An Injury Prevention Program in an Urban African-American Community

ABSTRACT

Objectives. Injury is a major US public health problem, particularly in urban minority communities. This paper evaluates the impact of the Safe Block Project, a comprehensive injury prevention trial, on home hazards and injury prevention knowledge in a poor urban African-American community.

Methods. Nine census tracts in the community were allocated to either the intervention area or the control area. The intervention, carried out by trained community outreach workers, consisted of (1) home modification for simple prevention measures, (2) home inspection accompanied by information about home hazards, and (3) education about selected injury prevention practices. Approximately 12 months after the intervention, random samples of control and intervention homes were assessed for home hazards and injury prevention knowledge.

Results. A significantly larger proportion of intervention homes than control homes had functioning smoke detectors, syrup of ipecac, safely stored medications, and reduced electrical and tripping hazards. No consistent differences were observed between control and intervention homes on home hazards requiring major effort to correct.

Conclusions. There was a distinct difference between control and intervention homes with respect to safety knowledge and home hazards requiring minimal to moderate effort to correct. The Safe Block Project could serve as a model for future urban injury prevention efforts. (Am J Public Health. 1993;83:675–680)

Donald F. Schwarz, MD, MPH, Jeanne Ann Grisso, MD, MSc, Carolyn Miles, MPH, John H. Holmes, MS, and Rudolph L. Sutton, MPH

Introduction

Injury ranks as one of America's most pressing health problems, particularly in urban minority populations.1 Although a large number of strategies have been used to address injuries, particularly those related to motor vehicles, 2,3 few efforts have been specifically aimed at minority groups.4 This is an important issue, because Americans of minority origin often suffer high rates of home-related injuries, particularly those related to house fires.5 Even in those instances where home injury efforts have been applied on a large scale, they have rarely been evaluated to determine their effectiveness.6,7 Evaluation of these efforts has generally been anecdotal, and rarely have controlled trials been launched.

To address this issue, the Philadelphia Injury Prevention Program developed a model for a community-based injury prevention project called the Safe Block Project. This project was designed to (1) improve injury prevention knowledge and reduce the number of hazards in the home and (2) reduce the rates of injury occurring to residents of an inner city community. The model used combined a number of often-advocated home injury prevention strategies and applied them in individual homes to change injury risks for an urban minority population. This first report from the Safe Block Project focuses on the impact of the intervention on the correction of home hazards and on residents' injury prevention practices.

Methods

The Philadelphia Injury Prevention Program is a cooperative effort of the Philadelphia Department of Public Health, the University of Pennsylvania School of Medicine, the Children's Hospital of Philadelphia, and the Philadelphia Citizens Advisory Board for Injury Prevention. This multifaceted program serves an urban community of 68 103 people who reside in 17 census tracts in western Philadelphia. The population is predominantly (97.2%) African American and poor, with a median family income of \$11 810. The program's activities include indepth studies of common injuries (falls and violence) and an emergency room-based active surveillance program that documents the incidence of fatal and nonfatal injuries in this community. Having conducted epidemiologic investigations documenting the high rate of injuries in this community, the Philadelphia Injury Prevention Program designed the Safe Block Project, a model comprehensive program to prevent inju-

The Safe Block Project was a controlled trial in which the nine census tracts in the target community with the highest injury rates (based on the first year of surveillance) were allocated to either the intervention area or the control area. The allocation was not random, but baseline injury rates, 1987 estimated intercensal data on income and population character-

Donald F. Schwarz and Carolyn Miles are with the Division of General Pediatrics, Children's Hospital of Philadelphia, Philadelphia, Pa. Jeane Ann Grisso and John H. Holmes are with the Clinical Epidemiology Unit, University of Pennsylvania School of Medicine, Philadelphia. Rudolph L. Sutton is with the Philadelphia Department of Public Health.

Requests for reprints should be sent to Donald F. Schwarz, MD, MPH, General Pediatrics, Room 2013, Children's Hospital of Philadelphia, 34th and Civic Center Blvd, Philadelphia, PA 19104.

This paper was accepted February 4, 1993.

istics, and geographic location were used to ensure that the two areas were as similar as possible. To reduce the possibility of contamination, the census tracts selected for intervention were geographically contiguous; they shared only one border with homes in control census tracts. The intervention was carried out exclusively in the intervention area and no contact was made with residents of homes in the control area during the intervention period. Approximately 12 months after the intervention, health department personnel conducted home visits in a random sample of control and intervention homes to assess the presence of hazards in the home and the scope of injury prevention knowledge.

Intervention

The Safe Block Project was designed to emphasize home injury prevention. Preliminary research on unintentional injuries indicated that falls, fires, scald burns, and poisonings were significant problems that might be amenable to preventive measures. However, because homicide was the principal cause of mortality in this urban community, we included discussions of both unintentional injuries and violence in our educational program.

The intervention consisted of three components: (1) home modification for simple prevention measures, (2) home inspection to inform residents about hazards and ways of alleviating them, and (3) education about selected injury prevention practices. Educational programs were conducted in individual homes and at block and community meetings.

The intervention team, hired from the community and trained in injury prevention methods, was supervised by personnel from the Injury Control Section of the Philadelphia Department of Public Health. The team included 3 community safety liaisons and 10 safety inspectors. Because community involvement in injury prevention was an important component of the Safe Block Project, the community liaisons' role was to develop a network of block and community leaders in the intervention area. The liaisons recruited a volunteer from each block in the intervention area to act as a block representative to identify neighborhood resources, facilitate contacts with block residents, and reinforce safety messages through monthly block meetings. The community liaisons worked with the block representatives each month on a selected topic, assisting in organizing block meetings and providing educational materials for their neighbors.

After obtaining informed written consent, the safety inspectors carried out the home-based component of the intervention, which included home modifications, inspection, and education. Safety materials for each home consisted of one or more smoke detectors, batteries for existing smoke detectors, a bathwater thermometer (for scald burn prevention), a nightlight (for the prevention of falls), a bottle of syrup of ipecac (for poison prevention), a sticker for the telephone with emergency telephone numbers, and a poster (with magnet) listing information and phone numbers to be put on the refrigerator. The poster concentrated on methods to prevent four major types of injuries: burns, poisonings, falls, and injuries due to domestic violence. The cost of the safety supplies was \$10.34 per home. The safety inspectors conducted home inspections in the presence of the residents and taught them how to correct hazards in their homes. In each home, inspectors installed one or more smoke detectors, placed night-lights in the bedrooms, and turned the water heater temperature to below 120° to 125°F. A 60-watt light bulb was given to the residents to put in the light fixture nearest the main staircase. Each home was checked for the presence of tripping hazards (including throw rugs, holes in the floor, and electrical wiring or clutter) and electrical hazards (such as frayed cords). All stairs, including basement, porch, and interior staircases, were inspected for broken or loose railings, loose carpet, clutter, and inadequate lighting. The safety inspectors also evaluated the proper storage and labeling of medications. Finally, each room was inspected for peeling paint.

The inspectors provided simple instructions for repairs, as well as a copy of the inspection checklist for the home. In addition, they instructed residents on how to use syrup of ipecac and the bathwater thermometer. The inspectors discussed safety behaviors, including the proper use of child restraints and storage of weapons, with each family and identified community resources that could provide help with a wide range of issues, such as domestic abuse, vector control, and lead abatement.

The entire Safe Block team coordinated the intervention efforts on each block. The community liaisons made the initial contact, recruiting a block resident to volunteer as the block representative. The safety inspectors carried out the

home-based intervention in the home of the block representative first and then in each of the other homes on the block. Before a home was considered to be "nonparticipating," it was visited a minimum of three times at different days of the week and at different times of the day. Block representatives were asked to urge neighbors to participate in the project. The home-based component of the intervention program began on April 1, 1989, and was completed on December 31, 1989. The block-wide educational activities continued through December 31, 1990.

Evaluation

We evaluated the presence of hazards in the home and the residents' level of knowledge concerning the prevention of injury in a random sample of intervention and control homes. At the time this paper was written, data were still being collected for use in assessing the impact of the program on rates of injury. Approximately 12 months after the intervention, personnel from the Department of Public Health visited a random sample of households in the intervention and control areas. In the intervention area they assessed (1) whether home modifications remained intact, (2) compliance with the hazard abatement recommendations made by the safety inspectors, and (3) residents' knowledge about safety procedures. In the control area they assessed the prevalence of hazards in the home and the residents' level of knowledge concerning safety procedures. Although health department personnel were not blinded to the intervention or control status of each household, the inspection checklist, criteria for each hazard definition, and questions on the knowledge questionnaire were standardized.

Statistical Analysis

Our a priori hypothesis was that the impact of each component of the intervention on the reduction of hazards in the home would vary according to the level of effort required to correct the hazard. We classified each component of the intervention into one of three groups as follows: (1) hazards requiring minimal effort to correct, (2) those requiring moderate effort to correct, and (3) those requiring major effort to correct. The minimal-effort variables included absence of syrup of ipecac, need for a night-light, lack of a functioning smoke detector, inadequate lighting on stairs, and a hot water temperature higher than 125°F. All of these hazards were corrected by safety inspectors at the time of the visit or supplies to correct them were provided to residents, and no additional effort on the part of the residents was required.

Hazards that required moderate effort to correct included tripping hazards. kerosene heater problems, and frayed electrical cords. Also included in this category were variables such as whether the family had a fire escape plan and, in households with children younger than 5 years of age, whether medicines were kept out of the reach of children or were sealed with childproof caps. Hazards that were classified as requiring major effort to correct included broken steps, railings, holes in the floors, and peeling paint.

We examined whether the impact of the intervention was greatest in those areas of the home where the safety inspectors spent the largest proportion of their teaching time, that is, in the living room and hallway, as opposed to the kitchen and bedrooms. We also assessed the impact of the intervention on variables grouped according to the three major injury types that were addressed most intensively in the intervention: burns, poisonings, and falls.

The home was the unit of analysis because the intervention was carried out at the household level. Chi-square statistics were used to assess differences between intervention and control communities for each factor. Logistic regression models were used to control for age distribution differences between intervention and control homes.

Results

Block representatives were recruited for 88% of the blocks in the intervention area. The intervention program was carried out in 3004 homes, representing 51% of the households in the intervention area. The other homes were nonparticipating by default (i.e., no one answered the door when the workers visited). Only 9% of families refused to participate in the intervention. For postintervention assessments, 1250 of the 3004 homes were randomly selected. The assessments were conducted in 902 of the 1250 homes (72%). The city's water department lists were used to randomly select control homes from control census tracts. Control homes were visited up to three times to obtain participation. Control home inspections were completed in 1060 (72%) of 1472 randomly selected homes.

Baseline characteristics for the entire control and intervention populations are shown in Table 1. The intervention area had slightly higher baseline injury rates and a slightly larger proportion of families

TABLE 1—The Safe Block Project: 1987 Population Estimates for Intervention and Control Areas Intervention Control (n = 17058)(n = 17 145)Median family income, \$ 9165.70 9854.81 No. injuries in 1987 (rate per 1000 residents)^a 2914 (17.1) 2690 (15.7) Age, no. (%) <5 y 1579 (9.3) 1699 (9.9) 5-17 y 3002 (17.6) 3240 (18.9) 18-64 y 9154 (53.7) 9965 (58.1) ≥65 y 3323 (19.5) 2241 (13.1) Race, no. (%) African American 16 509 (96.8) 16 416 (95.7) Other 549 (3.2) 729 (4.3) ^aFrom Philadelphia Injury Prevention Program data collected on injuries that occurred in 1987.

		Control			
	Intervention Homes, % ^a	Homes,	P°	Adjusted Odds Ratio	95% CI
No syrup of ipecac for					
children aged <5 y	29.0	90.2	<.001	0.04	0.02, 0.07
No smoke detectors	4.0	23.0	<.001	0.14	0.09, 0.20
Hot water temperature					
≥ 125°F	36.8	26.8	<.001	1.73	1.39, 2.15
nadequate lighting on stairs	17.9	19.9	.41	0.90	0.69, 1.16
No bedside light for adults					
aged ≥ 65 y	13.3	15.1	.90	1.03	0.68, 1.57

⁶⁵ years or older, respectively

living at or below the poverty level. No data were collected regarding income or race because the community advisors felt that these questions were too intrusive. Demographic information obtained at the time of the health department inspectors' visits was limited to the proportion of homes with children younger than 5 years of age and with elderly persons (aged 65 years or older). These proportions were similar in the control and intervention samples. The age distributions of the randomly sampled evaluation homes were compared with 1990 census information for each census tract and the age distributions were similar.

Tables 2 through 4 show the comparisons between intervention and control groups for intervention variables. Table 2 lists variables that were classified as requiring minimal effort to correct. A significantly larger proportion of homes in the control area than in the intervention area lacked functioning smoke detectors and syrup of ipecac. However, a larger proportion of intervention homes had hot water temperatures higher than 125°F. No differences were observed in the presence of adequate stairway lighting and bedside night-lights.

Table 3 shows the comparisons between intervention and control groups for safety hazards requiring moderate effort to correct. Intervention homes appeared significantly better than control homes at keeping medications out of reach of children, having fire escape plans, not having frayed electrical cords, and not having tripping hazards in the living room or hallway. Intervention households also exhibited

^bThe proportions presented are based on the 1060 homes evaluated in the control area or the subset of 250 homes or 482 homes in the control area with children younger than 5 years or adults aged 65 years or older, respectively

^cLogistic regression models adjusted simultaneously for the presence of children younger than 5 years and adults aged 65 years or older.

TABLE 3—The Safe BI		
Effort to Co		

	Intervention Homes, % ^a	Control Homes, % ^b	P°	Adjusted Odds Ratio	95% CI
No fire escape plan	68.7	84.9	<.001	0.30	0.24, 0.38
In homes with children aged <5 y, medications Within reach Without childproof caps Either within reach or without	48.4 26.2	64.4 16.3	<.001	0.48 1.53	0.33, 0.71 0.95, 2.46
childproof caps	24.8	15.4	.08	1.54	0.95, 2.50
Electrical cords Presented tripping hazards Were too thin	41.7 23.7	37.0 27.9	.38	0.44 0.59	0.35, 0.56 0.46, 0.75
Rugs/floor coverings presented tripping hazards Living/dining room Kitchen Hall Bedroom Other room Any rugs/floor coverings	22.5 16.2 9.3 12.2 3.3 32.5	35.2 16.0 15.8 14.7 2.0 38.2	<.001 .40 <.001 <.001 .29 .004	0.50 0.89 0.46 0.55 1.41 0.74	0.40, 0.62 0.68, 1.17 0.34, 0.64 0.40, 0.76 0.75, 2.65 0.60, 0.91
Kerosene Kerosene not stored in containers approved by Underwriters Laboratory	3.6	6.0	.10	0.68	0.43, 1.07
Kerosene heater used without a screen Flammables stored near	4.6	9.4	<.001	0.45	0.29, 0.68
kerosene heater Any hazards connected with	6.4	7.9	.11	0.73	0.49, 1.08
use of kerosene heater	8.1	10.5	.04	0.69	0.49, 0.98

^aThe proportions presented are based on the 902 homes evaluated in the intervention area or the subset of 250 homes or 357 homes in the intervention area with children younger than 5 years or adults aged 65 years or older, respectively.

greater compliance with proper kerosene heater use. Control area homes, however, scored better than intervention homes on the absence of electrical-cord tripping hazards and the storing of medicines in containers with childproof caps. No differences were observed between the two areas on the remaining safety measures that required moderate effort to correct.

Table 4 shows comparisons of intervention and control areas on home hazards that require a major effort to correct. Intervention homes were less likely than control homes to have peeling paint in the living room and hallway but more likely to have peeling paint on the porch. A larger proportion of intervention homes than control homes had kitchen floors in need of repair and hazards associated with basement and outside stairs.

We assessed whether safety factors differed by room of the home (Table 5).

We had hypothesized that the intervention program would have a greater impact on the living room and hallway than on other areas of the house. We found that the living room and hallway areas of the intervention homes were significantly less likely to have tripping hazards from loose floor coverings and peeling paint than were the same areas in control homes. A less pronounced difference was found between control and intervention homes for the bedrooms, and no consistent differences were observed between control and intervention homes for the kitchen area.

We grouped variables according to three major causes of home injuries: fire or scald burns, poisonings, and falls. Variables associated with fire prevention included presence of functioning smoke detectors, presence of a fire escape plan, frayed electrical wiring, and proper kerosene heater storage. Intervention homes

were significantly less likely than control homes to have any of the fire hazards. Both the total number of functioning smoke detectors and the number of floors with functioning smoke detectors were found to be significantly higher in intervention households ($P \le .0001$ for both comparisons). Intervention homes were significantly more likely to have syrup of ipecac available and to keep medicines out of the reach of children (which was the message highlighted in safety inspector visits). Control homes were more likely to have medications with childproof caps. however. Although tripping hazards due to loose floor coverings were found to be less common in intervention homes than in control homes, no differences were observed between control and intervention homes on staircase hazards and lighting, presence of bedside lighting, or need for major floor repairs.

Discussion

The principal positive finding of this study is a distinct difference between control and intervention homes with respect to safety knowledge and home hazards that required minimal to moderate effort to correct. Intervention homes were found to be safer than control homes, particularly with respect to hazards related to fires and poisonings.

Data on injury rates are not yet available, and the relationship between the incidence of injury and preventive efforts to alter safety knowledge and home hazards has not been definitively established. However, several safety measures, such as functioning smoke detectors and the presence of syrup of ipecac, are widely accepted preventive measures. A significant problem in fire prevention programs is that smoke detectors that are given away are often not installed or properly maintained. In this community, not only were intervention homes more likely than control homes to have at least one functioning smoke detector, but the proportion of homes with an adequate number of functioning smoke detectors was significantly higher in the intervention area than in the control area. If we assume that smoke detectors are 75% effective in preventing burn deaths, given that 5000 people die in fires each year in the United States, increasing the prevalence of smoke detector use to 96% (the rate achieved in our intervention homes) would save 3600 lives each year.

Several limitations to this study should be mentioned. Home assessments

^bThe proportions presented are based on the 1060 homes evaluated in the control area or the subset of 250 homes or 482 homes in the control area with children younger than 5 years or adults aged 65 years or older, respectively.

^cLogistic regression models adjusted simultaneously for the presence of children younger than 5 years and adults aged 65 or older.

were not carried out both before and after the intervention in either the intervention area or the control area. Although data for baseline assessments in the intervention homes could have been collected by the home safety team, we decided against it because of the limited time available in the home visit. The primary function of the home safety team was to implement home modifications, educate residents on preventive practices, and motivate them to carry out additional home safety measures. Baseline assessments were not conducted in control homes because of the possibility of influencing those families' home safety knowledge and the presence of hazards in the homes and because of the extra time and effort required to carry out an additional 1000 baseline visits. The results of this study are based on home assessments conducted by health department personnel who had not carried out the intervention and who could provide objective evaluations of both control and intervention homes. The intervention and control samples did not differ in age composition either from each other or from their census tracts as a whole. Nevertheless, because many factors may have influenced safety knowledge and correction of home hazards, the observed differences cannot definitely be attributed to the Safe Block Project.

The study may also have been limited by our not being able to assign either homes or blocks randomly to control or intervention areas. Community leaders believed that contamination within blocks and across contiguous blocks was highly probable. We therefore selected the intervention and control areas on the basis of socioeconomic and demographic characteristics from the most current census data available at that time, as well as baseline injury rates. The intervention area had a slightly higher proportion of elderly persons and persons living in poverty and a slightly higher preintervention injury rate. Given that these factors are associated with increased injury morbidity, we expect that these differences between the intervention and control areas would bias the results, making it less likely that we would find a difference between intervention and control homes after the intervention.

Exposure to injury prevention messages occurred from sources other than our program. At roughly the same time as our intervention, the fire department carried out a city-wide project in which smoke detectors were given away and town watch initiatives were encouraged by the police department for all areas of the city. Exposure to these programs

TABLE 4—The Safe Block Project: Hazards in the Home That Would Require Major Effort to Correct

	Intervention Homes, % ^a	Control Homes, %ª	Pb	Adjusted Odds Ratio	95% CI
Peeling paint					
Living/dining room	10.6	14.5	.005	0.64	0.47, 0.87
Kitchen	10.6	11.3	.15	0.79	0.57, 1.09
Hall	4.3	10.2	<.001	0.43	0.29, 0.65
Bedroom	6.8	9.2	.05	0.69	0.48, 1.00
Other room	1.7	3.7	.02	0.45	0.24, 0.88
Porch	31.7	19.6	<.001	2.05	1.60, 2.61
Floors in need of repair					
Living/dining room	4.9	3.7	.26	1.31	0.82, 2.11
Kitchen	7.8	3.5	<.001	2.67	1.75, 4.07
Hall	2.4	2.0	.37	1.34	0.71, 2.51
Bedrooms	3.1	2.1	.17	1.52	0.83, 2.77
Other room	3.4	3.3	.67	0.88	0.51, 1.55
Any floors in need of repair	14.1	7.8	<.001	1.91	1.40, 2.61
Stairs					
Outside	40.5	44.0	004	4.00	4 40 0 50
Broken steps	19.5	11.9	<.001	1.92	1.46, 2.53
Missing or loose railings	25.5	20.8	.02	1.33	1.06, 1.68
Basement	00.0	00.0	05	4.00	0.00 1.04
Broken steps	22.9	22.9	.65	1.06	0.83, 1.34
Missing or loose railings Interior	48.4	40.2	<.001	1.44	1.18, 1.77
Broken steps	7.3	8.3	.75	0.94	0.65, 1.36
Missing or loose railings	21.3	21.5	.66	1.06	0.83, 1.35
Porch railing missing or loose	11.1	18.7	.001	0.62	0.46, 0.83

^aThe proportions presented are based on the evaluation of 902 intervention homes and 1060 control homes.

could have introduced an element of misclassification into the comparison of intervention and control areas. However, misclassification would minimize differences between control and intervention areas, because the police and fire department programs were not targeted exclusively toward the intervention area.

Many hazard and knowledge variables were assessed. As is the case when multiple comparisons are made, some differences may occur by chance alone.

Finally, the study design did not permit us to disaggregate the impact of the home-based interventions carried out by the safety inspectors and the block-wide educational initiatives facilitated by the community liaisons. Although we assessed specific home hazards and safety knowledge addressed by the safety inspectors, many of these issues were readdressed throughout the year in block meetings and educational materials distributed by the community liaisons. Although the work of the community liaisons cannot be evaluated quantitatively, we believe that participation rates were greatly enhanced by the liaisons' working with a leader on each block before initiating the home visits by the safety inspectors. The continued active participation by 88% of the block leaders is evidence of the importance of the role of the liaisons.

Although violence prevention was not a primary outcome of the Safe Block Project and there were no specific hazard or knowledge measures assessed relative to violence prevention, the prevention of violence was discussed in several contexts during the project. In individual homes the safety inspectors talked with families about community resources that were available to handle problems related to domestic abuse. During block meetings, block leaders were assisted in setting up town watches, and several community meetings were organized with local police precincts to discuss the cocaine epidemic. However, we believe that these measures are just the initial steps in setting up a meaningful community-based violence prevention program. We found that discussing violence in the context of a home safety program was an acceptable approach to a loaded issue, and we recommend that public health initiatives use

^bLogistic regression models adjusted simultaneously for the presence of children younger than 5 years and adults aged 65 or older.

	Intervention Homes, % ^a	Control Homes, %ª	Pb	Adjusted Odds Ratio	95% CI
Living/dining room					
Rugs (tripping hazard)	22.5	35.2			
Peeling paint	10.6	14.5			
Floor in need of repair	4.9	3.7			
Any problems	28.5	40.2	<.001	0.55	0.45, 0.68
Hall					
Rugs (tripping hazard)	9.3	15.8			
Peeling paint	4.3	10.2			
Floor in need of repair	2.4	2.0			
Any problems	13.0	20.1	<.001	0.54	0.41, 0.71
Bedroom					
Rugs (tripping hazard)	12.2	14.7			
Peeling paint	6.8	9.2			
Floor in need of repair	3.1	2.1			
Any problems	16.9	17.8	.02	0.73	0.55, 0.95
Kitchen					
Rugs (tripping hazard)	16.2	16.0			
Peeling paint	10.6	11.3			
Floor in need of repair	7.8	3.5			

^aThe proportions presented are based on the evaluation of 902 homes in the intervention area and 1060 homes in the control area.

21.3

.24

25.5

home safety as a means to develop the partnership with the community that must be achieved before the complex issue of violence can be addressed.

Any problems

It appears that the Safe Block Project may have had a significant impact on most burn prevention measures. However, we were surprised to find a larger proportion of homes in the intervention area with unsafe hot water temperatures despite the safety inspectors' having tested for this, and, in most cases, having actually turned down the temperature setting on the water heaters. We hypothesize that residents did not accept the lower hot water temperature and that they were able to reset the heaters because the safety inspectors had shown them how. This problem illustrates the importance of understanding community residents' perceptions and values and addressing them in any program that requires behavioral change, even passive change.

There are no published reports of community-based injury prevention programs involving ongoing block-level educational programs and home-based interventions in minority communities. The Massachusetts Statewide Childhood Injury Prevention Program created a protocol to change the home environment through home hazard inspection and education.6 Residents modified their homes in 10% to 48% of cases. The program did not focus on homes in inner-city areas and the intervention consisted of a single home visit without follow-up. In Sweden, a community intervention program that involved media, education, supervision, and physical environmental change was developed in a rural area.7 Home injury rates (which were monitored through emergency room visits) decreased from 26.4 per 1000 persons in 1978 to 17.2 per 1000 persons in 1982. Although each of these projects represents an important community-based effort to prevent injuries, neither was similar in focus or design to the Safe Block Project.

1.15

0.91, 1.45

A number of recent reports have advocated community-level strategies for changing health risks in minority populations.⁸⁻¹⁰ Other reviews of methods for community-level health promotion have reviewed successes for alleviating public health problems in populations.^{11,12} To the best of our knowledge, the Safe Block Project represents the first compre-

hensive injury prevention effort in an African-American community. We have demonstrated that it is feasible to carry out the program in extremely poor, inner-city neighborhoods. Many of the accomplishments of the safety inspectors, such as helping families to get basic services and desperately needed public assistance, cannot be measured. We have shown that individuals with minimal formal education can be trained to coordinate effectively a large-scale community-based prevention program involving community leaders. block leaders, and individual families. This outcome leads us to believe that the Safe Block Project should serve as a useful model on which to build and expand for future urban injury prevention efforts.

References

- The National Committee for Injury Prevention and Control. Injury prevention: meeting the challenge. *Am J Prev Med.* 1989; 5(suppl):1–303.
- Baker SP, O'Neill B, Ginsburg MJ, Li G. The Injury Fact Book. 2nd ed. New York, NY: Oxford University Press; 1992.
- 3. Wilson MH, Baker SP, Teret SP, Shock S, Garbarino J. Saving Children: A Guide to Injury Prevention. New York, NY: Oxford University Press; 1991.
- Report of the Secretary's Task Force on Black and Minority Health. Vol. 1. Washington, DC: US Dept of Health and Human Services; 1985. DHHS publication 0-487-637 (OL3).
- Gulaid JA, Sattin RW, Wazweiler FR. Deaths from residential fires, 1978–1984.
 CDC surveillance summaries. MMWR. 1988;37(SS-1):39-45.
- Gallagher SS, Hunter P, Guyer B. A home injury prevention program for children. Pediatr Clin North Am. 1985;32:95–111.
- Schelp L. Epidemiology as a Basis for Evaluation of a Community Intervention Programme on Accidents. Sundbyberg, Sweden: Karolinska Institute Press; 1987. Paper 5.
- Braithwaite RL, Murphy F, Lythcott N, Blumenthal DS. Community organization and development for health promotion within an urban black community: a conceptual model. *Health Educ.* 1989;20(5):56– 60
- Hammond WR, Yung Br. Preventing violence in at-risk African-American youth. J Health Care Poor Underserved. 1991;2: 359–373.
- Youth Investment and Community Reconstruction. New York, NY: Milton S. Eisenhower Foundation; 1990.
- Bracht N. Health Promotion at the Community Level. Newbury Park, Calif: Sage Publications: 1990.
- Kar SB. Individual and Societal Actions for Health Promotion: Strategies and Indicators. New York, NY: Springer; 1989.

^bLogistic regression models adjusted simultaneously for the presence of children younger than 5 years and adults aged 65 or older.