

The Yale-Griffin Prevention Research Center

Newsflash

Fall 2019 Issue

The PRC has prepared this electronic **Newsflash** to keep you informed about our work and invite you to take part in our research, education and outreach activities. If you have ideas for working together on shared projects, please let us know.

For more information about the Yale-Griffin PRC:

Please visit our website at <https://yalegriffinprc.griffinhealth.org>

PRC Updates

New 5-Year Funding Cycle (9/30/19 through 9/29/24) – Thanks to continued funding from the Centers for Disease Control and Prevention (CDC), we are making plans for our next 5-year funding cycle. Our Center will be one of 25 within the national Prevention Research Center network to conduct applied public health research. Our Implementation Science research project, *Improving Health in Low Income Communities: Virtual Delivery of a Diabetes Prevention Program Facilitated with Community Care Coordination*, will assess the feasibility and health impacts of offering a virtually-delivered Diabetes Prevention Program facilitated by community health workers and hospital-based community nurses to low-income adults at risk for type 2 diabetes. It will take place in New Haven and the Lower Naugatuck Valley (Ansonia and Derby), and will address barriers that keep people with low incomes from successfully participating in evidence-based lifestyle interventions.

Goodbye and Best Wishes to: David Katz, MD, MPH, Yale-Griffin PRC Founding Director since 1998.



Dr. David Katz (second from left) received a plaque at the Stewardship Committee meeting from Griffin Hospital President Patrick Charmel, PRC Deputy Director Beth Comerford, Yale School of Public Health Dean Sten Vermund, and Griffin Hospital Vice President Todd Liu.

During his time here, Dr. Katz also directed the Preventive Medicine Residency Program at Griffin Hospital, and held faculty positions at the Yale Schools of Medicine and Yale School of Public Health. Under his leadership, the PRC has successfully leveraged CDC funding to secure additional funding in excess of \$25 million to support our mission, with additional project-specific support obtained from various other sources – public and private. At the PRC Stewardship Committee meeting in August, administrators from Yale University and Griffin Hospital presented Dr. Katz with a plaque expressing appreciation for his devotion and significant contributions to medical education and public health (photo left). Dr. Katz plans to devote himself full-time to his start-up company, [Diet ID™](#), which uses an innovative digital dietary intake assessment tool powered by Diet Quality Photo Navigation to help physicians, hospital systems, dietitians, coaches, and wellness companies to quickly and efficiently assess nutrition in their clients. We're grateful for his leadership over the past 21 years, and wish him the best in his new ventures.

Welcome to: Rafael Pérez-Escamilla, Ph.D., Professor of Epidemiology & Public Health, Director of the Office of Public Health Practice, and Director of the Global Health Concentration at the Yale School of Public Health, who is our new Principal Investigator. Dr. Pérez-Escamilla is recognized internationally for his work in nutrition and health disparities. His global public health nutrition and food security research program has led to improvements in breastfeeding programs, infant iron deficiency anemia, household food security measurement and outcomes, and maternal, infant and child community nutrition education/ counseling programs. His health disparities research involves assessing the impact of community health workers on improving behavioral and metabolic outcomes among Latinos with type 2 diabetes. He has been a senior advisor to maternal-child community nutrition programs as well as household food security measurement projects funded by WHO, PAHO, UNICEF, FAO, UNESCO, UNDP, CDC, USDA, USAID, The World Bank, the Gates Foundation, and the Governments of Mexico, Brazil, and Colombia. We're fortunate to have Dr. Pérez-Escamilla join the PRC, and look forward to our work ahead!

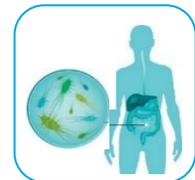


Welcome to: Chelsea Duckwall, who is joining us as a research volunteer this fall. Chelsea is currently enrolled in a nursing informatics program at Western Governors University, and will be working on our new core research project and the ACCESS project (Addressing Chronic Conditions in Elementary and Secondary Schools).

Current Projects

NEW STUDY / NOW RECRUITING - A Pilot Study of Oral FMT (Fecal Microbial Transplant) in Subjects with Multiple Sclerosis

The FDA has granted permission to use FMT capsules for this pilot study at Griffin Hospital to investigate whether a fecal microbial transplant (FMT) is tolerated, safe, and leads to favorable changes in the intestinal bacteria of people with multiple sclerosis (MS). The PRC is partnering with neurologist Joseph B. Guarnaccia, MD of the MS Treatment Center at Griffin Hospital, the principal investigator on this study, funded by the State of CT Department of Public Health.



Some studies have found that an imbalance of bacteria in the intestines could lead to inflammation in the immune system, which could make some people more likely to develop MS, or exacerbate symptoms in those with established disease. It is thought that restoring the balance of intestinal bacteria can improve some health conditions or diseases.

Our study team will offer patients with MS a single FMT procedure in the form of 30 oral capsules that contain fecal material. We will monitor them carefully before and after the FMT procedure.

- **Who we're recruiting:** Adults with MS who are 18 to 40 years old, can walk with or without assistance, are not on immunotherapy (except for interferon beta or glatiramer acetate), and are willing to visit Griffin Hospital 8 times over a 4-month period.
- **What will happen:** The 8 visits will include: a clinical screening, a single procedure of 30 FMT capsules taken by mouth; and 5 visits for blood and stool samples, medical exams, and surveys.
- **Outcome measures:** (1) ability to tolerate FMT capsules without vomiting or adverse side effects; (2) immune markers found in blood samples; (3) changes in the microbiome of stool samples; (4) self-reported quality of life, mental health status, and levels of fatigue; and (5) MS disease status.
- **Compensation:** \$800 total, payable in installments over the course of the study. The FMT capsules and all study procedures and tests will be provided free of charge.
- **How to apply:** Call 203-732-1265, extension 220 for Sue or extension 300 for Rocky.

Community Alliance for Research and Engagement

The Community Alliance for Research and Engagement (CARE) extends the PRC's work with a mission to improve health in New Haven, CT. CARE, in partnership with the New Haven community, is working in tandem with the PRC to take action against chronic diseases and other challenges that threaten the health of community members.

- **CARE works to improve street safety in New Haven neighborhoods**

Funded in part by the CDC's Racial and Ethnic Approaches to Community Health (REACH) Program, CARE is working to make active transportation easier for residents of New Haven's six low income neighborhoods so they can safely and easily reach their destinations. We feel that by improving street safety, we are able to improve health for New Haven. If people feel their streets are safer, they will be more likely to bike, walk, and take the bus - all of which increase activity levels.

On August 24th and September 7th, the first four of six tactical urbanism projects were launched in intersections in New Haven's West Rock, Fair Haven, Dixwell and Dwight neighborhoods. These intersections had been identified by residents during community forum as being most in need of traffic calming, pedestrian safety, and increased active transit. A final project is scheduled for September 28th in the Hill and Newhallville neighborhoods. Each project is volunteer-based, with those in attendance helping to paint and install our custom project design in different New Haven neighborhoods. Volunteers are welcome to sign up here: www.tinyurl.com/nhvsaferroutes

This project is a multifaceted effort between the City of New Haven Department of Transportation, Traffic, and Parking; the Community Alliance for Research and Engagement (CARE); Street Plans, a New York based, tactical urbanism specialist firm; and the residents of these six neighborhoods.



Project Findings

Fruit and Vegetable Prescription Program Study

- **Purpose:** To determine the feasibility and effectiveness of a worksite based Fruit & Vegetable Prescription (Rx) Program designed to increase fruit and vegetable consumption and improve diet quality and other health outcomes of participants. It included incentives and skill building/educational sessions to increase intake of fruits, vegetables, and other health promoting foods (i.e. legumes, whole grains).
- **Intervention:** We enrolled 58 Griffin Hospital employees in the study. Half of the participants received vouchers they could use to purchase fresh fruits and vegetables and attended weekly 45-minute nutrition and cooking education workshops for 10 weeks. The other participants were asked to maintain their usual habits, and were not given any special instruction or incentives.

- **Outcome Measures:** We checked everyone's body mass index (height/weight), waist size, blood pressure, and body fat. We measured their fasting blood levels of cholesterol, triglycerides, and hemoglobin A1C (a measure of blood glucose over several weeks). Everyone filled out 24-hour diet recalls, which we used to measure diet quality with a score based on a special formula.
- **Results:** Our findings are listed below.
 - **Overall diet quality increased in the intervention group**, as compared to the control group, but this difference was not statistically significant. However, participants in the intervention group **significantly reduced their intake of empty calories** as compared to those in the control group.
 - There were **no effects** of the intervention on weight, waist circumference, body fat percentage, blood pressure, blood lipids, or HbA1c. This was not surprising, given the relatively healthy status of participants.
 - There were no notable between-group differences in cooking skills or household meal practices.
 - **Three months after the intervention ended, the reduction in empty calories was maintained in the intervention group.** However, it was no longer significantly different from the change in the control group because the control group also reduced their intake of empty calories.
 - Three months after the intervention ended, **participants in the intervention group had increased their intake of seafood and plant proteins** more than the control group (+1.11 vs. -0.08 points). This difference was almost statistically significant, but the possibility that it was due to chance cannot be ruled out.
 - According to surveys, **more than 90% of intervention group participants found that elements of the program helped them to increase their fruit and vegetable intake and 78% said that their diet was "somewhat" or "a lot" more healthful than before taking part in the program.**
- **Conclusion:** We found that a worksite program designed to increase fruit and vegetable consumption did improve some aspects of diet and was perceived by participants as valuable. It is possible that we would have seen more differences between the intervention and control groups if we had a larger number of participants and/or participants who were less healthy at baseline.
- **For more information:** Contact Beth Comerford (beth.comerford@yalegriffinprc.org).

Presentations

David Katz, MD, MPH, FACPM, FACP, PRC Director, presented *Lifestyle is the Medicine; What's the Spoon?* on September 20 at the SiNAPSA Neuroscience Conference held at the University of Ljubljani in Slovenia.

Valentine Njike, MD, PRC Assistant Director of Research & Evaluation, presented lectures on descriptive and inferential biostatistics on August 23 and 27 as part of the Griffin Hospital medical residency program.

Publications

Khatlani K, **Njike V**, Costales VC. *Effect of Lifestyle Intervention on Cardiometabolic Risk Factors in Overweight and Obese Women with Polycystic Ovary Syndrome: A Systematic Review and Meta-analysis.* Metab Syndr Relat Disord. 2019 Sep 12. [Epub ahead of print]

Elmore JG, Wild DMG, et al., **Katz DL.** *Jekel's Epidemiology, Biostatistics, Preventive Medicine, and Public Health, 5th Edition.* Elsevier: 2019. [Available in December 2019]

Katz DL, Karlsen MC, Chung M, Shams-White MM, Green LW, Fielding J, Saito A, Willett W. *Hierarchies of Evidence Applied to Lifestyle Medicine (HEALM): Introduction of a Strength-of-Evidence Approach Based on a Methodological Systematic Review.* BMC Med Res Methodol. 2019 Aug 20;19(1):178.

Guthrie NL, Carpenter J, Edwards KL, Appelbaum KJ, Dey S, Eisenberg DM, **Katz DL**, Berman MA. *Emergence of Digital Biomarkers to Predict and Modify Treatment Efficacy: Machine Learning Study*. BMJ Open. 2019 Jul 23;9(7):e030710.

In-Service / Training Opportunities

You are invited to join us at our **Journal Club meetings or other professional development sessions**, usually held every other month. We review and critique publications on topics such as community-based research, clinical research, and public health. This helps us stay up-to-date on research findings. It also allows us to examine publications (for the research questions, study design, results and conclusions) so we can apply the knowledge gained and lessons learned to the design of our own projects. Occasionally, we devote these sessions to reviewing recent findings from our own studies.

Our next meeting will be held at the PRC on the second floor of Griffin Hospital.

- **Tuesday, October 8 from 2:00 to 3:00 p.m.**

von Storch K, Graaf E, Wunderlich M, Rietz C, Polidori MC, Woopen C. *Telemedicine-Assisted Self-Management Program for Type 2 Diabetes Patients*. Diabetes Technol Ther. 2019 Sep;21(9):514-521.

If you have questions, please contact Dr. Valentine Njike by email at valentine.njike@yalegriffinprc.org, or by phone at 203-732-1265 ext. 304.

Let's Stay in Touch

We want to hear from you – let us know what you are doing and how our research might assist you in your work. Please contact Beth Comerford, MS, Deputy Director (beth.comerford@yalegriffinprc.org) or any of the staff listed in this **Newsflash**.

Yale-Griffin Prevention Research Center
130 Division Street, Derby, CT. 06418
Phone: (203) 732-1265
Fax: (203) 732-1264

The Yale-Griffin PRC is a member of the Prevention Research Centers Program.



Healthier Communities Together

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