Barriers to Children Walking and Biking to School—United States, 1999

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3 figures omitted

Physical activity is an important part of a healthy lifestyle; however, many children in the United States do not meet recommended levels of physical activity. Although walking and biking to school can increase physical activity among children, motor-vehicle traffic and other factors can make these activities difficult. The majority of U.S. children do not walk or bike to school, approximately one third ride a school bus, and half are driven in a private vehicle. Less than one trip in seven is made by walking or biking. To examine why the majority of children do not walk or bike to school, CDC analyzed data from the national HealthStyles Survey. This report summarizes the results of that analysis, which indicate that long distances and dangerous motor-vehicle traffic pose the most common barriers to children walking and biking to school. Public health and community-based efforts that encourage walking and biking to school should address these barriers.

CDC provides technical assistance to Porter/Novelli (Washington, D.C.) in conducting the HealthStyles Survey, an annual mail survey of health-related attitudes and behaviors in the United States. In 1999, investigators solicited 3,550 households that had previously indicated a willingness to respond to survey questions. This sample was selected as representative of the U.S. population on the basis of eight demographic variables: age, sex, marital status, race/ethnicity, income, region, household size, and population density. A total of 2,636 (74%) households responded; the 749 (28%) households with children aged 5-18 years were asked (1) if their youngest child walked or biked to school at least once a week during the preceding month, and (2) whether any of six specified conditions made it difficult to do so: traffic danger, crime danger, long distances, weather, opposing school policy, or other reasons. Respondents also had the option of stating that their children had no barriers to walking or biking to school.

Results were weighted to match population distribution in the United States by using the eight demographic variables. Of the 611 respondents, 19% reported children walking and 6% reported children biking to or from school at least once a week during the preceding month. Frequency of walking and biking trips ranged from zero to >10 times a week (mean frequency: six one-way trips a week). These trips represented 14% of all school trips (11% walking and 3% biking). The proportions of primary school-aged children walking (18.6%) and biking (5.7%) to school were similar to those of secondary school-aged children walking (19.6%) and biking (5.7%) to school.

Reported barriers to walking and biking to school included long distances (55%; 95% confidence interval [CI]=±4%), traffic danger (40%; 95% CI=±4%), adverse weather conditions (24%; 95% CI=±3%), crime danger (18%; 95% CI=±3%), opposing school policy (7%; 95% CI=±2%), and other reasons (26%; 95% CI=±3%). A total of 16% (95% CI=±3%) reported no barriers to their children walking or biking to school.

Of the 16% of respondents who reported no barriers, 64% reported children walking, and 21% reported children biking to or from school at least once a week during the preceding month. Children with no barriers were six times more likely to walk or bike to school than the rest of their peers aged 5-18 years with one or more barriers. A total of 66% of the children were primary school-aged (aged 5-11 years); 34% were secondary school-aged (aged 12-18 years). Reported barriers for primary school-aged children were compared with those for secondary school-aged children. Proportions were similar for distance, weather, opposing school policy, and other reasons. The proportion of respondents reporting no barriers to their children walking or biking to school was the same for both age groups. However, primary school-aged children reportedly faced barriers of traffic danger and crime danger significantly more than their older peers.

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CDC Editorial Note: To increase physical activity among children, two of the national health objectives for 2010 are to increase the proportion of trips to school made by walking and biking (objectives 22-14, 15). The median distance to school from a child’s residence is relatively long (2 miles for children aged 5-15 years); however, many children do not walk or bike to school even when distances are short. For children living ≤1 mile from school, only 31% of trips are made by walking, and for children living ≥2 miles from school, only 2% of trips are made by biking. Results from the HealthStyles Survey indicate that approximately two thirds of children walk or bike to school when barriers are not present; however, the majority of parents report that their children face barriers to walking and biking to school. Substantial resources, diverse expertise, and ongoing political commitment are required to address the two most important barriers: long distances and traffic danger. Traffic danger inhibited approximately 40% of children from walking or biking to school. When extrapol-
lated to the U.S. population, these findings indicate that perceived traffic danger prevents approximately 20 million children from walking or biking to school. Additional data indicate that perceived traffic danger is an understandable concern. Although U.S. children aged 5-18 years walk relatively little and bike even less, approximately 550 pedestrian deaths and 250 cyclist deaths occur annually among this population, and approximately 100 nonfatal injuries occur for each death.

The findings in this report are subject to at least two limitations. First, the HealthStyles Survey solicits a population identified by its willingness to participate in survey research. Second, approximately 18% of respondents with children did not respond to questions about walking and biking to school. This pool of respondents might not represent the overall attitudes and behaviors of U.S. households.

Improving traffic safety is crucial for programs that encourage children to walk or bike to school. To advance local pedestrian and cyclist safety initiatives, CDC research and surveillance data have been used to (1) formulate guidelines for age-appropriate child-pedestrian supervision, (2) support bicycle-helmet promotion, and (3) outline national strategies for advancing both child-pedestrian and bicycle safety.

Many U.S. communities are facilitating walking and biking to school by addressing traffic safety concerns, mapping safe routes to local schools, building new schools in residential neighborhoods, and involving parents in programs such as Walking School Bus, Bike Trains, and Walk to School Day. The Marin County Safe Routes to School program in California is an ongoing effort developed by the Marin County Bicycle Coalition, funded by the National Highway Traffic Safety Administration and other state and local sources, and assisted by numerous parent volunteers. The Marin County program reported a 57% increase in walking and biking to school in its first year. Efforts focused on creating safe and accessible routes for children walking and biking to school promise the additional benefit of producing neighborhoods that ensure safer walking and biking for all ages.

Additional information about programs and resources for promoting safe walking and biking to school is available at the following websites: http://www.cdc.gov/rncdpdb/dnpa/kidswalk/fact_sheet.htm and http://www.cdc.gov/ncipc/at CDC, http://www.walktoschool-usa.org at Walk to School Day—USA, and http://www.safekids.org at the National SAFE KIDS Campaign.

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YMS was a cross-sectional survey conducted during 1994–1998 of males aged 15–22 years who attended MSM-identified venues (e.g., shopping areas, dance clubs, bars, and organizations) in Baltimore, Maryland; Dallas, Texas; Los Angeles, California; Miami, Florida; New York, New York; the San Francisco Bay Area, California; and Seattle, Washington. Extensive formative research was conducted to construct monthly sampling frames of the days, times, and venues attended by young BMSM. Each month, 12–16 venues and their associated day/time periods were selected randomly and scheduled for sampling. During sampling events, men were approached consecutively to assess their survey eligibility. BMSM eligible for the survey were aged 15–22 years and residents in one or more local counties. Participants were interviewed by using a standard questionnaire, had blood drawn for HIV testing, were given appointments to obtain test results, and were provided HIV-prevention counseling and referral for care when needed.

Specimens were tested for HIV at local laboratories with standard assays. Analyses were restricted to men who reported ever having sex with men and who described their racial background as either being only black or having a mixed background that included being black. Analyses excluded records of duplicate participants, who were identified by using the Miragen antibody profile assay. Records also were excluded from Seattle because few BMSM had participated in that city.

In the six cities, 920 BMSM participated in YMS (range: 127–202). The participation rate among eligible blacks was 61% (range: 53%–77%). Of the 920 participants, 150 (16%) tested positive for HIV (range: 13%–18%). Of the 150 HIV-infected BMSM, 139 (93%) were unaware of their infection (range: 88%–100%). Of those with unrecognized infection, 99 (71%) reported either that there was no chance, that it was very unlikely, or that it was unlikely that they were infected with HIV; 58 (42%) perceived themselves at low risk for ever becoming infected; and 45 (32%) perceived themselves at low risk both for being and for ever becoming HIV-infected.

During the 6 months preceding the survey, the 920 BMSM reported a median of two male sex partners (interquartile range: one to three), 712 (77%) reported having anal intercourse with another man, and 342 (37%) reported having unprotected anal intercourse (UAI). Of the 79 BMSM with unrecognized HIV infection who had UAI, 41 (52%) reported not using condoms for one or more of the following reasons: they “knew” they were HIV-negative (24%), they “knew” their partners were HIV-negative (20%), or they thought their partners were at low risk for infection (35%); 34 (43%) also reported not using condoms because none were available.

Of the 920 BMSM, 585 (64%) had ever tested previously for HIV, but few had tested frequently (median number of tests: one; interquartile range: zero to two). Of those who had tested previously, 536 (92%) reported last testing HIV-negative, and of these, 87 (16%) were found to be infected with HIV. The 332 (36%) men who had not tested previously gave the following reasons for not testing (more than one reason could be given): low risk for infection (45%), fear of learning their results (41%), and fear of needles (21%). Of those who had not tested previously, 42 (13%) were HIV-infected. Of the 148 men who had not tested previously because of perceived low risk, 122 (82%) ever had anal intercourse with a man, 99 (67%) had at least three lifetime male partners, and 11 (7%) were HIV-infected.

Compared with their noninfected peers, young BMSM with unrecognized infection were more likely to report engaging in UAI and not testing previously because of fear about learning their results. Noninfected young BMSM were more likely to perceive themselves at low risk for infection and not to have tested previously because of this perception.

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CDC Editorial Note: The findings in this report are consistent with previous studies suggesting that in several U.S. cities, the majority of young HIV-infected MSM, particularly BMSM, were unaware of their infection. In a preliminary analysis of 573 HIV-infected MSM aged 16–29 years sampled in six U.S. cities, proportionally more BMSM were unaware of their infection than were white MSM (91% versus 60%). However, among all young MSM with unrecognized HIV infection, no racial or ethnic differences were observed among those perceiving themselves at low risk for being infected (66%), engaging in UAI (54%), or not using condoms during anal intercourse because of perceived low personal or partner risks for HIV infection (46%). These findings underscore the urgency of improving HIV-prevention efforts for all young MSM by (1) increasing the demand for and availability of HIV-testing services and (2) providing young MSM with high-quality HIV- and STD-prevention services that include assessment and clarification of personal risks for infection.

In accordance with recently revised guidelines, health-care providers should assess the HIV risks of their patients routinely and encourage all MSM at risk for HIV to test at least annually. Findings from this report indicate that demand for testing by young BMSM might be increased by implementing efforts that increase personal risk perceptions; addressing concerns about testing positive by conveying the benefits of early diagnosis and HIV care; and marketing the availability of oral fluid, urine-based, or finger-stick HIV tests that do not require venipuncture. Use of testing services also might be increased by offering testing in nonclinici-
HIV testing should be accompanied by high-quality prevention counseling that includes an in-depth personalized risk assessment, clarification of risk perceptions, and negotiation of steps to reduce risks. Because 16% of young BMSM who reported being HIV-negative were found to be HIV-infected, providers should encourage young BMSM to use condoms consistently with all partners, including those who have tested negative previously. In negotiating risk reduction with young BMSM, providers should be prepared to address alcohol, drug, and partner influences on condom use and to help young BMSM cope with emotional responses in high-risk situations. Providers should refer clients who have difficulty in initiating or sustaining safer sexual practices to organizations, community stakeholders, and other federal agencies, CDC is taking steps to reduce HIV transmission and unrecognized infection among young MSM, particularly BMSM. Since September 2001, five national consultations have helped identify current prevention needs of MSM, including young minority MSM. In 2001, additional resources were made available to expand HIV counseling and testing, outreach services, and behavioral risk-reduction interventions for young minority MSM. Ongoing prevention efforts also are being strengthened through capacity development for minority community-based organizations serving young MSM, and through recently released guidelines calling for expanded risk assessment and HIV testing for homosexual and bisexual men. Finally, new research efforts, including rapid ethnographic assessments, have been initiated to identify additional factors that influence HIV-acquisition risks among young minority MSM. These and similar efforts signal the increased priority at national, state, and local levels to reduce the considerable racial disparities in HIV morbidity and unrecognized infection among young MSM.

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Satellite Broadcast on HIV Prevention

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CDC AND THE PUBLIC HEALTH TRAINING NETWORK will co-sponsor a satellite broadcast, “Public-Private Partnerships: A New Model for Community Mobilization Against AIDS,” on Thursday, November 21, 2002, at 1 PM, EST. The 2-hour forum will address CDC’s public-private partnerships to engage the private sector as a mobilizing agent for community-based human immunodeficiency virus (HIV) prevention. Presentations, interviews, and panel response to audience questions will include legal issues, employee education, management training, and resources related to HIV prevention for businesses.

This broadcast is designed for executives, human resources directors, medical staffs, and other persons in community and national organizations, business and labor organizations, public health agencies, trade associations, and foundations. Viewers can fax questions and comments before, during, and after the broadcast. Additional information is available at http://www.cdcnpin.org/broadcast and through CDC’s fax information system, 888-232-3299, by entering document number 130043 and a return fax number.

Organizations are responsible for setting up their own viewing sites and are encouraged to register their sites as early as possible so that viewers can access information about viewing locations when visiting the website or calling the information line. Health departments and other organizations are encouraged to invite leaders in the business community and other areas of the private sector to view this broadcast.