

Minnesota Academy of Family Physicians Foundation:

I am a first year medical student at the University of Minnesota Medical School Duluth. Last year, I attended the University of Minnesota, School of Public Health to pursue a Masters of Public Health in Epidemiology. My primary area of interest is overweight and obesity, particularly the socioeconomic factors that contribute to this problem. While at the School of Public Health, I held a position as a research assistant in the Division of Epidemiology and Community Health. As a research assistant, I designed and implemented a randomized controlled trial to investigate the economics of shopping for groceries, and how deep discounts on fruits and vegetables as opposed to processed foods impacts purchasing behavior and overall consumption of these foods.

Because I enjoy working with chronic diseases such as obesity and diabetes, family practice is the best fit for me as a future physician. Additionally, I like seeing people across the entire lifespan, and I appreciate the long-term relationships that a primary care physician is able to cultivate with his or her patients.

I am applying for this grant because I am curious about the quality of health care delivery in family medicine especially as it relates to the epidemic of obesity and overweight. I have been privileged to work with intelligent and passionate physicians and researchers who have served as role models and have inspired me to start my own research. My mentor in this project is X, MD, a physician who went into family practice because of an inspiration to help people quit smoking. Dr. X is a physician at X Clinic in MN. Additionally, Y, PhD. has been a great help and a mentor within the medical school.

Sincerely,

a) Description of Research Topic:

Two-thirds of Americans are overweight, and half of these are obese. The prevalence of obesity and overweight in the United States are highly studied; however, the extent to which these diseases are being addressed in the health care system has not been determined. Although the epidemic of childhood obesity is widely recognized, one study found that health care providers identify obesity as a problem for only one-half of the obese children seen in health maintenance exams (1).

This research will assess the percentage of adult patients coming in for health maintenance exams that are overweight or obese, how many of these are identified as being overweight or obese by their primary care physicians, and how many received advice or counseling from their primary care physicians regarding their weight.

b) IRB and HIPAA Compliance:

The Medical Record Chart Review (MRCR) Form will be submitted to the University of Minnesota Institutional Review Board with appendices A and H. Appendix H addresses HIPAA compliance, and it will state that the proposed study qualifies for an IRB waiver of the HIPAA authorization requirements from the study subjects. The principal investigator has completed University of Minnesota HIPAA certification.

c) Why this research is important to Family Medicine:

Physicians are the strongest motivators of patient lifestyle change, and the most common setting for this delivery of advice is in primary care. This is known based on years of studies on tobacco and alcohol counseling (2). Studies on smoking cessation have shown that simple advice has a small but significant effect on cessation rates. Thus, simple advice from primary care physicians may be one facet of a multi-faced approach to help patients with obesity and overweight.

Additionally, there is little systematic review of quality control in primary practice in terms of delivery of health care. In the little data that has been gathered, one study showed that patients in the United States receive only 55% of the recommended care, and they receive only 10% of care for more chronic issues such as alcohol dependence (3).

d) Hypothesis / research question(s) to be answered:

- 1) What is the percentage of patients at the Ridgeview Clinics that are obese (as defined as  $BMI \geq 30 \text{ kg/m}^2$ ) or overweight ( $BMI = 25-29.9 \text{ kg/m}^2$ )?
- 2) What is the percentage of obese and overweight patients in which the provider has acknowledged that the patient is obese or overweight?
- 3) What is the percentage of obese and overweight patients in which the provider has addressed obesity or overweight with the patient, and provided at least simple advice?

e) Methodology:

- 1) Determine BMI (Body Mass Index =  $\text{kg/m}^2$ ) of the patient from height and weight measurements in the chart. BMI, the exposure variable, will be divided into categories: underweight (BMI < 18.5), normal weight (BMI = 18.5 – 24.9), overweight (BMI = 25 – 29.9), and obese (BMI  $\geq$  30).
- 2) Determine if the provider documented obesity or overweight in the physical description of the patient, if the patient was obese or overweight. This will be measured as a dichotomous outcome (yes/no).
- 3) Determine if the provider documented obesity or overweight in the assessment of the patient, if the patient was obese or overweight. This will be measured as a dichotomous outcome (yes/no).

f) Define data / sample and how it will be collected:

The data sample will be collected from adult patients ( $\geq$ 18 years old, having at least one examination in the past year) of the Ridgeview Clinic system. The clinics are located west of the Twin Cities in both suburban and rural settings, and the towns served include: Chanhassen, Delano, Excelsior, Howard Lake, Mound/Westonka, and Winsted. Electronic medical records will be audited based on the type of exam, using “health maintenance exam,” “annual physical,” or a similar appointment code. Approximately 400 charts will be audited on the first round, as 200 overweight or obese cases will be an adequate sample size for this study, and it is estimated that approximately 52% of women and 69% of men in Minnesota are obese or overweight (4).

g) How the data will be processed and analyzed:

The data will be collected and cleaned by the principal investigator. The results will be reported (mean, standard deviation) for each of the three hypotheses listed above. Multiple two-by-two tables will be used to compare the exposure variable (BMI category) to the outcome variables (listed in physical description by physician, listed in assessment by physician). Additionally, inter-clinic or inter-provider comparisons may be made. It may also be insightful to compare the two outcome variables for each category of BMI.

h) Proposed timeline for completing the research study:

Institutional Review Board application will be completed this spring. Data collection will take place in July. Data cleaning, data analysis, and project write up will take place in August and during the fall semester as needed.

i) Projected budget:

Budget will cover living expenses (estimated \$1,200.00) and travel expenses (estimated \$300.00) of the principal investigator during the time of the data collection and write up. Additionally, there may be a fee associated with the use of SAS 9.1 statistical software, but this is yet to be determined.

References:

1. O'Brien SH, Holubkov R, Reis EC. Identification, evaluation, and management of obesity in an academic primary care center. *Pediatrics*. 2004 Aug;114(2):e154-9.

2. Silagy C, Stead LF. Physician advice for smoking cessation (Cochrane Review). *Cochrane database Syst Rev* 2001:CD000165

3. McGlynn EA, Asch SM, Adams J, Keesey J, Hicks J, DeCristofaro A, Kerr EA. The quality of health care delivered to adults in the United States. *N Engl J Med*. 2003 Jun 26;348(26):2635-45.

4. Adult Overweight and Obesity Rates for Adults by Sex – Minnesota – Kaiser State Health Facts <http://www.statehealthfacts.org/profileind.jsp?cmp=1&cat=2&rgn=25&ind=90&sub=26>. Accessed February 11, 2009.