

Automating Assessment of Obesity Care Quality

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Target Population: Adults, Chronic Care*, Obesity

Summary: Obesity and its public health effects are an increasing burden on the health care system. This project proposes to develop, implement, and evaluate a routine, automated method to assess outpatient obesity care quality using measures from comprehensive electronic medical record (EMR) data based upon the National Heart, Lung, and Blood Institute (NHLBI) obesity care guidelines.

The study team will use reasons for visit, orders, referrals, diagnosis codes, laboratory test values, and text clinical notes pertaining to weight loss counseling and other obesity intervention efforts to investigate associations between obesity care delivery steps and clinical outcomes known or suspected to be accelerated by obesity. Percent change in body weight was selected as the primary outcome measure.

Retrospective EMR data from both a midsized health maintenance organization and a consortium of Federally Qualified Health Centers will be used to evaluate the association between obesity guideline adherence and clinical outcomes. The project will use Kaiser Permanente's Certification Commission for Health Information Technology-certified Epic-based EMR HealthConnect and Oregon Community Health Information Network's Epic-based EMR EpicCare. Information from both structured and free-text fields will be used. Free-text fields will be automatically coded using natural language processing computer software. Data produced under the automated method of quality measurement will be compared to medical record reviews performed by abstractors in order to assess the validity of the automated system.

The automated system will be applied to two diverse patient populations totaling more than 350,000 adults to determine: 1) the proportion of overweight or obese patients who are receiving advice, counseling, weight loss program referral, medication prescription, and other care recommended by the guidelines; 2) correlates of overweight and obesity diagnosis and treatment guideline adherence including patient characteristics, comorbidity status, provider characteristics, and health system characteristics; and 3) changes in health status as a function of guideline adherence for obese patients.

Specific Aims:

- Develop obesity care quality measures based on updated NHLBI guidelines to evaluate obesity care performance in primary care. **(Achieved)**
- Use comprehensive EMR data to develop and validate an automated (generalizable and scalable) method for applying the measures identified in the first aim. **(Ongoing)**
- Apply the method developed in second aim to assess ambulatory obesity care quality in two distinct

health plans representing diverse patient populations and care practices. **(Ongoing)**

- Evaluate the association between measures of obesity guideline adherence to recommended obesity care processes and clinical outcomes and provider characteristics. **(Upcoming)**

2010 Activities: The study team developed a working draft of the Obesity Care Quality (OCQ) Measure Set that defines the following:

- Study population, including reasons for exclusion.
- Nine distinct measures of obesity care quality, including criteria for qualification and measurement.
- Risk factors that will be assessed to enable measurement of care for those at heightened risk for adverse health consequences of obesity.

Although the working draft of the OCQ Measure Set will be revised as needed, the associated aim was considered achieved. The team updated their data extraction process and, with a working draft of the OCQ Measure Set developed, have begun to identify the content-specific rules and codes required to identify the relevant clinical events, such as the order codes used at each site, that indicate “obesity counseling.”

Progress was made in identifying the data necessary to assess ambulatory obesity care quality in the two health systems. Summary analyses to understand numbers of patients meeting basic eligibility criteria were created and the project has refined and generalized the measurement methodology utilized in a previous Agency for Healthcare Research and Quality-funded study.

Grantee’s Most Recent Self-Reported Quarterly Status (as of December 2010): Project progress is completely on track with all milestones being met and progressing on schedule. The overall budget is somewhat underspent, due to a slower than expected startup. It is anticipated to be on track in the upcoming year.

Preliminary Impact and Findings: The project does not have any findings to date.

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

Business Goal: Knowledge Creation

* *AHRQ Priority Population*