Expanding the Translational Research Team Workforce to Include Older Adult Center Staff

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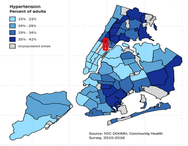
Background

- Cardiovascular Disease (CVD) is highly prevalent among older adults (OAs). Two thirds of adults aged 60 to 79 have one or more form of CVD [1].
- OAs are also at increased risk for developing high blood pressure (BP), a major modifiable risk factor for CVD which is often poorly controlled [3].
- Racial and ethnic minorities and people of lower socioeconomic status face higher rates of CVD and mortality [2].
- OAs affected by financial need, food insecurity, or social isolation rely on agencies like Carter Burden Network (CBN), an Older Adult Center (OAC) network, for community nutrition services, such as on-site congregate meals, subsidized by NYC Department of Aging.
- The Rockefeller University (RU), Clinical Directors Network (CDN), and CBN formed a community/academic partnership in 2016 to address unmet health needs among CBN clients, such as widespread high/uncontrolled BP.



Here we use the **RE-AIM** planning and evaluation framework and the **Translational Science Benefits Model (TSBM)** to assess project impact. Both frameworks expand research assessment to account for wider community and public health impact [4].

Methodology

Primary Aim: Test whether providing two evidence-based interventions, Dietary Approaches to Stop Hypertension (**DASH)-aligned menus in an ongoing congregate meal program**, along with **educational and behavioral support for Home Blood Pressure Monitoring (HBPM)**, lower BP among community-living OAs attending two OACs in NYC

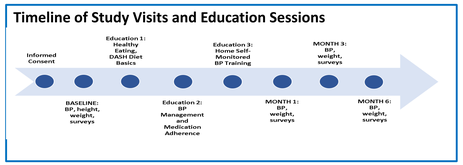
Co-Primary Outcomes: Change in mean Systolic BP at Month 1 vs. Baseline, and change in percent of participants with controlled BP (per JNC-8)

Other Aims: Adapt and implement DASH-aligned congregate meals; Optimize client acceptance; Support cognitive and behavioral change; Enhance self-efficacy for BP management

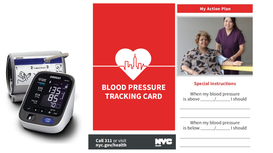
Other Measures: DASH concordance of meals, Meal Satisfaction, Meal Attendance, BP and HBPM data

Setting: 2 CBN Older Adult Centers in East Harlem and the Upper East Side NYC serving congregate meals [5, 6]

Participants: Age ≥ 60; clients consuming ≥ 4 congregate meals/week.

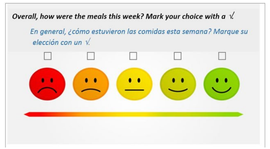


Methodology (continued)



Participants received HBPMs and BP diaries to track their own BPs

Weekly Concordance of Served Meals with DASH Serving Goals



Smiley Likert cards were used to collect client feedback

Results

RE-AIM	TSBM Domain	Outcome(s)
R each	Community	45% of those screened were enrolled (94/207) 98% of all eligible were enrolled (96/98)
E fficacy	Clinical	SBP -4.15 mmHg at Month 1 (p=0.07) = short term impact SBP -6.9 mmHg at Months 5-6 (p=0.0036) = long term impact
A doption	Community	Food Service staff implemented planned menu changes Staff provided health education in 2/2 OACs 90% of OAs conducted HBPM in month 1
I mplementation	Community	DASH-compatible meals served by OAC food service staff: 75%-133% OA client preferences recommended actionable menu changes High OA client satisfaction compared to pre-DASH measures
M aintenance	Community	65% continued to conduct HBPM in month 5/6
	Clinical	SBP -6.9 mmHg at Months 5-6 (p=0.0036)
	Policy	OAC food service staff worked with NYC DFTA to approve 6-week menus in Simple Serving platform DHHS-ACL dissemination webpage: https://acl.gov/senior-nutrition/models available to all OACs
	Economic	10-15% increase in food ingredients costs to OACs

References

[1] Mozaffarian D, et al. 2016. PMID: 26673558 [2] Havranek EP, et al. 2015. PMID: 26240271 [3] Lionakis N, et al. 2012 PMC3364500 [4] Glasgow RE, et al. 2019. PMC6450067 [5] Hashemi A, et al. 2022. PMC9297336 [6] Hashemi-Arend et al. 2022. PMC9699075 [7] Home-Delivered Meals Programs Standards of Operation and Scope of Services Based on standards set by the NYC Department for the Aging and the NYS Office for the Aging. Updated January 2024. https://www.nyc.gov/assets/dfta/downloads/pdf/community/Home-Delivered-Meals-Standards.pdf Standards 14 & 15, pp 8-9.

Community-Engaged Implementation

CDN medical director presentin on HBPM & BP medication adherence

RU bionutritionists presenting on principles of healthy eating using the DASH diet

RU and CDN celebrating the translational work of the CBN food service managers and chefs

Discussion

A multi-stakeholder Translational Research Team designed and operationalized this project, laying the groundwork for future studies and health interventions for OAs with OAC Food Service staff as part of the Clinical and Translational Research Workforce.

We aligned two implementation science frameworks, RE-AIM and the Translational Science Benefits Model (TSBM). We examined our RE-AIM based results through the lens of the TSBM domains. While our results aligned RE-AIM *Efficacy* with the TSBM *Clinical* domain, we found our outcomes for *Reach, Adoption, and Implementation* cross walked with the TSBM *Community* domain. We examined RE-AIM *Maintenance* through all TSBM dimensions (*Community, Clinical, Policy* and *Economic*).

The project demonstrated the feasibility and acceptability of adapting existing congregate meal and wellness services to improve BP control for OAs by translating complex nutritional and metabolic principles into daily meals prepared by OAC food service staff and OA participants at home. By engaging food service staff at two OACs who worked closely with RU bionutritionists, and seeking CBN client feedback, we adapted menus in alignment with DASH principles, OA tastes and preferences, and regulatory requirements from the NYC Department for the Aging (DFTA) [7].

The primary challenges for continuing this intervention are the associated increases in food costs and demands on OAC staff for training OAs in using HBPM. Increases in food costs combined with reductions in federal food assistance programs and resulting increased demand for low-cost food services place community-based organizations such as OACs, food banks and food pantries under immense pressure for sustainability.

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Dissemination webpage

www.CDNetwork.org/CBN-DASH