Sodium Reduction in Senior Meals: Lessons From the Field

Background

Americans eat too much sodium and seniors are no exception. Prepackaged and restaurant foods contribute almost 80% of the sodium in American’s diets. The 2010 Dietary Guidelines for Americans recommends limiting sodium to less than 2,300 milligrams (mg) per day. However, Americans eat on average more than 3,400mg of sodium per day.

According to the 2010 County Data Book prepared by the New York State Office for the Aging (NYSOFA), there are over 3,700,000 individuals 60 years and older in New York State. Many older adults depend on prepared meals from senior meal programs. In 2011-2012, the NYSOFA home delivered meals program provided 12.4 million meals to approximately 53,500 older New Yorkers and 10.3 million meals to about 121,000 older New Yorkers in congregate meal sites (www.aging.ny.gov). In 2011, 62% of adults 65 years and older reported they had been told by a provider that they had high blood pressure (www.health.ny.gov/statistics/brfss/). High sodium consumption is a major contributor to high blood pressure which in turn can lead to heart attack and stroke. Because they are eaten frequently by seniors, the top food sources of sodium for adults over the age of 70 are sandwiches and bread (IOM 2010 Strategies to Reduce Sodium Intake in the U.S.).

In September 2010, the Centers for Disease Control and Prevention awarded funding for 3 years to the New York State Department of Health (NYS DOH) through the Sodium Reduction in Communities Program. NYS DOH worked with Broome County Health Department and Schenectady County Public Health Services. Broome and Schenectady Counties each partnered with their local Area Agency on Aging to reduce the sodium content in meals offered to seniors in congregate meal sites and home delivered meals programs. This document provides key steps and lessons learned from their successful sodium reduction efforts.

Steps to Success

Know Your Players

Identify the key organizations, people involved and how they work together.

- Identify the individuals and organizations that fund and coordinate the program, prepare the meals, purchase the food, and monitor compliance with regulations. There could be one organization or many involved.
- Become familiar with program operations including: contracts, local and state nutrition guidelines, funding, purchasing, food delivery or meal site coordination, menu development and analysis, food preparation, food procurement and distribution.
- Develop a flow chart showing how the players work together.

Many people think that lower sodium foods won’t taste good. Practice a “stealth health” approach and gradually lower sodium in meals so it isn’t noticeable.
Establish an Advisory Team
Convene key stakeholders as an advisory team for the project.

- Schedule individual meetings with all the players to gain buy-in on the project.
- Plan an initial meeting of all the players to share their roles in senior meal programs.
- Meet with the advisory team monthly in the beginning to develop attainable goals, projected timeline, key responsibilities of each team member and an evaluation plan.
- Schedule bi-monthly or quarterly meetings once the project is established to provide team members with updates and to brainstorm solutions to barriers.

Collect and Analyze Baseline Data
To determine the accurate sodium content of senior meals, it is essential to collect the necessary data (i.e. recipes and specific product information) to conduct an accurate nutrition analysis of the menu.

- Obtain nutrition analysis software (such as Nutritionist Pro, CBORD or Food Processor) which allows input of specific product information and recipes.
- Take inventory of high sodium food products (including brand name and sodium content per serving) being used for the meals.
- Collect recipes being used to make the senior meals.
- Input the recipes and specific food product information into the nutrition analysis software to obtain the most accurate sodium content per meals.
- Identify the meals that are highest in sodium, from the nutrient analysis of the menu.
- Analyze products and cooking practices to determine what is contributing the largest amount of sodium.
- Identify key constituent ingredients, like soup bases and tomato products that are used in many recipes. Changing to lower sodium constituent ingredients can impact many menu items.
- Assess purchasing practices, and record the cost of products.
- Present results to the advisory team and prioritize areas for improvement.

Implement and Evaluate
Work with the advisory group to develop a sodium reduction implementation and evaluation plan. Gradual change is better accepted and doable.

- Educate food service staff on the importance of lowering the sodium content of meals.
- Identify strategies to **gradually** reduce sodium in meals including modifications to the menu, recipes, cooking techniques and products being used.
- Work with food service staff and senior meal program participants to taste test new products and recipes.
- Collaborate with senior nutrition programs to educate seniors on benefits of sodium reduction in the diet.
- Document changes: strategies implemented (products, menu and cooking techniques), costs associated with changes, barriers and solutions, and lessons learned.
- Obtain feedback from food service staff on the changes implemented.
- Conduct follow-up and on-going nutrient analyses to show reduction in the sodium content of meals.
- Continue to assess the menu, cooking techniques and products being used.

Strategies that Work
Key strategies to reduce the sodium content of senior meals include modifications to the menu, recipes, cooking techniques and the type of products used. Often no-salt added and lower sodium products can increase costs although menu and cooking techniques (such as not adding salt to cooking water and reducing portion sizes) do not cost anything. These changes could save money in the long run and offset any additional costs.
Menu Modifications

- Pair a higher sodium entree with a low sodium side (e.g. ham with a cooked vegetable or baked potato).
- Remove or serve high sodium menu items less often (e.g. those that exceed 700mg per serving like liverwurst or salami).
- Remove extra bread from meals, which, when eaten several times a day, can add a lot of sodium to the diet.
- Reduce the portion size of high sodium items.
- Offer foods that are naturally low in sodium such as fresh or frozen fruits and vegetables.

Recipe and Cooking Modifications

- Limit processed foods and cook from scratch whenever possible.
- Reduce the amount of key constituent ingredients such as gravies, sauces, dressings and soup bases to reduce sodium over many menu items. Soup bases have 800mg – 1000mg of sodium /tsp.
- Reduce or eliminate salt, seasoning packets or soup bases in recipes. Enhance the flavor with other ingredients such as herbs, spices and vegetables.
- Modify recipes by replacing a regular product with its lower sodium version. For example: when a recipe calls for canned diced tomatoes substitute a portion of the amount with lower sodium canned diced tomatoes. Over time, gradually increase the proportion of the lower sodium product used in the recipe.
- Prepare vegetables without butter and instead season with sodium-free seasonings, herbs or garlic.
- Reduce or remove high sodium ingredients from a recipe such as cheese, bacon, deli meats and sausage.

Product Choices

- Choose fresh, raw, unprocessed food whenever possible.
- Try lower sodium soup bases, and lower sodium canned tomato products in recipes.
- Ask food suppliers to obtain lower sodium versions of high sodium products and to provide samples.
- Create the demand among food manufacturers and distributors for lower sodium products. Attend food shows and ask vendors for lower sodium products.
- Switch to a lower sodium item when using pre-prepared entrées. For example, offer a chicken breast stuffed with cheese and broccoli (~ 440mg/serving) instead of chicken cordon bleu (~600mg/serving).

Sustainability Plan

Increase Awareness

- Continue to assess the menu, cooking techniques and products being used.
- Survey seniors on acceptability of menu items (without necessarily identifying meals as lower sodium).
- Post the menu with the calorie and sodium content at senior meal sites. This keeps you accountable.
- Work closely with food manufacturers and distributors to create a demand for cost effective lower sodium products.

Adopt Food Purchasing Standards

These standards state the nutritional guidelines that must be followed when purchasing and offering foods. Important steps to developing food purchasing standards include:

- Identify who develops and executes contracts, and what policy and guidelines are already in place.
- Develop food purchasing guidelines with sodium targets to be implemented over a gradual period of time. Consider comprehensive guidelines that put limits on calories, fat and sugar too.
- Work with key staff to incorporate the food purchasing language into contracts. For example, add nutritional guidelines to contracts for senior meals between local Area Agency on Aging and senior meal providers or contracted caterers.
• Address the purchasing practices that will assure the continuation of the sodium reduction efforts.
• Establish and post purchasing policies and procedures. Document recipe changes and resulting change in nutrient analysis and provide to caterers and menu developers.

Resources
Tasting Success with Cutting Salt
Improving the Food Environment Through Nutrition Standards: A Guide for Government Procurement
http://www.cdc.gov/salt/pdfs/dhdsp_procurement_guide.pdf
Under Pressure: Strategies for Sodium Reduction in Institutional Environments

Success Stories

Broome County
The Broome County Health Department and the Broome County Office for Aging Congregate and Meals on Wheels programs launched an initiative to reduce sodium in senior meals for 4,400 seniors. Through successful collaboration with partners and utilizing the “Steps to Success” and “Strategies that Work” the project succeeded in reducing sodium in senior meals over a 2 year period. In 2010, the average congregate meal contained 1517mg of sodium, in 2 years the sodium was reduced 22% with an average of 1181mg of sodium. Likewise, in 2010, the average Meals on Wheels meal contained 1163mg of sodium, and 2 years later, that amount was 19% lower, with an average of 944mg of sodium per meal.

The project goal to reduce sodium by 5% was achieved in the first year. Throughout the project, nutritional and cost analyses were conducted to ensure that the menu modifications fit program budgets and met sodium reduction goals. Food purchasing practices were developed to assure the continuation of the sodium reduction efforts and in the Spring of 2013, Broome County became the first county in New York State to adopt a food procurement policy consistent with the Dietary Guidelines for Americans.

More information: Broome County Health Department http://gobroomecounty.co.broome.nyenet/broome/senior/

Schenectady County
Schenectady County Public Health Services worked with the county-operated nursing home to reduce the sodium content in meals offered through congregate meal site and home-delivered meal’s programs to 500 older adults. The project goal was to reduce the average sodium content in meals served by 10% each year over 3 years. Sodium reduction efforts were achieved through the “Steps to Success” and “Strategies that Work”. Nutritionist Pro software was utilized to assess the sodium content of meals. In year one, the average sodium content per meal on the 5-week seasonal rotating menu was 1,270mg. A reduction of 124mg (9.75%) of sodium resulted in 1,146mg of sodium per meal. In year two, under a new food service manager, a new 4-week base menu with seasonal substitutes was implemented. A baseline sodium content of the new menu indicated higher sodium content than year 1 menu at 1,379mg/meal. As a result, the amount of sodium for year 1 and year 2 menus was analyzed separately. At the end of year 2, a reduction of 195mg (14%) of sodium or 1,184 mg/meal was achieved. In year 3, despite a second change in food manager, the year 2 menu continued to be utilized, and the amount of sodium in meals was further reduced by 7%. Though Schenectady County encountered multiple barriers during this project, continued efforts resulted in modest sodium reductions to the senior meals menu. Nutritional guidelines with targets for further sodium reduction in senior meals have been incorporated into the Schenectady County senior meal program’s 2014 Request for Proposal.

More information: Sodium Savvy Schenectady www.schenectadycounty.com/sodium

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