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Studies: Children obese due to a host of unhealthy pressures

ANN ARBOR, Mich.--Unhealthy options and pressures influence nearly every part of children's daily lives, according to studies released this week in a special supplement of the American Journal of Preventative Medicine.

The national studies, which include work conducted at the University of Michigan, reveal that, in most middle and high schools across the nation, contracts with soft drink bottling companies give students easy access to sugary beverages.

Low- versus high-income neighborhoods have a higher proportion of their restaurants serving fast foods and have fewer supermarkets and more convenience stores at which to buy their groceries. In the media, television advertisements steer kids to spend their money on junk food, and minority students get considerably more such exposure, the studies showed.

For the special supplement, Bridging the Gap, a national research program funded by the Robert Wood Johnson Foundation and based at U-M and the University of Illinois at Chicago, produced a groundbreaking collection of evidence on factors that contribute to the escalating rates of childhood obesity.

The studies offer new insight about how current school policies, neighborhood characteristics and advertising collectively impact the childhood obesity epidemic---and together create an overwhelmingly unhealthy environment for young people.

A study by U-M Distinguished Research Scientist Lloyd Johnston and colleagues finds that the vast majority of middle schools (67 percent) and high schools (83 percent) have contracts with a soft drink bottling company, which in many cases gives students access to soft drinks all day long.

Estimates of the median annual revenue for soft drink contracts in high schools turn out to be \$6,000 (\$6.48 per student), while for middle schools the annual revenue is about \$500 (70 cents per student).

"The financial benefits of school contracts are modest in relation to the health threat that soft drink promotions entail, and clearly the problem is most serious at the high school level," Johnston said.

Other studies by the U-M team found that physical education is lacking among older students. The average number of minutes students spend in PE each week drops from 172 minutes in 8th grade to 89

minutes in 12th grade, by which time only a third of students are even taking a gym class at some time during the school year.

Minority students from lower socioeconomic levels attend schools in which fewer students are involved in varsity sports, quite possibly because such schools have fewer resources available to offer a full range of sports and the exercise that goes with them.

The U-M studies also show evidence of unhealthy school nutrition policies and serious disparities across racial/ethnic lines and across different socioeconomic levels:

--An article by Jorge Delva, U-M associate professor of social work, and colleagues documents the great extent to which children in school have access to high-fat, high- sugar and salty foods through vending machines and snack carts in schools

--Racial and ethnic minorities have less access to healthier foods, such as low-fat snacks.

--Students of low socioeconomic status have less access to healthy snacks at school than do students with higher socioeconomic status.

--On average, Hispanic high school students are exposed to brand-name fast-food items at lunchtime twice as often as African-American and white students.

U-M's Patrick O'Malley and colleagues found that in the 10 percent of schools that have the least overweight students, one in 10 students are overweight, on average, whereas in the 10 percent of all schools with the greatest problem, fully 44 percent of their students are overweight, on average.

"Research is showing us that we have in our schools and communities a perfect storm that will continue to feed the childhood obesity epidemic until we adopt policies that improve the health of our communities and our kids," said Frank Chaloupka, head of the University of Illinois at Chicago research team.

The UIC researchers found that, outside of school, it does not get much easier for kids to consume a healthy diet. Too many kids live in neighborhoods where fast-food restaurants and convenience stores far outnumber supermarkets. This is especially true in lower-income communities.

UIC economist Lisa Powell found a statistically significant association between the availability of supermarkets and lower adolescent and overweight status. In addition, Powell found a statistically significant association between the availability of convenience stores and higher overweight status.

"In communities where convenience stores outnumber supermarkets and fast-food restaurants are particularly prevalent, we're making it extremely difficult for parents and kids to eat balanced, healthy diets," Powell said. "These families simply don't have easy access to affordable fresh foods."

Powell and her colleagues also found that high-income neighborhoods have a significantly lower proportion of fast-food restaurants than do lower-income neighborhoods. There are also racial disparities: predominantly African-American urban neighborhoods have a significantly higher

proportion of fast-food restaurants out of total restaurants compared with predominantly white urban neighborhoods.

"I think that the role of the environment in bringing about the epidemic of overweight among our children is still not fully appreciated," Johnston said. "There are many influences in our schools, communities and the media that contribute significantly to the problem and that can be changed for the better. If we don't make those changes, the consequences in terms of the health, longevity and the health care costs of our newest generations are going to be staggering."

About Bridging the Gap Bridging the Gap, which is funded by the Robert Wood Johnson Foundation, is a joint project of the University of Illinois at Chicago's Institute for Health Research and Policy and the University of Michigan's Institute for Social Research. It is intended to improve our understanding of the role of policy and environmental factors in youth alcohol consumption, illicit drug and tobacco use, as well as diet and physical activity. Bridging the Gap also evaluates the effectiveness of policies and changes in environmental conditions in reducing substance use and obesity among youth. For more information, visit www.impact0een.org and www.yesresearch.org.

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