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Food Insecurity in Alaska

Abstract

Although it has been established that food insecurity is a significant and growing problem in Alaska, in-depth, statewide studies of this public health issue have been limited. The purpose of this study was to create a demographic and chronic disease risk factor profile of the food insecure in Alaska to equip service providers throughout Alaska with information to target and address the needs of the state's food insecure. The U.S. Household Food Security Survey Module: Six-Item Short Form was used to determine food security status on the 2006 Alaska Behavioral Risk Factor Surveillance Survey (BRFSS). The prevalence of food insecurity was calculated for groups with selected demographic and socioeconomic characteristics. The comorbidity of food insecurity with chronic conditions and their risk factors was also examined. The Alaska BRFSS estimated over 80,000 Alaskans lived in households that were food insecure in 2006. These food insecure households included 10.8% of adults and 15.2% of children in Alaska. Food insecurity was greater among those with lower socioeconomic status, though it was by no means restricted to this segment of Alaskan society: 40% of food insecure Alaskans had some college and nearly 60% were employed. The public health implications for Alaskan policy makers are highlighted through significantly higher health risk factors and chronic disease prevalence among the food insecure. Until the root economic causes of food insecurity can be resolved, emergency food supplements will be required.

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Introduction

A healthy diet is one of the foundations of a healthy life. But for most individuals, food is a commodity which must be purchased and therefore can be in competition with other necessities in the household budget such as housing, energy, clothing, and health care. Those who cannot reliably go without access to adequate food are termed 'food insecure'; the proportion of these who experience the greatest difficulty in securing food are considered to have 'very low food security'.¹

Food insecurity is an issue of public health concern due to its association with a number of negative health outcomes. Food insecurity can result in physical impairment (illness or fatigue), psychological issues



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caused by lack of food, and domestic disruption as eating patterns and related rituals, and the means of food acquisition and management are modified.²

Although counterintuitive, it is a fact that the food insecure are often overweight or obese.¹ This occurs as individuals compensate their diminished means to obtain food through reliance on a few basic foods and reducing variety in their diets, with the result that meals may not always be balanced and nutritious.¹ Fruits and vegetables are among the first items sacrificed in the face of approaching hunger, resulting in lower dietary quality. Households with incomes below 130 percent of the poverty line are unlikely to allocate money to purchase fruits and vegetables.³

The risks to youth from food insecurity are profound and extend beyond poor health to include decreased cognitive performance and academic achievement as well as increased behavioral and psychosocial problems.² Research indicates the following negative outcomes are associated with food insecurity among children: poor health status; more frequent colds, ear infections and other health problems; greater incidence of hospitalizations; higher levels of aggression, hyperactivity, and anxiety as well as passivity; difficulty getting along with other children, and increased need for mental health services; impaired cognitive functioning and diminished capacity to learn; lower test scores and poorer overall school achievement; and increased likelihood of repeating a grade, school absences, tardiness, and school suspension.⁴

As might be expected, unemployed individuals and those with lower incomes are more likely to be food insecure. Economic issues of poverty, high housing costs, and unemployment were the most cited causes of hunger in a recent survey conducted by the U.S. Conference of Mayors.⁴ A number of socio-economic factors are associated with food insecurity, even among those with employment or middle/high incomes. Unemployment and other employment-related problems, followed by low-paying jobs, high housing costs, poverty, medical or health costs, substance abuse, high utility costs, mental health problems, homelessness, reduced public benefits, and high child-care costs have been linked with food insecurity.²

Food insecurity is a significant and growing problem in Alaska. According to a recent report from the United States Department of Agriculture (USDA), 12.6% of Alaskans—compared to only 11.3% of US residents overall—are food insecure. Although this difference is not statistically significant, the difference between

Alaskan (5.1%) and US (3.9%) rates of very low food security does reach statistical significance.¹ Furthermore, rates of both overall food insecurity and very low food security have increased significantly in Alaska over the past decade.¹

Alaska's high cost of living may be one reason for a higher than average food insecurity rate. Alaska is the largest state in the US and most of its communities are inaccessible by the road system. This situation creates challenges for transporting goods, including foodstuffs, which must be imported by sea or air. Domestic food production and subsistence harvests are limited and highly seasonal in the far north. For these and other reasons, costs for a standardized "market basket" of food items in Alaska can range from being 20% higher in urban areas to 170% higher in rural areas than in Portland, Oregon, for example.⁵ Energy costs in Alaska for electricity and heating oil can be three times the cost in Portland. Other necessities are similarly priced higher in Alaska, with Anchorage having over 40% higher costs for housing and over 30% higher medical costs than the US average in a cost-of-living differential survey.⁶

Although it is valuable to know the prevalence of food insecurity in Alaska, more detailed information is needed in order for social service programs to appropriately target and serve those in most need of their services. The Current Population Survey supplement from which the USDA food insecurity estimates are calculated cannot produce estimates below the level of the state, nor does it assess the risks and diseases associated with food insecurity. A Food Bank of Alaska (FBA) client survey conducted in 2005 provided FBA with a description of the demographics and select health status information on their client base.⁷ This assessment did not allow for breakdowns by either region or chronic disease co-morbidity, nor did it provide a statewide profile generalizable to all of Alaska's food insecure. More recently, the FBA produced a report describing Alaska's food insecure by both region and poverty status; other demographic variables and chronic disease co-morbidities were not included in their analysis.⁸

The purpose of this study was to address this literature gap by creating a demographic and chronic disease risk factor profile of the food insecure in Alaska. The goal of such a profile is to equip service providers throughout Alaska with information they can use to more effectively target and address the needs of the state's food insecure.

Methods

Design and Sampling

Using Alaska 2006 Behavioral Risk Factor Surveillance System (BRFSS) data, we examined the demographic, regional, and chronic disease profile of Alaskans who are food insecure.

The BRFSS is an ongoing random-digit-dial survey of non-institutionalized adults aged 18 years and older that is conducted in all 50 states, the District of Columbia and 3 territories. The BRFSS methods and weighting procedures are described elsewhere.⁹ In Alaska, a stratified sampling plan was used and sample drawn from 5 regions defined by combinations of census areas and boroughs (Anchorage and Vicinity, Gulf Coast, Southeast, Rural, and Fairbanks and Vicinity). In 2006, the Alaska BRFSS surveyed 2,113 Alaskan adults, achieving a survey response rate of 57.5%.

Variable Definition

The US Household Food Security Survey Module: Six Item Short Form was used to determine food security status (see Appendix A for complete wording).¹⁰ Respondents were asked to indicate whether, in the last 12 months they or members of their household ever: (1) ate less than they felt they should because there wasn't enough money to buy food; (2) cut the size of meals or skipped meals because there wasn't enough money for food; and (3) were hungry but didn't eat because there wasn't enough money for food. They were also asked the frequency of occurrence of the following events: (4) food purchased didn't last, and didn't have money to get more; (5) couldn't afford to eat balanced meals; and (6) cut the size of your meals or skip meals because there wasn't enough money for food.

Items (1) through (3) were assigned a score of 1 if answered "yes"; items (4) through (6) were assigned a score of 1 if the event occurred to any extent. A score of 0 – 6 was calculated based on the number of positive responses to the 6 questions in the module. A score of 0 – 1 indicated high or marginal food security, a score of 2 – 4 indicated low food security and a score of 5 – 6 indicated very low food security. Households with low food security had reduced quality and variety of the food they eat but the quantity of food intake was normal.¹¹ Those households with very low food security had disrupted eating patterns or reduced food intake of one or more household members. For the current analysis, respondents with a score of 2 or greater were considered food insecure.

Covariates

Socio-demographic variables included sex, race or ethnicity, age group, marital status, employment status, income, and region of residence. Chronic disease related variables included: current smoking status, physical inactivity, obesity, binge drinking, non-gestational diabetes, lifetime asthma diagnosis, heart disease, cancer screening, depression, anxiety, quality of life variables and current disability status. The 2006 Alaska BRFSS questionnaire is available at <http://www.hss.state.ak.us/dph/chronic/hsl/brfss/pubs/BRFSS06.pdf>.

Statistical Analysis

The BRFSS data were weighted to represent the distribution of Alaskan adults by sex, age and region. The prevalence and 95% confidence interval of food insecurity was calculated for groups with selected demographic and socioeconomic characteristics. The comorbidity of food insecurity with chronic conditions and their risk factors was also examined. SPSS Complex Samples module or SAS v9 combined with SUDAAN 9.0 were used to accommodate the complex sampling design of BRFSS. Groups were considered statistically significantly different if their 95% confidence intervals did not overlap.

Results

In 2006, 10.8% of households in Alaska were food insecure, meaning that at times members of the household were uncertain of having, or unable to acquire, enough food for all household members because they had insufficient money or other resources for food (Figure 1). The estimated 80,095 individuals in these food insecure households represent 10.8% of adults (age 18 and over) and 15.2% of children (age less than 18) in the state (Table 1).

Figure 1. Alaskan Households by Food Security Status, Alaska BRFSS Standard Survey, 2006

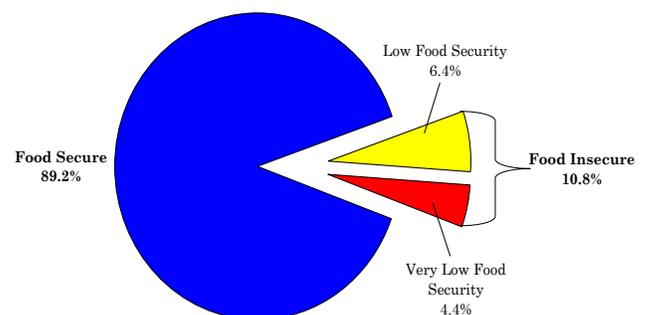


Table 1. Food Insecurity by Region, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Food Insecurity	
			N	%
Adults (18+)				
Anchorage and Vicinity	9.8%	(7.1%-13.%)	24,993	48.9%
Gulf Coast	10.9%	(7.7%-15.1%)	5,926	11.6%
Southeast	7.4%	(5.0%-10.8%)	3,883	7.6%
<i>Rural</i>	<i>21.8%</i>	<i>(17.0%-27.6%)</i>	10,265	20.1%
Fairbanks and Vicinity	9.2%	(9.2%-12.9%)	5,993	11.7%
Children (<18)				
Anchorage and Vicinity	14.1%	(9.1%-21.0%)	14,116	46.0%
Gulf Coast	13.8%	(8.4%-21.7%)	2,823	9.7%
Southeast	8.8%	(4.3%-17.2%)	1,584	5.5%
Rural	26.4%	(19.1%-35.3%)	6,685	23.0%
Fairbanks and Vicinity	14.0%	(8.5%-22.1%)	3,827	13.2%
Households				
Anchorage and Vicinity	10.0%	(7.6%-13.1%)	13,556	46.3%
Gulf Coast	10.0%	(7.4%-13.4%)	3,594	12.3%
Southeast	7.7%	(5.4%-10.8%)	2,574	8.8%
<i>Rural</i>	<i>19.7%</i>	<i>(15.8%-24.3%)</i>	5,877	20.1%
Fairbanks and Vicinity	9.8%	(7.3%-13.2%)	3,653	12.5%

Note: Food insecurity = low food security and very low food security.
Italics = significant difference from one or more subgroups

Although nearly half of the food insecure population resides in Anchorage and vicinity, the prevalence of food insecurity was significantly higher in the rural region of Alaska at 23.4% (adults and children combined) compared to the statewide average of 12.0%. This regional difference in food insecurity was found when considering both the adult population and the total number of households (Table 1). Table 2 shows the estimated number and percentage of Alaskan individuals and households that met the definition of very low food security.

Table 2. Very Low Food Security by Region, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Very Low Food Security	
			N	%
Adults (18+)				
Anchorage and Vicinity	4.0%	(2.3%-6.8%)	10,207	54.2%
Gulf Coast	4.5%	(2.6%-7.5%)	2,445	13.0%
Southeast	3.4%	(1.9%-5.7%)	1,758	9.3%
Rural	5.4%	(3.3%-8.9%)	2,546	13.5%
Fairbanks and Vicinity	2.9%	(1.6%-5.3%)	1,876	10.0%
Children (<18)				
Anchorage and Vicinity	8.1%	(4.2%-15.0%)	8,087	56.8%
Gulf Coast	8.2%	(4.4%-14.8%)	1,682	11.8%
Southeast	4.6%	(1.5%-13.2%)	830	5.8%
Rural	9.7%	(5.2%-17.5%)	2,469	17.3%
Fairbanks and Vicinity	4.3%	(1.9%-9.1%)	1,170	8.2%
Households				
Anchorage and Vicinity	4.5%	(2.9%-6.9%)	6,078	51.2%
Gulf Coast	4.6%	(2.9%-7.2%)	1,639	13.8%
Southeast	3.7%	(2.2%-6.1%)	1,246	10.5%
Rural	5.5%	(3.5%-8.6%)	1,654	13.9%
Fairbanks and Vicinity	3.4%	(2.0%-5.7%)	1,257	10.6%

Characteristics of Alaska's Food Insecure

Not surprisingly, food insecurity was much less prevalent in households more than two times above the poverty level ("middle or high income"; 5%) compared to those below ("poor"; 39%) or less than twice above the poverty level ("near poor"; 24%).

Table 3. Food Insecurity by Demographic Variables, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Food Insecurity	
			N	%
Poverty: Adults (18+)				
Poor (<100% Poverty Threshold)	33.0%	(22.7%-45.3%)	10,024	22.7%
Near Poor (100-199% Poverty Threshold)	22.1%	(16.3%-29.1%)	14,329	32.4%
<i>Middle/High (200+ Poverty Threshold)</i>	<i>6.1%</i>	<i>(4.4%-8.3%)</i>	19,886	45.0%
Poverty: Children (<18)				
Poor (<100% Poverty Threshold)	44.3%	(29.2%-60.6%)	8,490	31.5%
Near Poor (100-199% Poverty Threshold)	30.2%	19.0%-44.3%)	10,251	38.1%
<i>Middle/High (200+ Poverty Threshold)</i>	<i>6.5%</i>	<i>(4.4%-9.6%)</i>	8,192	30.4%
Poverty: Households				
Poor (<100% Poverty Threshold)	38.9%	(29.7%-49.0%)	6,591	25.8%
Near Poor (100-199% Poverty Threshold)	24.3%	(18.9%-30.7%)	8,844	34.6%
<i>Middle/High (200+ Poverty Threshold)</i>	<i>5.3%</i>	<i>(4.1%-7.0%)</i>	10,101	39.6%
Household Types				
Single Adult Household without Children	9.9%	(7.1%-13.5%)	6,318	21.6%
<i>Single Adult Household with Children</i>	<i>21.1%</i>	<i>(14.4%-29.9%)</i>	4,289	14.7%
2+ Adult Household without Children	7.1%	(5.2%-9.7%)	6,908	23.6%
<i>2+ Adult Household with Children</i>	<i>12.9%</i>	<i>(10.3%-16.1%)</i>	11,739	40.1%
DEMOGRAPHICS - ADULTS				
Gender:				
Male	10.1%	(7.7%-13.1%)	24,770	48.5%
Female	11.5%	(9.2%-14.2%)	26,291	51.5%
Age:				
18-44	13.3%	(10.6%-16.5%)	33,498	66.1%
45-64	8.3%	(6.2%-11.0%)	14,110	27.8%
65+	6.7%	(3.5%-12.5%)	3,083	6.1%
Race:				
White	8.5%	(6.7%-10.9%)	29,760	58.3%
American Indian / Alaska Native (Preferred)	19.0%	(14.8%-24.0%)	13,772	27.0%
Other/Unknown/Refused/Missing	14.1%	(8.3%-22.8%)	7,529	14.7%
Income:				
< \$25,000	26.1%	(20.3%-32.8%)	19,883	44.9%
\$25 - 49,999	15.8%	(11.3%-21.7%)	17,270	39.0%
\$50,000 +	3.0%	(1.9%-4.7%)	7,086	16.0%
Education:				
Less than High School	25.7%	(16.4%-37.7%)	8,679	17.0%
High School or GED	14.5%	(11.0%-18.7%)	21,134	41.4%
<i>Some College or Higher</i>	<i>7.2%</i>	<i>(5.5%-9.4%)</i>	21,245	41.6%
Employment Status:				
Employed	9.5%	(7.4%-12.0%)	30,031	59.4%
<i>Unemployed</i>	<i>21.7%</i>	<i>(14.0%-32.1%)</i>	7,245	14.3%
Not in Work Force	7.6%	(4.9%-11.6%)	8,047	15.9%
Unable to Work	DSU		5,226	10.3%
Marital Status:				
Couple (Married or Unmarried)	9.0%	(7.0%-11.4%)	28,542	56.2%
Formerly Married (Widowed, Divorced, Separated)	15.1%	(11.3%-20.0%)	10,803	21.3%
Never Married	22.6%	(15.7%-31.4%)	11,475	22.6%

Italics = significant difference from one or more subgroups
 DSU = Data statistically unreliable.

However, due to the disproportionate percentage of “middle or high income” households in Alaska, this means that 40% of all the food insecure in Alaska were not located in “poor” or “near poor” households, but were living in households with higher incomes (Table 3).

Nearly 45% of adults who are food insecure had incomes of less than \$25,000. Over 40% of food insecure adults had at least some college and nearly 60% were employed. The presence of children in the households increased the likelihood of food insecurity for both single and multiple adult-headed households. Two-thirds of food insecure adults were 18-44 years of age. American Indian/Alaska Native adults were twice as likely to be food insecure as white adults.

The majority of adults with food insecurity had access to health care (65.8%), could always afford to see a doctor (51.3%), but had not had a dental visit in the past year (58.7%) (Table 4). Rates of food insecurity were significantly higher for those without a health plan or who could not afford to see a doctor.

Table 4. Food Insecurity by Health Care Variables, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Food Insecurity	
			N	%
Have Any Kind of Health Plan:				
Yes	8.6%	(7.0%-10.5%)	33,260	65.8%
No	21.0%	(15.3%-28.2%)	17,283	34.2%
Time When Could Not Afford to See Doctor:				
Yes	35.6%	(28.4%-43.4%)	24,771	48.7%
No	6.5%	(5.1%-8.2%)	26,114	51.3%
Dental Visit Within Past Year				
Yes	6.6%	(5.0%-8.8%)	20,999	41.3%
No	19.2%	(15.5%-23.4%)	29,884	58.7%

Italics = significant difference from one or more subgroups

Those adults who assessed their health as fair to poor health had an increased prevalence of food insecurity compared to most adults with more favorable health assessments (Table 5).

Despite two-thirds of the food insecure having access to health care, usage of preventive health measures was mixed (Table 6). Immunization rates for influenza and pneumonia were low. Nearly two-thirds of food insecure women aged 40 and over met the requirements for a mammogram within the past two years and nearly 90% of adult women had a pap test within the past three years. Among men, the food

Table 5. Food Insecurity by Health Assessment Variables, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Food Insecurity	
			N	%
Activity Limitations Due to Health Problem:				
Yes	16.8%	(13.0%-21.5%)	16,451	32.8%
No	9.0%	(7.2%-11.3%)	33,652	67.2%
Activity Limitations 7+ Days:				
Yes	20.4%	(14.7%-27.7%)	8,963	17.6%
No	9.9%	(8.1%-12.0%)	41,948	82.4%
Disability Present:				
Yes	16.3%	(12.6%-20.8%)	16,714	33.4%
No	9.1%	(7.2%-11.7%)	33,389	66.6%
Emotional Support Obtained:				
Always or Usually	7.4%	(5.7%-9.5%)	26,784	53.2%
Sometimes / Rarely / Never	25.6%	(20.4%-31.7%)	23,592	46.8%
Frequent Mental Distress:				
Yes	25.6%	(18.5%-34.1%)	11,662	23.4%
No	9.1%	(7.3%-11.2%)	38,144	76.6%
General Health:				
Excellent/Very Good	5.7%	(4.1%-7.9%)	15,826	31.1%
Good	14.0%	(10.4%-18.6%)	19,242	37.8%
Fair/Poor	26.5%	(20.6%-33.5%)	15,780	31.0%
Mental Health Not Good 7+ Days:				
Yes	23.0%	(17.2%-30.0%)	15,621	31.4%
No	8.6%	(6.9%-10.7%)	34,186	68.6%
Physical Health Not Good 7+ Days:				
Yes	25.4%	(19.3%-32.6%)	17,383	35.1%
No	8.1%	(6.4%-10.1%)	32,071	64.9%
Special Equipment Required Due to Health Problem:				
Yes	20.0%	(12.4%-30.7%)	6,170	12.1%
No	10.1%	(8.4%-12.2%)	44,819	87.9%

Italics = significant difference from one or more subgroups

insecure were less likely to have preventative tests; less than a third of food insecure men aged 40 and over had had a PSA test within the past two years. Less than 40% of food insecure adults aged 50 and over had ever had a sigmoidoscopy or colonoscopy.

Nearly two-thirds of the food insecure were above a normal weight and fully a third (34.8%) were obese (Table 7). Generally adults with food insecurity did not binge drink or have a sedentary lifestyle. However, nearly half (48.7%) were current regular smokers.

The public health impact of food insecurity was shown by a high prevalence in adults with a range of chronic diseases (Table 8). For those with mental illness, food insecurity existed for 19.9% with anxiety disorder and 24.0% with depressive disorder. Among those adults with asthma, 16.5% were food insecure, as were 14.5% of those with diabetes.

Table 6. Food Insecurity by Health Assessment Variables, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Food Insecurity	
			N	%
Flu Shot or Spray within Past 12 Months				
Yes	7.9%	(6.0%-10.4%)	12,394	24.4%
No	12.3%	(10.0%-15.2%)	38,389	75.6%
Pneumonia Shot Ever				
Yes	11.7%	(8.1%-16.6%)	11,222	26.4%
No	10.4%	(8.3%-13.0%)	31,303	73.6%
Women 40+ With Mammogram Within Past 2 Years				
Yes	8.4%	(5.8%-12.0%)	7,797	65.2%
No	12.4%	(7.9%-19.0%)	4,170	34.8%
Women 50+ With Mammogram Within Past 2 Years				
Yes	6.7%	(4.0%-11.0%)	4,130	67.7%
No	11.4%	(5.8%-21.0%)	1,973	32.3%
Women 18+ With Pap Test within Past 3 Years				
Yes	12.1%	(9.2%-15.7%)	19,093	88.8%
No	10.1%	(5.2%-18.8%)	2,401	11.2%
Men 40+ With PSA Test within Past 2 Years				
Yes	5.7%	(2.4%-12.7%)	3,300	32.4%
No	10.1%	(6.7%-14.9%)	6,891	67.6%
Adults 50+ With Blood Stool Test within Past 2 Years				
Yes	8.3%	(4.0%-16.6%)	2,325	19.0%
No	7.3%	(5.0%-10.4%)	9,917	81.0%
Adults 50+ Ever Had Sigmoidoscopy or Colonoscopy				
Yes	5.5%	(3.5%-8.3%)	4,938	39.4%
No	10.3%	(6.6%-15.8%)	7,593	60.6%

Table 7. Food Insecurity by Risk Factors, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Food Insecurity	
			N	%
Alcohol: Binge Drinking:				
Yes	13.3%	(8.3%-20.6%)	10,190	20.6%
No	10.3%	(8.5%-12.4%)	39,187	79.4%
Physical Activity: Leisure Time Exercise:				
Yes	9.1%	(7.3%-11.3%)	33,907	67.0%
No	16.4%	(12.2%-21.8%)	16,671	33.0%
Tobacco: Current Regular Smoker:				
Yes	21.7%	(16.8%-27.5%)	25,420	48.7%
No	7.2%	(5.7%-9.1%)	25,810	51.3%
Weight Status:				
Neither Overweight or Obese				
Obese	11.1%	(8.4%-14.7%)	18,442	36.9%
Overweight	8.1%	(5.7%-11.3%)	14,155	28.3%
Obese	14.3%	(10.7%-18.9%)	17,363	34.8%

Italics = significant difference from one or more subgroups

Discussion

Food insecurity crosscuts the Alaska population, affecting children and adults, the employed and unemployed, the urban and the rural, white and Alaska Native, and the sick and the well. Programs such as the Women, Infants, and Children (WIC),

Table 8. Food Insecurity by Co-Morbidities, Alaska BRFSS Standard Survey, 2006.

	%	(95% CI)	Within Food Insecurity	
			N	%
Anxiety Disorder:				
Yes	19.9%	(14.5%-26.6%)	10,737	21.4%
No	9.9%	(8.1%-12.2%)	39,362	78.6%
Asthma:				
Yes	16.5%	(11.9%-22.5%)	11,278	22.1%
No	9.8%	(8%-12.0%)	39,783	77.9%
Depressive Disorder:				
Yes	24.0%	(18.8%-30.1%)	18,739	36.8%
No	8.7%	(6.9%-10.9%)	32,116	63.2%
Diabetes:				
Yes	14.5%	(8.8%-22.9%)	4,064	8.0%
No	10.5%	(8.8%-12.6%)	46,996	92.0%

Italics = significant difference from one or more subgroups

Commodity Supplemental Food Programs (CSFP), and Medicaid may protect the most vulnerable populations by providing increased access to food and healthcare, but these programs leave a large segment of economically disadvantaged individuals at continued risk.

Job change, divorce, and competition in the expenditure of scarce dollars have been identified as contributors to food insecurity.¹² For example, in a choice between food and necessities, 31.7% of client households in the FBA survey said that they had to choose at least once in the previous 12 months between paying for food and paying for utilities or heating fuel, 24.8% between food and paying for rent or mortgage, and 32.0% between food and paying for medicine or medical care.⁷

Public health impacts of food insecurity are felt through poor nutrition (which can manifest itself in overweight and obesity), psychological issues caused by lack of access to food, and exacerbation of the long-term health effects of chronic disease. Individuals in households without adequate access to food are significantly more likely to be depressed than those with secure food access.¹³

There are several limitations to this study. One limitation of the BRFSS survey is that it did not include a question on use of emergency food sources, such as the FBA, in addition to those on food security. It is therefore not possible to know how many individuals and households were food secure as a result of food contributions from FBA, Food Stamps, or WIC. The extent of unmet needs by those currently using emergency food sources and those unaware or ineligible for these services is unknown.⁸ Furthermore, because the BRFSS exclusively surveys adults residing in non-group quarters with telephone service, the

homeless are routinely not surveyed. This suggests the current estimates of the extent of food insecurity are underestimates.

The findings from this cross-sectional analysis do not reveal whether food insecurity places individuals at increased risk for chronic disease or that chronic disease-related expenses result in food insecurity. Regardless of the causal pathway, some extremely vulnerable individuals with chronic disease must manage with food access problems and potentially reduced food intake. Poor nutrition can prolong the healing process and potentially aggravate conditions such as diabetes which are already sensitive to food intake.¹⁴ The health effects of food insecurity must be addressed to reach the goals of Healthy Alaskans 2010, the Alaska Department of Health and Social Services' disease prevention and health promotion objectives for Alaska.¹⁵

A 'healthy Alaska' cannot exist without the economic and nutritional needs of Alaskans being addressed. The FBA is unable to fully meet the nutritional needs of Alaskans. In 2005, half of the food pantries statewide were short of canned or frozen fruits and vegetables, two-thirds were low on protein sources such as meat, poultry, fish, beans, eggs, and nuts, and one-third actually had to turn clients away.⁷ Until the root causes of economic inequity are rectified, emergency food agencies such as the Food Bank of Alaska and safety net programs such as WIC will require increased support to meet the nutritional needs of Alaskans at risk for food insecurity.

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Appendix A

Six-Item Food Security Module

HH3. I'm going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month).

The first statement is, "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
 Sometimes true
 Never true
 DK or Refused

HH4. "(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- Often true
 Sometimes true
 Never true
 DK or Refused

AD1. In the last 12 months, since last (name of current month), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes
 No (Skip AD1a)
 DK (Skip AD1a)

AD1a. [IF YES ABOVE, ASK] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

- Almost every month
 Some months but not every month
 Only 1 or 2 months
 DK

AD2. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?

- Yes
 No
 DK

AD3. In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?

- Yes
 No
 DK