

Inner City Community Oriented Primary Care to Improve Medical Student Skills and Combat Obesity

José E. Rodríguez, MD*; Alice B. Fornari, EdD, RD†

*Department of Family Medicine and Rural Health
Florida State University College of Medicine
Tallahassee, Florida

†Department of Family Medicine and Social Medicine
Albert Einstein College of Medicine
Bronx, New York

Abstract:

Background: Efforts to increase medical student knowledge regarding obesity are needed in medical school curriculum. This article examines a third year medical student intervention utilizing obesity group visits.

Description: In our third-year family medicine clerkship, we implemented the Health not Cosmetics pilot intervention as part of a Community Oriented Primary Care experience. The intervention consisted of weekly group visits run by third and fourth year medical students to teach lifestyle modification. To evaluate the intervention, medical students filled out an anonymous departmental evaluation form and patients were surveyed using a short questionnaire during a group visit.

Evaluation: Medical students rated the intervention as meeting or exceeding expectations and as improving Community Oriented Primary Care skills, especially in the following areas: identifying community needs, participating in an intervention, collecting data and presenting results. Patients adopted more active lifestyles and healthier eating habits.

Conclusion: This intervention was well received by medical students and patients.

A recent study of Americans suggests that 90% of men and 70% of women will become overweight in their lifetimes.¹ As a result, virtually all physicians will encounter obese patients in their careers. Obesity disproportionately affects minority groups,² suggesting that the above findings will be even more pronounced among Latino and African American patients.³ Individual treatments are costly, time consuming and may not be feasible in busy primary care settings. Despite the large numbers of obese Americans, treatments for obesity are not adequately taught in United States medical schools.⁴

This article describes a community intervention which has been used to help underserved residents of the Bronx, New York lose weight. We will discuss the results of medical student participation, as well as patient results. Since this is a pilot evaluation, discussions of all results are preliminary. This project was reviewed by the Albert Einstein College of Medicine Committee on Clinical Investigations (CCI) and approved under the protocol entitled "Stop Obesity through Awareness, Prevention, and Treatment."

Intervention

To expose medical students to feasible obesity interventions, we developed a medical-student run, community-based intervention. During their third-year family medicine clerkship, medical students participated in a lifestyle intervention based on the group visit model of care. We called the intervention *Health not Cosmetics*, recognizing that weight loss is primarily a cosmetic change. In some cultures, this cosmetic change is interpreted as an indicator of recent illness or poverty.⁵

We developed four goals for patients and five goals for medical students. Patient goals included establishing healthy eating patterns, safely increasing physical activity, supporting efforts to change lifestyle, and overcoming beliefs that are not consistent with healthy lifestyles. Goals for medical student skill improvement included defining a community-based health problem, participating in an educational intervention, collecting data and interpreting results, analyzing and presenting outcomes, and preparing an oral presentation for peers and faculty.

Table 1: Third-Year Clerkship

Third-Year Family Medicine Clerkship at Albert Einstein College of Medicine—1 Month						
Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
A.M. Session	Outpatient Clinical Experience	Case Based Teaching	Outpatient Clinical Experience	Outpatient Clinical Experience	Lectures & Didactics	Einstein Community Health Outreach Free Clinic
P.M. Session	At Family Physician's Practice	<i>COPC</i>	At Family Physician's Practice	At Family Physician's Practice	<i>COPC</i>	

Evaluation

Background

The Albert Einstein College of Medicine family medicine clerkship is based in family medicine practices throughout New York City. Unlike most third-year clerkships, two days a week are dedicated to hands-on Community Oriented Primary Care (COPC).

Medical students learn COPC during the allotted time by participating in a community intervention over four weeks. Medical students are paired to work on these interventions 8-12 hours per week. At the end of the clerkship, medical students present their work to their peers and faculty. *Health not Cosmetics* is one of these community interventions. As a part of *Health not Cosmetics*, we initiated group visits to provide patients with tools to meet their group goals. We used a multidisciplinary approach consisting of a family physician, a nutritionist and third year family medicine clerks. Lifestyle modification is the central theme of these group visits. In addition to leading the group visits, medical students produce patient education materials using any instructional media that they choose. Medical students and providers recruit patients through phone calls, a web site, office visits, and community health fairs. Any patient choosing to participate in *Health not Cosmetics* is encouraged to attend weekly.

Once individual patient goals are identified, medical students teach patients to manage their weight through lifestyle changes in nutrition, exercise, and stress management. Each group of medical students selects and develops topics from a lifestyle curriculum to be taught during the group visit. Lessons are reviewed by the faculty before presentation to the patients. Medical students are responsible for three to six group visits. The group visits are held at two different community health centers in the Bronx, New York. One group is 70% Latino; the other group is 90% African-American. Medical students provide culturally-sensitive education to these patients.

We collected data from medical students and patients to evaluate the intervention. This data is part of a pilot evaluation. We anonymously collected medical student experience data using a departmental evaluation form upon completion of each clerkship. The evaluation form included questions such as these: How much did this project improve your skills in each of the following areas? How would you evaluate your family medicine project overall? Would you recommend this project to students in subsequent rotations? This information is shared with faculty after the medical student has received her or his grade.

We administered the patient attitude questionnaire during one group visit to all those that attended that day. The questionnaire consisted of open-ended questions with a list of response choices. A sample question reads "If you have changed, please check all the changes that apply to you."

We tallied the medical student responses and then averaged the Likert scale scores. We conducted analyses using a Microsoft Excel spreadsheet. Patient questionnaire results were tallied and displayed as percentages.

Results

Medical Student evaluations - Eighteen medical students completed the evaluations. Medical students reported substantial improvement in defining a population-based health problem, carrying out an intervention, and preparing an oral presentation. Medical students also reported some improvement in analyzing and presenting data, interpreting results and participating in an educational intervention. Overall, 100% of medical students felt that this COPC intervention met or exceeded expectations and would recommend it to their peers.

Table 2: Sample Medical Student and Patient Evaluations

Sample from Medical Student Evaluation Form:					
How much did this project improve your skills in each of the following areas? (Not at All=1, Somewhat=2, Substantially=3 and N/A=0)					Average Likert Score
a. Defining a community/population based health problem					2.83
b. Participating in an educational intervention					2.39
c. Collecting data or carrying out an intervention.					2.72
d. Interpreting results.					2.28
e. Analyzing/presenting data.					2.50
f. Preparing an oral presentation for peers.					2.83
Sample from Patient Questionnaire					
If you have changed, please check all changes that apply to you:					
Eating healthier	Exercising more	More active lifestyle	Lost weight	Lost inches off waistline	Cooking/preparing healthier foods
77%	62%	54%	62%*	46%*	69%

* All measurements were taken by medical students

Patient evaluations - All thirteen patient participants in the group visits completed the survey. The patients had varying levels of attendance, from one month to one year. The results suggest that 62% of respondents have adopted healthier eating and food preparation habits, more active lifestyles, and regular exercise. A similar number (62%) have lost weight. A large minority (46%) have decreased their waist circumference. Since this is a pilot evaluation, the results reported are preliminary. Over the course of the project, we hope to include more participants for further evaluation of the program.

Conclusion

The data presented suggest that group visits run by medical students and centered on lifestyle modification may improve patients' health habits, exercise, food preparation, and choice of foods. This intervention simultaneously offers medical students a COPC experience which can improve their skills.

Health not Cosmetics has been a COPC intervention for three years, reaching about 100 people in the community served. These group visits have been successful in promoting lifestyle change among the patients participating. We are planning more community outreach to motivate those who currently are not patients at the participating clinics. The plans include health fairs, radio and television appearances, an internet site, a school-based intervention called Apple Wars, and a mobile health unit dedicated to obesity education. All of these future directions will involve medical students.

In the future, we will use more objective evaluation methods and will include comparison groups of patients as part of the study design. We will collect data focused on patient outcomes including body mass index, hemoglobin A1C, and weight change. We will also collect medical students' comments, evaluate them for themes, and use them to make the experience richer as a model for COPC and obesity interventions.

Acknowledgement

The Authors would like to acknowledge Gladys Valdivieso for her efforts to identify and organize community projects for medical students and her work with Health not Cosmetics.

References

1. Vasan RS, Pencina MJ, Cobain M, Freiberg MS, D'Agostino RB. Estimated risks for developing obesity in the Framingham Heart Study. *Ann Intern Med.* 2005;143:473-80.
2. Hedley AA, Ogden CL, Johnson CL, Carroll MD, Curtin LR, Flegal KM. Prevalence of overweight and obesity among US children, adolescents, and adults, 1999-2002. *Jama.* 2004;291:2847-50.
3. Perez A, Rodriguez JE. The Hispanic paradox: review of an open question. *The Bariatrician: Am J Bariatric Med.* Fall 2005;20(3):16-22.

4. Tobin B, Welch K, Dent M, Smith C, Hooks B, Hash R. Longitudinal and horizontal integration of nutrition science into medical school curricula. *J Nutr.* 2003;133:567S-72S.
5. Rodriguez J. Bronx Style bariatrics: health not cosmetics. *The Bariatrician: Am J Bariatric Med.* Winter 2004;19(4):23-7.

Correspondence

Jose E Rodriguez MD
Florida State University College of Medicine
1115 West Call Street #3210M
Tallahassee, FL 32306
Phone: 850-645-6850
Fax: 850-645-2859
E-mail jose.rodriquez@med.fsu.edu