
Missed Opportunities

Local Health Departments as Providers of Obesity Prevention Programs for Adolescents

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- Background:** This study examined the availability of local health department programs related to youth healthy eating, obesity control, and physical activity.
- Methods:** Data were obtained in the spring and summer of 2003. Selection of communities was based on a nationally representative sample of 8th-, 10th-, and 12th-grade students. Health departments with jurisdiction over these communities were contacted. Information was collected on departmental activities around healthy eating, weight loss, and physical activity.
- Results:** Results reveal that on average less than half the health departments surveyed provide, support, or advocate for programs targeting these activities. While the majority of informants indicated that these programs are of high priority, there is still an opportunity for health departments to expand these types of services.
- Conclusions:** By increasing and expanding these programs and advocacy efforts, health agencies could be an important resource in helping to curb the current obesity epidemic.
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Introduction

The United States has been experiencing a growing trend in overweight and obesity among both adults and youth over the past 20 years.^{1–3} The problem has grown to such proportions that obesity is second only to tobacco as the leading cause of preventable disease and death. Given recent trends, poor diet, physical inactivity, and resulting obesity may soon overtake tobacco as the leading cause of death.^{4,5} Although there has been some recent controversy on the magnitude of the health impact that obesity has on excess mortality, there is still strong evidence that obesity is associated with increased rates of mortality.⁶ Thorpe et al.⁷ found that during 1987–2001, 27% of the growth in healthcare spending was attributable to the increase in obesity prevalence and increased spending on the obese.

Chronic diseases are responsible for seven of every ten deaths in the U.S.⁸ and being overweight or obese increases the risk of many chronic diseases, such as hypertension, type 2 diabetes, coronary heart disease, stroke, and some cancers.⁹ Results of a survey, administered in January 2003 to local health departments with jurisdiction over 37 million people (13% of the

U.S. population), show that on average only 1.85% of the health department's overall budgets was spent on chronic disease-related programs.¹⁰ The survey also revealed that only half of responding health departments had received any federal funding for chronic disease programs; this represented only minimal amounts of funding (\$0.24 per capita).¹⁰

The risk of obesity varies by race, ethnicity, and socioeconomic status (SES). Using cross-sectional data collected annually from 1993 through 2003 for 8th and 10th graders, and from 1986 through 2003 for 12th graders, researchers¹¹ found significant differences in the percent of racial and ethnic minorities and youth with lower SES who were overweight and, particularly among males, had less healthy lifestyle habits, which included eating and exercise behaviors, as well as time spent viewing television. Powell et al.¹² found that low-income and minority populations most at risk for physical inactivity and obesity were likely to have access to fewer outdoor physical activity-related settings. These results are of particular concern because physical activity and eating behaviors that youth develop in their adolescence will most likely follow them into adulthood; maintaining regular physical activity and healthy eating behaviors can reduce the risk of overweight and obesity.

Although constantly evolving as new threats to the nation's health emerge, the responsibilities of public health agencies fall primarily into three overarching categories: (1) health promotion, (2) disease preven-

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tion, and (3) health protection.¹³ The public health system is vast, with agencies at not only the federal and state level, but also at the regional/district and local level. In a survey of state health officers (N=47), 43% of the respondents reported that their state had a regional or district structure in place and over 80% responded that local public health agencies served all areas of the state.¹⁴ With the increasing threat that obesity poses to future quality of life and preventable disease and death, public health agencies at both the state and local level could serve as resources for obesity prevention programs. Results of a study conducted by the National Association of County and City Health Officials show that 55% of local public health agencies include obesity as part of their programmatic responsibilities.¹³ In 2000, the Centers for Disease Control and Prevention (CDC) launched a state-based obesity prevention program that provides funding to 28 state health departments to develop and implement population-based nutrition and physical activity interventions.⁹ The purpose of this study was to examine the availability of local public health department programs related to adolescent healthy eating, obesity control, and physical activity. The results will provide evidence on what, if anything, health departments are doing to address these issues, as well as help policymakers and public health officials improve and/or better target these programs.

Methods

Sample

In 2003, ImpacTeen, a component of the Bridging the Gap: Research Informing Healthy Youth Behavior Initiative (www.impacteen.org, funded by The Robert Wood Johnson Foundation), developed a brief survey, targeted to local health departments, that focused on the availability of programs related to adolescent healthy eating, obesity control, and physical activity. Data-collection activities were conducted at 219 sites surrounding a national sample of 8th-, 10th-, and 12th-grade schools participating in their second year of the Monitoring the Future study (MTF), supported by the National Institute on Drug Abuse. MTF uses a multi-stage sampling design to obtain nationally representative samples of students.¹⁵ Site boundaries were defined as the area from which each school drew the majority (at least 80%) of its student population (school enrollment zone). School enrollment zones vary in size depending on the type of school, thus some sites comprise multiple communities.

A total of 162 health departments were identified through a combination of Internet searches and directories of local health departments as having jurisdiction over the sites. There were fewer health departments than sites because in most cases a county or regional health department had jurisdiction over a site and some sites were located in the same counties. However, interviews were conducted with multiple agencies for 26 sites. This happened when sites encompassed multiple communities with multiple health departments having jurisdiction over these communities or

when the health department contracted out some of its obesity-related services. In order to account for this in the analyses, respondents' answers were first weighted based on the proportion of the population each community represented within the site and then aggregated to the site level. Next, to account for the complex MTF multi-stage sampling design, sampling weights were applied to adjust for differential selection probabilities.

Interviews were completed with 156 health department informants who had jurisdiction over 215 of the total 219 sites for a 96% response rate. Initial telephone contact was made with the health department director to confirm jurisdiction. Once jurisdiction was confirmed, the health department director was then asked a screener question about the presence or support of programs related to adolescent healthy eating, obesity control, or physical activity. A total of 105 respondents covering 151 (70%) of the sites indicated they had some type of program related to at least one of these areas. Respondents included health administrators, such as directors of health promotion; health educators; and obesity prevention directors; as well as registered nurses, nutritionists, and youth program coordinators.

Variables

Informants were asked about service provision (Table 1) and whether their agency was involved in any advocacy activities related to these programs. Advocacy was defined as engaging in lobbying, raising awareness, working with schools, and other interest groups, and by enacting new health regulations. Those who did provide support or advocate for these types of programs also were asked about three separate categories—healthy eating, obesity control, and physical activity—that used a 5-point scale (ranging from much less important to much more important) about how important these activities were in comparison to other agency activities. To determine how the availability of these programs related to the level of importance the agency placed on them relative to other programs, scales of the individual questions were created by summing the dichotomous variables for the four topic areas: (1) health department provides or supports healthy eating programs, (2) health department provides or supports obesity control programs, (3) health department provides or supports physical activity-related programs, and (4) health department advocates for healthy eating and/or physical activity-related community/school programs. Due to the skewed distribution of responses (presence of programs versus no programs offered), a dichotomous indicator variable of availability was created. Availability for Category One was 87 of 145; Category Two was 76 of 144; Category Three was 74 of 148; and, Category Four was 79 of 147 sites.

Statistical Analysis

Descriptive analyses and cross-tabulations were performed using SAS version 9.1. For all analyses, weights were included to account for the MTF-stratified sampling procedures. Z-scores were calculated to the test for significant differences in the proportion of communities having any presence of healthy eating, obesity control, and physical activity programs.

Table 1. Healthy eating, obesity control, and physical activity programs for youth

Specific program/activity	Provide/ support (%)	n
Healthy eating programs for youth		
Individual nutrition counseling	25	209
Group nutritional counseling	17	215
Health fairs or seminars on healthy eating	41	215
Other healthy eating programs	25	215
Presence of any healthy eating programs	39	210
Obesity control programs for youth		
Group or peer weight loss programs	6	215
Parent education programs to reduce obesity	32	215
Programs to manage type 2 diabetes	23	215
Summer camps for overweight youth	3	215
Presence of any obesity control programs	33	215
Physical activity programs for youth		
Walking or bike clubs	18	215
Sports leagues, sports camps or programs	18	215
Organized physical activity events	20	215
Training for teachers to provide better PE	15	215
After-school physical activity programs at schools	13	215
After-school physical activity programs at public parks or recreation centers	15	214
After-school physical activity programs at community agencies or religious institutions	17	215
Training for physical activity leaders	18	215
Walk to school programs	18	215
Other physical activity programs	10	213
Presence of any physical activity programs	34	215

Percentages are based on respondents saying yes to presence of programs.

Results

Two thirds of the informants interviewed indicated that their health departments were doing something related to healthy eating, obesity and physical activity. Table 1 presents results on the presence of these programs and shows that fewer than half of the respondents indicated availability/support for these types of programs. Table 2 presents the results and shows that in all but one instance, fewer than a third of the respondents indicated involvement in advocacy activities. The proportion of communities having any type of healthy eating versus obesity versus physical activity programs were examined in an effort to determine if there were significant differences in the availability of the three target areas (results not shown). No significant differences were found. Informants were also asked how important healthy eating, obesity control, and physical

activity programs were in relation to other health department activities. The majority of informants indicated that all were either somewhat more or much more important in relationship to other health department activities (74%, 75%, and 75%, respectively). In contrast, only 11%, 14%, and 10% of respondents indicated that these programs were somewhat less or much less important, with the remaining informants stating these programs were of equal importance to other public health activities.

Cross-tabulations were run for four categories—healthy eating, obesity control, physical activity and advocacy activities for these programs—to determine if the availability of programs offered was an indicator of the level of importance placed on it by the agency (see Table 3 for full results). Of the ten cross-tabulations run, only four show statistically significant relationships (bolded in Table 3).

Limitations and Conclusions

These data illustrate that although respondents indicated that obesity control activities were important in relationship to other activities, the lack of programs does not support this. This is not surprising given that the allocation of resources has not kept pace with the increased and competing demands on health departments.¹³ With the continually growing evidence showing that both healthy eating and physical activity are effective at reducing overweight and obesity, which in turn should reduce the burden chronic disease causes in the U.S., it is important to consider many outlets, including health departments, where this existing research can be turned into practice.^{16,17} Although health departments are an important setting for disseminating research findings related to obesity prevention, they may lack the adequate infrastructure, including trained staff, facilities, and funding to effectively offer these pro-

Table 2. Health department obesity prevention advocacy activities

Specific program/activity	n	Advocates for (%)
Healthy school meals	215	41
After-school physical activity programs at schools	214	22
After-school physical activity programs at public parks or recreation centers	214	26
Training for physical activity leaders	213	28
Walking or bike paths	214	21
Increased PE requirements	214	20
Improved training of PE teachers	214	29
Better quantity and quality of play	212	20
Walk to school programs	211	18
Safe street and sidewalk designs for children to walk and bike	213	28

Percentages are based on respondents saying yes to advocating for programs.

Table 3. Cross-tabulations between level of importance of programs and presence of programs

Importance of	Healthy eating programs (HE) N=87 (%)	Obesity control programs (OC) N=76 (%)	Physical activity programs (PA) N=81 (%)	Healthy eating, obesity control, and physical activity advocacy activities (HE/OC/PA) N=85 (%)
Healthy eating	—	—	—	—
Much more important	30 (34)	36 (47)	N/A	36 (42)
Somewhat more important	25 (28)	21 (28)	N/A	24 (28)
Of equal importance	19 (22)	12 (15)	N/A	14 (17)
Somewhat less important	11 (13)	7 (10)	N/A	9 (11)
Much less important	2 (3)	0 (0)	N/A	2 (2)
Obesity control	—	—	—	—
Much more important	25 (29)	34 (44)	33 (40)	34 (40)
Somewhat more important	31 (36)	24 (31)	25 (30)	29 (34)
Of equal importance	13 (15)	7 (10)	8 (11)	9 (11)
Somewhat less important	15 (17)	11 (15)	13 (17)	11 (13)
Much less important	3 (3)	0 (0)	2 (2)	2 (2)
Physical activity	—	—	—	—
Much more important	N/A	31 (41)	34 (42)	35 (40)
Somewhat more important	N/A	27 (36)	26 (31)	30 (36)
Of equal importance	N/A	8 (11)	14 (17)	11 (13)
Somewhat less important	N/A	10 (12)	5 (6)	6 (7)
Much less important	N/A	0 (0)	3 (4)	3 (4)

Bolded entries show statistical significance.

HE by healthy eating-chi-square 21.45 ($p \leq 0.001$) N=145; OC by healthy eating-chi-square 4.26 ($p \leq 0.37$) N=144; HE/OC/PA by healthy eating-chi-square 8.28 ($p \leq 0.10$) N=147; HE by obesity control-chi-square 18.77 ($p \leq 0.001$) N=145; OC by obesity control-chi-square 4.98 ($p \leq 0.29$) N=144; PA by obesity control-chi-square 6.27 ($p = 0.18$) N=148; HE/OC/PA by obesity control-chi-square 4.02 ($p = 0.40$) N=147; PA by obesity control -chi-square 10.83 ($p \leq 0.05$) N=144; PA by physical activity-chi-square 4.43 ($p = 0.35$) N=148; HE/OC/PA by physical activity-chi-square 4.08 ($p = 0.39$) N=147.

grams^{16,18}; the development of this infrastructure is essential if health departments are to be successful in conducting obesity prevention programs.¹⁷

The results of this study are limited in a number of ways. First, there is only one year of data, therefore trends in the availability of healthy eating, obesity, and physical activity programs cannot be examined over time. Second, although respondents were asked about numerous types of programs, information was collected only on the availability or support of these programs; there was no detailed information about the programs themselves or the level of resources allocated to these programs. Finally, no specific information was collected on local policy efforts related to obesity prevention. Respondents were asked about their advocacy activities related to healthy eating, obesity, and physical activity, which included local policy efforts. It was not possible to disentangle efforts to enact new local policies from other advocacy efforts.

Local public health departments are typically available in all areas of a state,¹⁴ making them a good, accessible, and affordable resource for most of the population. This is important given the significant differences in the risk of obesity by race, ethnicity, and SES.¹¹ Although the findings of this study show fewer than half of the local health departments surveyed had some type of healthy eating, obesity control, or physical activity program, more recent research¹³ indicates that as of 2005 approximately 55% of local health departments undertook some type of obesity prevention ac-

tivity. This growth could be attributed to the increased attention and funding⁹ given to this growing problem in recent years.

There is still much that can be learned about what health departments are doing to address the issue of obesity. Future research could examine what causes health departments to offer these types of programs, how resources are allocated to these programs, what is the organizational capacity/infrastructure of these agencies in relation to obesity prevention, and, who uses the programs or what is the program's reach in the community. This survey helped shed some light on the types of healthy eating, obesity control, and physical activity related programs offered by local health departments, and provides a starting point on examining the role that local health departments can play in obesity prevention.

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