes.

NIH-NHLBI Systolic Blood Pressure Intervention Trial (SPRINT)

JAMA | Original Investigation

Effect of Intensive vs Standard Blood Pressure Control on Probable Dementia
A Randomized Clinical Trial

The SPRINT MIND Investigators for the SPRINT Research Group

IMPORTANCE There are currently no proven treatments to reduce the risk of mild cognitive impairment and dementia.

OBJECTIVE To evaluate the effect of intensive blood pressure control on risk of dementia.

DESIGN, SETTING, AND PARTICIPANTS Randomized clinical trial conducted at 102 sites in the United States and Puerto Rico among adults aged 50 years or older with hypertension but without diabetes or history of stroke. Randomization began on November 8, 2010. The trial was stopped early for benefit on its primary outcome (a composite of cardiovascular events) and all-cause mortality on August 20, 2015. The final date for follow-up of cognitive outcomes was July 22, 2018.

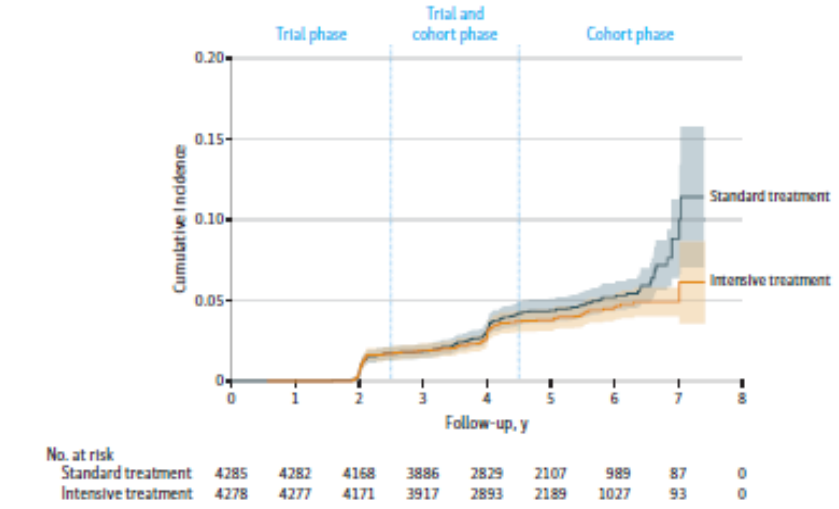
INTERVENTIONS Participants were randomized to a systolic blood pressure goal of either less than 120 mm Hg (intensive treatment group; n = 4678) or less than 140 mm Hg (standard treatment group; n = 4683).

MAIN OUTCOMES AND MEASURES The primary cognitive outcome was occurrence of adjudicated probable dementia. Secondary cognitive outcomes included adjudicated mild cognitive impairment and a composite outcome of mild cognitive impairment or probable dementia.

RESULTS Among 9361 randomized participants (mean age, 67.9 years; 3332 women [35.6%]), 8563 (91.5%) completed at least 1 follow-up cognitive assessment. The median intervention period was 3.34 years. During a total median follow-up of 5.11 years, adjudicated probable dementia occurred in 149 participants in the intensive treatment group vs 176 in the standard treatment group (7.2 vs 8.6 cases per 1000 person-years; hazard ratio [HR], 0.83; 95% CI, 0.67-1.04). Intensive BP control significantly reduced the risk of mild cognitive impairment (14.6 vs 18.3 cases per 1000 person-years; HR, 0.81; 95% CI, 0.69-0.95) and the combined rate of mild cognitive impairment or probable dementia (20.2 vs 24.1 cases per 1000 person-years; HR, 0.85; 95% CI, 0.74-0.97).

CONCLUSIONS AND RELEVANCE Among ambulatory adults with hypertension, treating to a systolic blood pressure goal of less than 120 mm Hg compared with a goal of less than 140 mm Hg did not result in a significant reduction in the risk of probable dementia. Because of early study termination and fewer than expected cases of dementia, the study may have been underpowered for this end point.

Figure 2. Probable Dementia by Treatment Group



Shaded regions indicate 95% confidence intervals. Median follow-up time was 5.14 years (interquartile range, 3.91-6.00) for the intensive treatment group and 5.07 years (interquartile range, 3.87-5.98) for the standard treatment group. For group comparison of incidence, hazard ratio, 0.83; 95% CI, 0.67-1.04; *P*=.10.

Table 2. Incidence of Probable Dementia and Mild Cognitive Impairment by Treatment Group

Outcomes	Treatment Group: Intensive No. With Outcome/Person-Years	Intensive Cases per 1000 Person-Years	Standard No. With Outcome/Person-Years	Standard Cases per 1000 Person-Years	Hazard Ratio (95% CI)[a]	*P* Value
Probable dementia	149/20 569	7.2	176/20 378	8.6	0.83 (0.67-1.04)	.10
Mild cognitive impairment[b]	287/19 690	14.6	353/19 281	18.3	0.81 (0.69-0.95)	.007
Composite of mild cognitive impairment or probable dementia	402/19 873	20.2	469/19 488	24.1	0.85 (0.74-0.97)	.01

[a] Intensive treatment group vs standard treatment group based on Cox proportional hazards regression.

[b] Participants adjudicated as having probable dementia at the first follow-up visit (year 2) do not contribute to the analyses of mild cognitive impairment.

Authors/Group In
SPRINT MIND Inve

Implementing DASH Diet in Congregate Meal Settings

Men on the Move: Growing Communities

Implementation of education on DASH diet along with access to community gardens for fruits and vegetables in a rural African American Community

The intervention included the creation of six community gardens

The intervention reduced blood pressure

Baker, E., Barnidge, E., Schootman, M., Sawicki, M. and Motton-Kershaw, F. (2016). Adaptation of a Modified DASH Diet to a Rural African American Community Setting. *American Journal of Preventive Medicine*, [online] 51(6), pp.967-974.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5118163/pdf/nihms816364.pdf [Accessed 9 Jan. 2020].

Prevalence of Hypertension, Overweight, and Obesity for the Intervention and Comparison Counties at Baseline and Post Intervention

	Intervention county			Comparison county		
	Baseline	**Post intervention**	***p*-value**	**Baseline**	**Post intervention**	***p*-value**
Hypertensive (%)[a]	61.0	43.5	**<0.01**	46.7	49.1	0.48
Overweight or obese	69.8	62.8	**<0.01**	65.2	66	0.39
Overweight	28.7	29.4		30.1	25.8	
Obese	41.1	33.4		35.1	40.2	

[a]Hypertensive (%) Respondents were coded as hypertensive if the average of two systolic blood pressure readings was 140 or higher or the average diastolic blood pressure was 90 or higher.

Note: Boldface indicates statistical significance ($p<0.05$).

The Possibility of Improving Nutritional Status and Clinical Outcomes for Seniors Aging in Place and Others by Providing DASH-concordant Meals through Congregate Meal Settings

DASH Intervention - Project Collaborators and Contributors

Carter Burden Network
William Dionne
Dozene Guishard
Moufdi Naji
Rina Desai
Clewert Sylvester
Cecilia Convenas
Joshua Watkins
Debra Perez
Sonia Diaz
Sharon Halliday

Vital Care Telehealth
David Gaur
Chris Gaur
Pramod Gaur
Nilton San Lucas

Rockefeller University
Rhonda G. Kost
Kimberly Vasquez
Andrea Ronning
Dacia Vasquez
Glenis George-Alexander
Victor Baez
Cameron Coffran
Roger Vaughan
Kadija Fofana
Teeto Ezeonu
Gloria Perez

Lehman University
Lara Cemo
Michael Akers

Department for Aging
Jacqueline Berman
Danielle Gill
Esther Maleh

Clinical Directors Network (CDN)
Jonathan N. Tobin
Chamanara Khalida

Advisory Committee
Jacqueline Berman, DFTA NYC
Esther Maleh, DFTA NYC
David Putrino, Mt Sinai
Mia Oberlink, Visiting Nurses of NY
Alina Moran, CEO NYC Health & Hospitals/Metropolitan
G Morris
Allison Nickerson, Exec Dir LIVEON-NY
Greg Olsen, ED, Office for the Aging
Beth Shapiro, ED City Meals on Wheels
Joseph Schulman, Northwell Health
Kristel Simmons

Senior Representatives
Kris Allen-**Leonard Covello Senior Center**
George Davis **Luncheon Club**

DASH Diet Project Website:

https://www.CDNetwork.org/CBN-DASH

Thank you!

Dozene Guishard E.d.D., CDP, Director, Health and Wellness Initiatives, and Co- Principal Investigator DASH Diet
guishard@carterburdennetwork.org

Rhonda G. Kost MD, Co-Director, Community Engaged Research Core, Vice-Chair, Institutional Review Board, Associate Professor of Clinical Investigation,
The Rockefeller University Center for Clinical and Translational Science,
Principal Investigator DASH protocol
kostr@rockefeller.edu

Kimberly Vasquez, MPH, Community Engagement Specialist, and Project Manager DASH Diet Project, Rockefeller University Center for Clinical and Translational Science
kvasquez@rockefeller.edu

Jonathan N. Tobin, PhD President/CEO Clinical Directors Network,
Professor, Department of Epidemiology & Population Health,
Albert Einstein College of Medicine/Montefiore Medical Center
Co-Director Community Engaged Research Core, The Rockefeller University Center for Clinical and Translational Science, Co-Principal Investigator DASH Diet
JNtobin@CDNetwork.org