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## Addressing the Relationship between Food Security and Oral Health in Low Socioeconomic Populations: An Inter-Professional Approach

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### Introduction

- ❖ Oral health is an often-overlooked component of general health and yet it is fundamental to a population's wellbeing (WHO, 2017; USDHHS, 2000).
- ❖ The goals of the Healthy People 2020 oral care program are to "prevent and control oral and craniofacial diseases, conditions, and injuries, and improve access to preventive services and dental care" (Healthypeople2020, 2017).
- ❖ Food Security is paramount to ensuring good oral health and food insecurity directly relates to adverse oral health and therefore poorer general health (Allareddy et al. 2014; Sun et al. 2016; USDHHS, 2000).
- ❖ The lower socioeconomic populations lack of access to fresh affordable food, and higher incidence of food insecurity, cause diets high in carbohydrates which leads to increased risk factors for dental caries (Chernoff, 2016; Jamieson & Koopu, 2007).
- ❖ The aim of this poster is, based on current evidence on the relationship between food insecurity in low socioeconomic populations and oral health, to present an inter-professional approach to this population health issue.



**FOOD FOR  
HEALTHY TEETH  
AND  
BEAUTIFUL SMILE**

### Proposed Inter-professional Approach

By forming a coalition of local supermarkets, food banks, nutritionists, and policy makers, we can address the food security issue in Maine using local resources and implementing changes to improve dietary habits.

#### The Coalition

A representative of Mainers Feeding Mainers program at the Good Shepherd Food Bank, the largest food bank in New England, Community relation specialists from the local grocery stores, Hannafords, and Shaws.

The director of Programs and Policy in the Office for Family Independence.  
A local legislator from low socioeconomic areas affected.  
A nutritionist representative from Maine Academy of Nutrition and Dietetics.

#### The Approach

Solicit money to increase the numbers of food banks and pantries, improving storage, and use local food suppliers for fresh and perishable supplies. Using supermarket donations to provide nutritious, healthy food to food banks and pantries.

Change policy, to increase eligibility to food programs such as SNAP, WIC, and Home Delivered Meals Program

Decrease food deserts by increasing numbers of, and transport to supermarkets in low socioeconomic areas with little or no healthy food options.

### Background

- ❖ Since World War II the US has seen a 20-40% decrease in dental caries with the implementation of fluoride in community water in many places (ADA, 2005; USDHHS, 2000).
- ❖ Lifestyle choices of smoking, alcohol, and poor dietary choices increase the incidence of craniofacial birth defects, oral and pharyngeal cancers, periodontal disease, and dental caries (Jamieson & Koopu, 2007; USDHHS, 2000).
- ❖ Food shortages and an unvaried diet, due to lack of funds and stress, and related to lack of funds for food, had a negative impact on use of dental services and care (Jamieson & Koopu, 2007; Muirhead et al., 2016).
- ❖ Food insecure households more than 5% higher incidence of dental caries, in comparison to food secure households (Allareddy et al., 2014; Chernoff, 2016; Gokhale & Nuvvula, 2016; Jamieson & Koopu, 2007; Muirhead et al., 2009).
- ❖ Maine has one of the highest rates of food insecurity in the country and has areas where supermarket access is limited unless you own a vehicle (Rhone, et al. 2017).

### Implications for Practice and Policy

- ❖ Maintaining good food access is imperative for this vulnerable group, who are at increased risk for health problems.
- ❖ Supermarkets in rural areas need to be protected to prevent food deserts, areas where the population has no, or limited access to affordable fresh healthy food choices.
- ❖ It is important to address the need for food banks and food pantries by increasing their numbers and their storage, therefore improving access to fresh healthy foods.
- ❖ Increasing access to programs such as SNAP, WIC, and Home Delivered Meals Program, will decrease food insecurity. These programs give money to those in need, offer dietary education, and work with community leaders, to help prevent food insecurity.

### Evaluation Plan

- ❖ **Improvement of diet:** Utilizing data from SNAP, WIC and Home Delivered Meals Program to compare carbohydrate content before and after the program started will show improved diet content.
- ❖ **Increased accessibility:** Continual assessment of how far people travel to gain access to supermarkets, and what services are utilized will show if increasing the supermarkets is working.
- ❖ **Increased availability of fresh healthy food choices:** How often the programs are being used, and if the need has dropped since the introduction of more affordable healthy alternatives shows improved availability.

References  
Available on request