

**Maine-Harvard Prevention Research Center at UNE**  
**June 2010**

**Project:** Using the Maine All-Payer Database to Examine Obesity-related Claims in Youth.

**Background:** The Maine all-payer claims database contains claims records of all billable health services for all Maine residents covered by commercial health insurers, MaineCare, and Medicaid for the time period 2003 to the current year. Included in each claim record are confidentially-protected demographic data, information on the patients' diagnoses and service/procedures provided, data on providers of care, and amounts paid for care.

**Objectives:** This research will assess the usefulness of Maine's all-payer claims database to study health issues relating to childhood obesity. We will analyze Maine claims records for the calendar years 2004-2008 to investigate the potential of using claims records for identifying children with obesity (via diagnosis or CPT service/procedure) or obesity-related conditions. Once identified, the study will assess the usefulness of claims data to study of childhood obesity co-morbidities, the specialty-mix of health care providers, treatment patterns, medication use and variations across geographic areas of Maine. The assessment will include the evaluation of MYOC provider sites to measure pre/post MYOC differences in patient claim data, as well as differences between MYOC provider sites versus non-MYOC provider sites.

**Questions to investigate:**

1) Can we identify a subset of children (by unique encrypted ID number) who received an ICD9 diagnosis code of 278.xx as a primary or secondary diagnosis within calendar year time periods? If yes, investigate the distribution of children by:

- Age-groups 3-5, 6-11, 12-19;
- Geographic area (public health districts, counties, hospital service areas);
- Payer group (government, private);
- Obese diagnosis mentioned as a primary and/or secondary diagnosis;
- Total cost of all health care provided during calendar year periods.

2) For the subset of unique patient IDs in Question 1, select all claims for these children regardless of any mention of the obesity diagnosis code 278.xx. With benchmarks for children without the obesity diagnosis code, can we use these claims data sets to better understand:

- Co-morbidities associated with obese children;
- Specialties of providers treating obese children and the frequency of health care visits to different specialties;
- Trends in obesity diagnosis by year – evidence of increased code reporting for selected provider groups;
- Types of medications associated with obese children?

3) Do any of the four aspects of health care services in Question 2 differ by:

- Age-groups 3-5, 6-11, 12-19;
- Geographic area (public health districts, counties, hospital service areas);
- Payer group (government, private);
- Type of provider specialist providing the majority of care?
- MYOC providers pre/post MYOC or MYOC versus non-MYOC?

4) Can we use the American Academy of Pediatrics set of obesity-related CPT procedure codes to identify potential obese children in the database? Project advisors have grouped the AAP procedure code list into three sub-categories for: code definitely represents obesity; code is associated closely with obesity; and code is possibly but not necessarily related to obesity. Claims can be analyzed by calendar years to identify patients with any mention of these CPT obesity-related codes. With benchmarks for children without the obesity CPT procedure codes, investigate the distribution of children by:

- Age-groups 3-5, 6-11, 12-19;
- Geographic area (public health districts, counties, hospital service areas);
- Payer group (government, private);
- Obesity-related procedure mentioned as a primary and/or secondary procedure;
- Percentage of children identified in each of the three procedure sub-categories who also were diagnosed with least one obesity diagnosis code (ICD9 278.xx) during a calendar year time period.

5) How do the counts of children found to have obesity-related diagnosis and/or obesity-related CPT procedures compare against estimates of childhood obesity prevalence from other sources of information such as BRFSS (by state and county)?

**Next Steps:**

- Finalize research questions for analysis;
- Obtain claims data file access from MHDO via MCDC;
- Load data sets and prep for analysis work with large data sets;
- Build programming to address research need;
- Prepare findings for first review.