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Obesity Rates in Maine Exceed New England's Obesity Rate: A look at possible contributing factors

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Obesity Rates in Maine Exceed New England's Obesity Rate
A look at possible contributing factors

UNIVERSITY OF SOUTHERN MAINE
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Introduction

Obesity causes many serious health problems such as:

- Diabetes
- Stroke
- Cancer
- Sleep apnea
- Gall stones
- Respiratory problems
- Coronary heart disease
- High blood pressure
- Osteoarthritis
- Infertility in women

Some astounding obesity estimates are:

- **300,000** -- US adults die of causes attributable to obesity each year.[1]

- **1.6 trillion** -- Obesity-related diseases and health problems account for 61 percent of healthcare costs in the United States totaling over this amount a year.[2]

- **$164 billion** -- The estimate of what U.S. employers are losing in productivity each year due to obesity-related issues with employees.[3]

- **$62 billion** -- Medicare and Medicaid are spending nearly this amount every year on obesity-related costs.[3]

- **105%** -- Obese Americans pay more than double what individuals who are not obese pay for prescription drugs.[3]

Definition of Obesity - Body mass index greater than 30:

- Body mass index (BMI) is a measure of body fat based on height and weight that applies to adult men and women.
- To calculate your BMI:
  1. Multiply your height in inches times your height in inches.
  2. Divide your weight by the number you arrived at in Step 1.
  3. Multiply the number you came up with in Step 2 by 705.
- Table 1. shows Weight status for a person five feet 9nine inches tall.

Table 1. Example of BMI and Weight Status

Height	Weight Range	BMI	Weight Status
5' 9"	124 lbs or less	Below 18.5	Underweight
	125 lbs to 168 lbs	18.5 to 24.9	Normal
	169 lbs to 202 lbs	25.0 to 29.9	Overweight
	203 lbs or more	30 or higher	Obese

Weight ranges, BMI, and weight status for a person five feet nine inches tall

Objective

The purpose of this study was to explore adult obesity data to:

- Compare Maine's rates with other New England states
- Explore differences in Maine counties by looking at known risk factors

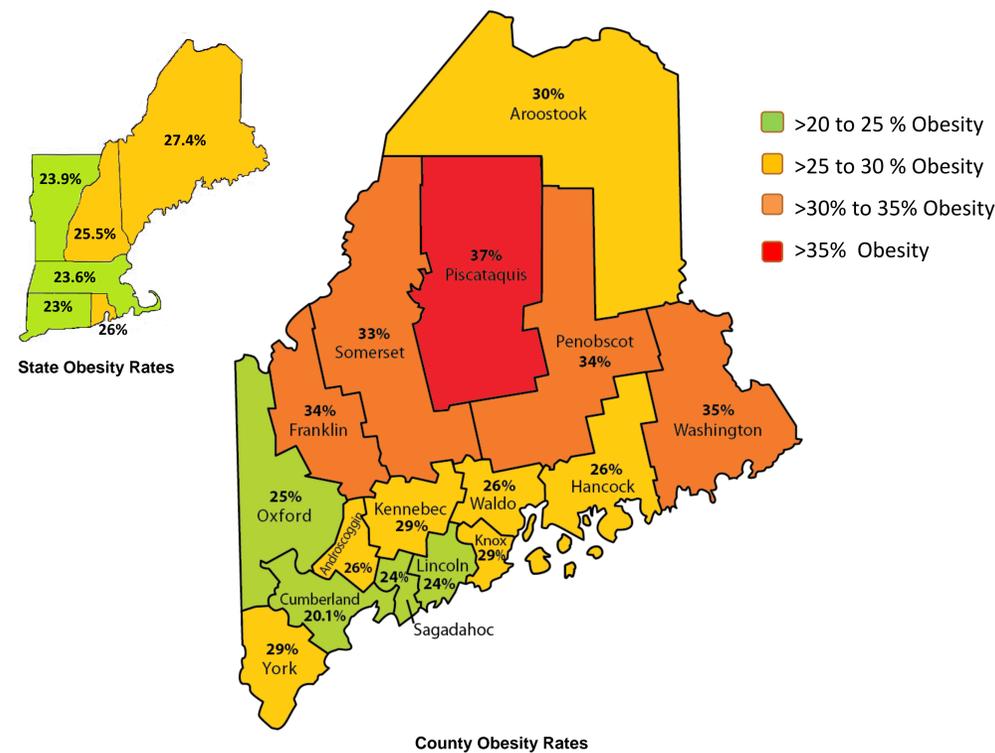**Map 1. County Obesity Rates with New England States Inset**

Legend:
- >20 to 25 % Obesity
- >25 to 30 % Obesity
- >30% to 35% Obesity
- >35% Obesity

State Obesity Rates: 27.4%, 23.9%, 25.5%, 23.6%, 23%, 26%

County Obesity Rates: Aroostook 30%, Piscataquis 37%, Somerset 33%, Penobscot 34%, Washington 35%, Franklin 34%, Oxford 25%, Kennebec 29%, Waldo 26%, Hancock 26%, Knox 29%, Androscoggin 26%, Lincoln 24%, Cumberland 20.1%, Sagadahoc 24%, York 29%

County Obesity Rates

Chart 1. Obesity vs. Bachelor's Degree

Counties with Obesity Rates **Above** New England's:
- Somerset 15%
- Piscataquis 16%
- Aroostic 17%
- Androscogan 19%
- Washington 19%
- Franklin 23%
- Penobscot 23%
- Kenebec 24%
- Waldo 26%
- York 29%
- Knox 29%
- Hancock 32%

New England 33%

Counties with Obesity Rates **Below** New England's:
- Cumberland 40%
- Lincoln 32%
- Sagadahoc 31%
- Oxford 18%

Percent of County Residents with a Bachelor's Degree

Chart 2. Obesity vs. Poverty Level

Counties with Obesity Rates **Above** New England's:
- Washington 20%
- Somerset 18%
- Piscataquis 18%
- Penobscot 17%
- Franklin 17%
- Aroostic 16%
- Waldo 16%
- Androscogan 15%
- Hancock 13%
- Kenebec 13%
- Knox 12%
- York 10%

New England 11%

Counties with Obesity Rates **Below** New England's:
- Sagadahoc 10%
- Lincoln 11%
- Cumberland 11%
- Oxford 15%

Percent of County Residents Living Below the Poverty Level
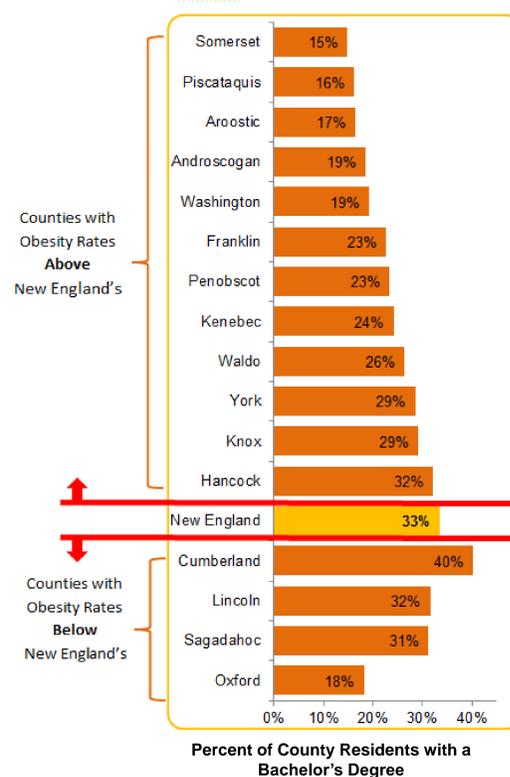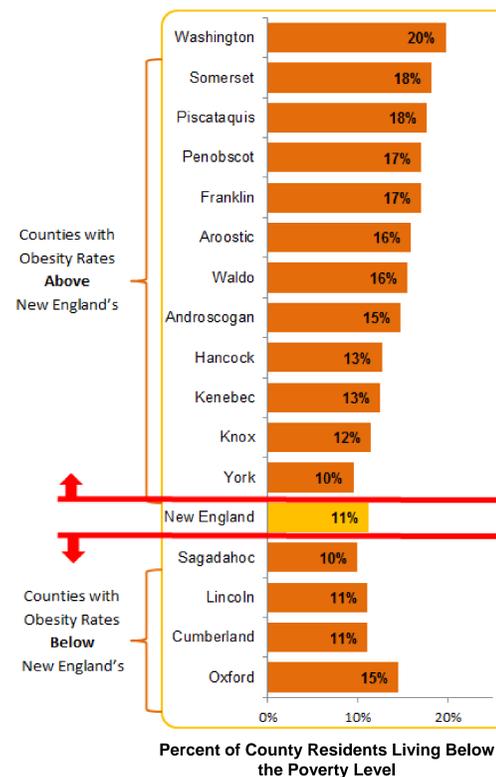
Method

Data was obtained from:

- The 2010 U.S. Census
- Behavioral Risk Factor Surveillance System

Prevalence estimates were based on self-reported height and weight to calculate body mass index (BMI) to assess obesity rates. This project was submitted to the Institutional Review Board at the University of Southern Maine.

Limitations:

- New England averages were calculated by averaging the state rates.
- Reviews of the prevalence data were used – no statistical tests were done.

Findings

This study found that:

- Maine has the highest rate of adult obesity in New England (27.4%) see Map 1. Inset.

- Twelve of Maine's 16 counties have obesity rates higher than the New England average (24.9%), as shown in Map 1.

- Of the twelve counties with obesity rates greater than 24.9 %
  - All have a lower percent of adults with a bachelor's degree than the New England average, see Chart 1.
  - Seven have poverty rates higher than the New England average as shown in Chart 2.

Further research suggested::

- Determine what factors are contributing to the band of high obesity across the central Maine region.

- Studied Oxford County to determine what factors are keeping its obesity rate down even though the number of people with bachelor degrees is relatively low and the prevalence of poverty is relatively high.

Acknowledgements

- This poster was produced for a class project with help and encouragement from Brenda Joly, fellow classmates and coworkers.

References

1: American Heart Association. 2000, Heart and stroke statistical update. Dallas TX
2: Barbara Wexler, 2007. "The Economics of Overweight and Obesity."
3: From the Motley Fool website which cited the following sources:
   Reuters, Brooking Institute, Society of Actuaries, Columbia University.