Four Years of Group Visits Treating Obesity in an Under Served Urban Community: Health not Cosmetics

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Conflicts of Interest
Neither José Rodríguez, MD, Kimberly Painter, MD, MPH, nor Gloria Bent, MSRD have any potential conflicts of interest.

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Introduction
A recent study of Americans suggests that one in two will be overweight or obese in their lifetimes (1). While this is an average for all Americans, it is probable the percentages will be even higher among some ethnic and racial minority groups (2, 3). This problem and its resulting complications cost 117 billion health care dollars annually (4). Obesity is only by tobacco use as the leading cause of preventable death (5). It is also responsible for many common conditions, including but not limited to heart disease, type 2 diabetes mellitus, hypertension, hyperlipidemia, arthritis, and complications associated with childbirth and surgery (6, 7).

Residents of The Bronx, New York are no exception to this trend. Official New York City Department of Health and Mental Hygiene (DOHMH) data suggests that 62.4% of current residents are overweight or obese (8). Over 27% of residents in some neighborhoods of The Bronx are obese (8). Since a large majority are overweight or obese it is possible that the community's residents perceive others with normal BMI as "too thin." (9) It is also possible that this high prevalence of obesity is caused by residents' lack of knowledge about obesity and its health effects.

The Bronx population is unique in many ways. Of its 1.5 million residents, 48.4% are Latino, 35.6% African-American, 14.5% Caucasian, and 30.7% live in poverty (10). These populations have been disproportionately affected by the obesity epidemic. In fact, the highest percentage of those morbidly obese are African-American women (11). The diverse nature of the population and the high prevalence of poverty make conventional methods of obesity treatment cost prohibitive or culturally inappropriate (12).

Despite the recognized need for an obesity intervention, group visits targeting obesity had not been attempted in this population. However, we began group visits for obesity treatment at a central Bronx health center. These group visits were designed to teach patients about obesity and its effects, and we tried to motivate them to lose weight by providing them with useful tools. This study was specifically designed to determine if group visits could be effective in promoting weight loss, as well as reducing waist circumference and hemoglobin A1C. The 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." Group visits began in 2002 and have been taking place weekly since then.

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Methods
Overview: In early 2002, one of the authors was obese (JR). He decided to lose weight and lost it rather quickly (13). Many of the clinic's patients saw the obvious change in his appearance and questioned him and the other providers about weight loss. Since the interest was so great, we started weekly group visits primarily taught by the providers (JR, KP) and the nutritionist (GB). We named the project Health Net Cosmetics, emphasizing that health improves before visible changes are seen.

Health Net Cosmetics was also part of the family medicine clerkship at the Albert Einstein College of Medicine (AECOM). Unlike most third year clerkships, the AECOM clerkship received two days a week for hands-on Community Oriented Primary Care (COPC) (Table 1). Medical students learn COPC during the allotted time by participating in a community intervention over four weeks. Pairs of medical students work on these interventions for 8-12 hours per week, and at the end of the clerkship each student presents his/her work to their peers and faculty. Over the last four years, 96 students have facilitated the group visits.

The project established goals for both patients and students. Patient goals were as follows:
1. Establish healthy eating habits.
2. Safely increase physical activities.
3. Support decisions to change lifestyle.
4. Overcome cultural challenges and beliefs that may not be beneficial.

Health Net Cosmetics was also developed to teach medical students lifestyle modification techniques and successful weight loss treatment for patients. We modeled the group visit facilitation for the first session of each rotation, and required the students to facilitate during the remaining sessions of the 4-week rotation. We also asked the students to produce culturally appropriate patient education materials.

Before initiating the group visits, a needs assessment was performed. Patients scheduled to see one of the authors (JR) were given an index card and asked to answer four questions (Appendix 1). Similar surveys have been used to assess community needs (14) but our survey gauged the group's interest in obesity.

Setting: Patients for these group visits were recruited through various means. The providers publicized and recruited patients at two clinical sites in The Bronx. The obesity group visits were discussed in our weekly provider meeting, and the providers agreed to either pass out flyers to patients or speak to them about the visits. Providers and staff made a specific effort to reach out to overweight or obese patients, but anyone who chose to participate was encouraged to attend regardless of their BMI. Interested patients gave their contact information to the individual providers or to the staff. We gave the contact information to the students and they called weekly before each group visit to ensure participation. Medical students created a website to publicize and recruit patients to the visits (15). Medical students reached out to the community by publicizing the group visits at health fairs, parks and other sites using a mobile health unit called Vehicle Assisted Nutrition (14). Staff were asked to specifically invite patients who were obese, had diabetes, or were interested in a healthy living group visit. Nobody was excluded from the group visit. We also recruited interested patients from the waiting room during the actual activity.

Weekly group visits were organized at two different health centers in The Bronx, which primarily serve Medicaid or uninsured patients, and are satellite clinics of the local public hospital. Visits were scheduled at a time that was logistically plausible for patients, medical students and faculty. Each group visit was organized as a drop-in group medical appointment (DIGMA). In other words, no appointment was necessary. We alerted staff about the scheduling of group visits, and asked them to open visits and record vital signs of all patients.

Weekly group visits were scheduled for 60 minutes. The group visit was based on an original curriculum developed by the first author, medical students, and a nutritionist. Patients' age, sex, height, weight and waist circumference were recorded at the beginning of each visit. The remainder of time was divided into three components: exercise, nutrition, and support. After each group visit, a few minutes were reserved for the patients to meet with the providers and medical students to resolve individual concerns. Providers and medical students also kept notes on patients for billing and documentation purposes.

The exercise component began with 20 minute walks in the park or through the clinic's halls, then patients returned to the clinic for the didactic part of the visit. Medical students greatly improved this segment. One student had experience operating a video camera while another was a professional aerobics instructor. With faculty guidance, these two students produced the first Health Net Cosmetics exercise DVD, which is still being used weekly in the group visits and in many patients' homes. Four other students collaborated to produce three DVDs: Aerobics, Resistance Training, and Pilates.

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<tr>
<th>Day</th>
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<td>Monday</td>
<td>Outpatient Clinical Experience At Family Physician's Practice</td>
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<td>Tuesday</td>
<td>Case Based Teaching</td>
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<td>Wednesday</td>
<td>Outpatient Clinical Experience At Family Physician's Practice</td>
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<tr>
<td>Thursday</td>
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<td>Friday</td>
<td>Lectures &amp; Didactics</td>
<td>LRSC Community Health Outreach Free Clinic</td>
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Table 1: Third Year Family Medicine Clerkship at Albert Einstein College of Medicine-1 Month
Nutrition is a central theme of the group visits because dietary therapy is an integral part of weight loss (16). Our nutritionist (GB) developed this portion of the curriculum with the authors, centering it on lifestyle modification. Many patients had common misconceptions about diets for weight loss. The curriculum was designed to teach patients that lasting weight loss requires permanent change. Patients, however, found the idea of a permanent diet difficult and a serious disincentive for weight loss. Using behavioral modification techniques, we focused on small yet permanent diet changes like drinking more water and reducing portion sizes. Patients were encouraged to set small goals and change them into daily habits.

The support component was integrated throughout the group visits. We encouraged patients to get to know each other and form relationships outside the scheduled visits. We also incorporated some behavioral therapy into this segment: self-monitoring, goal setting, problem solving, social support, stress management and cognitive restructuring (17). During the visits we elucidated their barriers and helped patients identify ways to overcome them. For example, one group saw exercise safety as a barrier. Group members formed pairs for the purpose of exercise and some even became partners with the authors. We also stayed in contact via email and beepers. Patients meeting their goals were rewarded with certificates, t-shirts, pedometers, and jump ropes provided by the New York City Department of Health and Mental Hygiene, the North Bronx Healthcare Network and MetroPlus insurance.

Primary Outcomes: Participants were expected to attend group visits every week, during which their age, gender, weight and height were recorded. Patients were weighed using a digital Healthometer® scale and weights were recorded to the nearest tenth of a pound. Their heights and waist circumferences were measured to the nearest quarter inch with a Stanley® industrial tape measure. Patient BMI was calculated using a standard formula in Microsoft Excel, data was recorded in an Excel spreadsheet and analyzed using SPSS.

Patients were invited to reflect on their experience with the group visit and their comments were collected and analyzed.

Results

Patients: One hundred forty patients participated in the program from July, 2004 to July, 2005. The majority (72%) of participants were female. The average BMI of female participants was 33 kg/m² and the average BMI of males was 31 kg/m². The average participant age was 36. On average, women participated twice as often as men. (Figure 1) During the first six months of the program (December 2002-June 2003), we observed significant weight loss among the initial participants, with an average loss being 14.7 lbs. (Figure 2) After the first 18 months patient participation became more sporadic, with only 22% of participants attending more than one session from July 2004-July 2006. However, we observed a dose response with repeat patient participation. The patients who attended more than eight times exhibited an average weight loss of 11 lbs. (Figure 3)

Patients' comments about their experience in the program were uniformly positive including, "I loved it" and "I would love to come again if I had more time." Patients said they were surprised at the amount of information readily available on food labels and the internet. One patient reported, "My kids and I became conscious of what we're eating and of our portion size." Patients also stated that their favorite part was "doing the exercises."
Students produced a myriad of patient education materials including exercise DVDs, step counting guides, resistance training posters using common household items, and food diaries. Students studied the new food pyramid and produced guides for patients to better understand its recommendations. Some students created small picture brochures with healthy alternatives pictured alongside the more popular, unhealthy choices. To remind patients of healthy foods, students developed a refrigerator magnet (Figure 4). While all of these materials have been used in the group visit to help achieve patient results, we are planning additional studies to test the efficacy of the individual products.

The legitimate limitations to our observational study follow. First, this study was done without a control group so there is no comparison to regular care for obese patients. Second, the group visits were not very accessible to patients because they were held during working hours in the afternoon. This excluded working patients who may have been overweight or obese. Third, the group visits had a small average attendance, limiting the power of our findings. Sporadic attendance in the group visits made it difficult to track the patients over time, and we are unable to report how many patients have kept all of the weight off for more than four years.

Despite these limitations, our findings suggest that group visits for obesity treatment do work. Patients have also become more aware of the information available to them. Patients and providers seemed to enjoy the program, helping motivate patients to continue their participation and lose weight.

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References

About the Author
Dr. Rodriguez is an expert in weight loss and non-pharmacologic obesity management. He is a Board-certified Family Physician and Assistant Professor at the newly created Florida State University College of Medicine. Previously he was on the faculty of the Albert Einstein College of Medicine of Yeshiva University and an attending physician at the North Bronx HealthCare Network, New York. He is founder and director of “Health not Cosmetics,” a lifestyle-based approach to weight loss and healthy living. Dr. Rodriguez has presented at several professional conferences on obesity in underserved minority populations and is the author of numerous articles on obesity, minority health, medical education and health disparities. He recently co-authored with Michelle May, MD a Spanish lifestyle modification, workbook entitled “Tendré Hambre? Cuaderno del manejo del peso y diario de motivación” (Am I Hungry? Weight Management Workbook and Motivation Diary). When not teaching he divides his time among his family, church, running and bariatric medicine.

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