

Grant Outcome Report

Addressing High Salt Intake in New York City

The Problem

According to the New York State Department of Health, cardiovascular disease (CVD) is the leading cause of preventable deaths in both New York and the United States. CVD also contributes to racial and ethnic health disparities: mortality rates as result of premature CVD (occurring before the age of 65 years) are roughly twice as high in blacks compared to whites in New York City.

The current level of sodium intake measured by self-report in the United States is an estimated 3,500 mg per person per day, which does not account for salt added at the table. Scientific evidence strongly suggests a direct relationship between sodium and blood pressure: as sodium intake increases, so does blood pressure. High blood pressure is a major risk factor for CVD. Reductions in sodium intake lower blood pressure, and stronger effects are observed in blacks, who have a higher prevalence of high blood pressure than whites. The American Medical Association estimates that if lifetime sodium consumption were decreased by 1,300 mg per day in the United States, 150,000 lives would be saved annually.

Although reducing sodium consumption is a public health priority, the only available data to measure levels of sodium consumption at the population level come from national surveys using the method of 24-hour dietary recall. The gold standard method for assessing sodium intake is measurement of sodium excretion in 24-hour urine samples, and has been used previously in other countries. In the absence of a nationally representative survey using this method, the New York City Department of Health and Mental Hygiene (NYCDOHMH) proposed to conduct the Heart Follow-Up Study to assess New York City's sodium intake through 24-hour urine collection.

Grant Activities and Outcomes

In October 2009, NYSHealth awarded the Fund for Public Health in New York, on behalf of NYCDOHMH, a grant to support this study.

NYCDOHMH planned, designed, and implemented all components of the surveillance study, and was able to recruit 1,775 participants, which was 12% more participants than the 1,586 adults it had planned

KEY INFORMATION:

GRANTEE

Fund for Public Health in New York, Inc.

GRANT TITLE

Reducing Salt in Processed and Prepared Foods: A Falling Tide of Salt Lowers All Blood Pressures

DATES

October 19, 2009 – July 13, 2011

GRANT AMOUNT

\$199,600

FUNDING

Special Projects Fund

to enroll. The protocol was adapted to improve the study results and strength of findings without compromising the study methods or quality. For example, in March 2009, the Centers for Disease Control and Prevention (CDC) released a report stating that 69.2% of adults in the United States should adhere to a lower sodium maximum intake per day. Consequently, NYCDOHMH decided to document and report mean sodium intake for study participants who were recommended to have a lower sodium intake per day.

NYCDOHMH originally planned to begin the study in January 2010, but began in May to secure additional funding to support the project. With NYHealth support, NYCDOHMH was able to leverage additional grant dollars from the United States Department of Health and Human Services. The additional funding allowed NYCDOHMH to add a spot urine collection component to the study in a subset of participants. Unlike the 24-hour collection, the spot urine sample is a one-time collection of urine. Incorporating this component of the study gave the researchers the ability to understand better the correlation between sodium in spot urine samples and the 24-hour collection. The spot urine samples also allowed for comparisons to spot urine samples collected in a nationally representative sample.

Based on preliminary analysis, the study found that the mean sodium intake in New York City adults was 3,147 milligrams, and males had a higher intake than females. In addition, the majority of New York City adults (61%) were recommended to consume less than 1,500 mg of sodium per day because they had certain risk factors, such as hypertension, diabetes, chronic kidney disease, were 51 years of age and older, or were black. However, only 11% of these high-risk New Yorkers were at or below the 1,500 mg limit. While the general population should consume less than 2,300 mg of sodium per day, only 1 in 5 adult New Yorkers consumed sodium within the recommended limit.



Former NYCDOHMH Commissioner Dr. Thomas Farley and Dr. Sonia Angell, formerly with the NYCDOHMH and now at the CDC, co-authored an editorial on the National Salt Reduction Initiative that was published in the *American Journal of Public Health*. The article, "Can We Finally Make Progress on Sodium Intake?" appeared in the September 2012 issue.¹

1 Available at: <http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.300722>.

The Future

NYCDOHMH released results of the study in a press release and prepared a manuscript for publication in a peer-reviewed journal. The results from the baseline and follow-up will be used to inform the assessment of the National Salt Reduction Initiative's achievement in meeting its stated goal of reducing population sodium intake by 20% over five years through gradual sodium reductions in processed food. This work serves as the baseline for the evaluation of the National Salt Reduction Initiative. NYCDOHMH plans to collect another sample after the conclusion of the National Salt Reduction Initiative's five-year period in 2014.

The study has also demonstrated the importance and feasibility of 24-hour urinary sodium collection in a representative sample. Taking steps toward integrating the routine collection of risk factors for chronic diseases would allow for efficient evaluation of large-scale interventions and more effective policymaking. Lastly, the findings illustrate the critical importance of using 24-hour urine collection methodology for the purposes of understanding population risk, guiding rational policy development, and ultimately measuring the impact of this project's efforts.

BACKGROUND INFORMATION:

ABOUT THE GRANTEE

Established in 2002, the Fund for Public Health in New York (FPHNY) is a nonprofit partner to the New York City Department of Health and Mental Hygiene (NYCDOHMH). FPHNY was formed to work independently and in partnership with NYCDOHMH to implement programs that protect and promote the health of New Yorkers. FPHNY currently supports a number of programs that address issues as diverse as colon cancer prevention, maternal and child health, substance use prevention, medication access and adherence, early childhood development, and air quality.

GRANTEE CONTACT

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