Research Article

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The New York State Healthy Neighborhoods Program: Findings From an Evaluation of a Large-Scale, Multisite, State-Funded Healthy Homes Program

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ABSTRACT

Context: A growing evidence base suggests that a comprehensive healthy homes approach may be an effective strategy for improving housing hazards that affect health, but questions remain about the feasibility of large-scale implementation.

Objective: To evaluate the impact of a large-scale, multisite, state-funded healthy homes program.

Setting: Homes in high-risk neighborhoods of 13 counties funded under the New York State Healthy Neighborhoods Program (NYS HNP) from 2008 to 2012.

Participants: A total of 28 491 homes received an initial visit and 6436 dwellings received a revisit (follow-up assessment 3 to 6 months after the intervention). A majority of residents are low-income renters living in buildings built prior to 1950.

Intervention: The NYS HNP is a low-intensity healthy homes program. Participating homes undergo a visual assessment to identify potential environmental health and safety hazards, and interventions (education, referrals, and products) are provided to address any hazards identified during the visit.

Main Outcome Measures: The proportion of homes affected by several types of housing hazards, improvement in hazards among revisited homes, and the change in the overall number of hazards per home were assessed.

Results: Among the homes that were revisited, there were significant improvements in the conditions assessed for tobacco control, fire safety, lead poisoning prevention, indoor air quality, and other hazards (including pests and mold). There was a significant reduction in the number of hazards per home (2.8 to 1.5; $P < .001$), but homes were not hazard-free at the revisit.

Conclusion: This evaluation suggests that a comprehensive, low-intensity healthy housing approach can produce short-term impacts with public health significance. This evaluation provides information about hazards that are common, easily assessed, and easily corrected or improved, which may be of use to a variety of programs that already provide in-home services and are seeking to expand the scope of their visits or to inform the development of new programs.

KEY WORDS: health and safety, healthy homes, healthy housing, home environment, housing, intervention, program evaluation

The connection between housing and health is well established.[1-6] Homes provide shelter and security, but homes that are poorly constructed or maintained can have a significant impact on the health and safety of residents. For example, asthma continues to account for millions of hospital and emergency department visits every year, carbon monoxide (CO) exposure is a leading cause of poisoning-related deaths in the United States, and,

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despite decades of investment, an estimated half a million children between 1 and 5 years of age have elevated blood lead levels.[7-10] These issues and many others are directly linked to poor housing conditions, which are underscored by the fact that geographic, income, and racial disparities in housing quality mirror those of some of our most significant public health challenges.[11-15] These are also costly problems for our health care system and society, accounting for billions of dollars in health care expenditures and lost productivity every year.[16]

Over the past decade, multiple agencies have worked to advocate for an increase in services, programs, and policies that promote healthy housing.[4,17-20] These calls to action have cited evidence from research and demonstration projects that highlight the potential public health impact of improved housing quality. Traditionally, many housing hazards have been addressed through initiatives targeted at specific health outcomes or environmental exposures (eg, remediation of lead hazards), but there has been a growing shift toward a more comprehensive approach that addresses multiple housing deficiencies within a single program.[1,3,4,17,20-24] This approach is premised on the experience that homes with one type of hazard often have others, and remediation of an underlying problem can impact more than 1 endpoint. For example, correction of a moisture problem may not only prevent deterioration of lead-based paint but will also aid in preventing mold, pests, and structural disrepair. Furthermore, since gaining entry to a home to complete a health and safety assessment can be very resource-intensive, proponents argue that it is more cost-effective to address multiple issues within a single program.

However, as the evidence base has grown, some critical questions remain about the feasibility and promise of implementing healthy homes approaches at scale and in real-world settings. What is the impact of improved housing on different populations (eg, children vs adults, urban vs rural)? Which hazards can be improved? How much improvement can we expect from a healthy homes program operating to scale? Can we expect improvements from low-intensity interventions that do not provide structural improvements? Will modest improvements in housing conditions yield improvements in health that have clinical or public health significance? Are these types of programs sustainable? While existing reports from research-based designs, demonstration projects, and smaller-scale initiatives have contributed to our current understanding of the impact of healthy homes approaches,[3,13,22-28] less is known about the impact of large-scale programs operating in real-world settings.

The New York State (NYS) Healthy Neighborhoods Program (HNP) has operated since 1985 and is distinct from previously evaluated programs in its scale, geographic scope, and funding structure. In this report, we present findings from a retrospective evaluation of this large-scale, multisite, state-funded healthy homes initiative. Although the program is nearly 30 years old, the evaluation focuses on a recent 5-year period after the implementation of a standardized data collection instrument. This unique data set includes information about services provided to more than 29 000 homes with 82 000 residents in 13 counties. We report on the proportion of homes affected by each type of housing hazard, improvement in hazards among revisited homes, and the change in the overall number of hazards per home.

Methods

Program description

A select number of county health departments are funded by the NYS Department of Health (DOH) to provide in-home assessments and interventions to improve the environmental health and safety of residents. During the evaluation time frame (2008-2012), 13 counties were funded from the state's general funds, 10 continuously, to implement this program. During this time frame, grants totaled $10 million, about $345 per visited dwelling. The counties are spread throughout state and vary in urbanicity, ranging in population density from 79 persons per square mile along the border with Canada to 2205 persons per square mile just north of New York City.

Each county selects high-risk areas to target, including specific zip codes in urban areas, towns, or geographic regions. Homes and residents are approached through a combination of door-to-door canvassing and referrals from other programs, local organizations, or health care providers. Trained environmental health specialists (sanitarians, health educators, public health nurses, or other public health professionals) provide the intervention, which varies in scope according to the needs identified during the assessment and the specific expertise of the staff. All homes receive an initial visit, which includes a visual assessment to identify potential health and safety hazards and the provision of guidance, products, and referrals to address any identified hazards. The assessment and interventions address tobacco control, fire safety, lead poisoning prevention, indoor air quality (CO, radon, ventilation, odors, temperature, and humidity), general conditions (cleaning, clutter, pests, mold/mildew, moisture, and structural problems), asthma triggers, and others (eg, injury prevention and social services).

Three to 6 months after the initial visit, the counties are expected to conduct revisits for roughly a quarter of all homes. During a revisit, the home is reassessed and any new or ongoing problems are addressed. The timing and selection of households for revisit are determined by each county program, but preference is typically given to homes with pressing health or safety issues or residents with asthma.

The HNP is designed to provide a framework of core objectives, operating procedures, and measures that are consistent across all programs. However, the counties are encouraged to build on local resources and infrastructure to deliver services in a way that is meaningful and effective for each community. For example, pest control problems may be referred to the county's vector control program or to a local university's extension service.

In terms of remediation intensity, the HNP is best classified as a minor to moderate intervention.[19] While program participants are provided with advice, low-cost materials (eg, pest control baits, mattress covers), and referrals for services, the program does not provide or fund structural improvements, repairs, or professional cleaning services and is therefore considered a lower-intensity approach. By addressing multiple housing hazards in 1 visit, this approach meets the definition of a healthy homes approach that is comprehensive or holistic (in contrast to programs that address a single exposure or disease).[29]

The program evaluation of the HNP was reviewed by the institutional review board of the NYS DOH and given exempt status on the basis of not being research.

Assessment instrument and data

The data used in this analysis were collected on a standardized home assessment form (see Document, Supplemental Digital Content 1, available at: http://links.lww.com/JPHMP/A285). The form includes 42 hazards that are assessed during the initial visit and revisit (see Document, Supplemental Digital Content 2, available at: http://links.lww.com/JPHMP/A286). Staff are provided with a manual that includes guidelines and strategies for assessing the presence of a hazard and instructions for completing the assessment form (see Document, Supplemental Digital Content 3, available at: http://links.lww.com/JPHMP/A287). The assessment covers 5 basic areas of home health and safety: tobacco control, fire safety, lead, indoor air quality, and other general conditions. The form is completed by the surveyor during or immediately after each home visit. The main form includes demographic information about the primary respondent, characteristics of the dwelling, enumeration and characteristics of the residents, physical conditions of the dwelling, and education, referrals, and products that were provided. An asthma form is completed at each visit for each person reporting a doctor diagnosis of asthma and includes information about the presence of asthma triggers in the home, asthma symptoms and morbidity, and asthma self-management. The completed forms are faxed to NYS DOH, and the faxed image is scanned and saved to a database (without personal identifiers). The data fields are automatically checked for completeness and valid values, and errors are manually verified and corrected.

Score development

To describe the prevalence and range of hazards succinctly, we set out to develop a score that could, in a single number, characterize the extent of the health and safety hazards in a home. We convened an expert panel of statisticians and health and housing experts and used a modified nominal group technique to select hazards for inclusion in the score. All 42 hazards assessed were considered for inclusion in the home hazard score. Participants were asked to consider each hazard on 3 sets of factors: nexus to health (including strength of association with health outcomes and potential severity of outcomes), likelihood of an adverse event, and the relative ease or difficulty of improving the hazard and maintaining the improvement. Individuals independently assigned hazards for inclusion, possible inclusion, or exclusion from the score, followed by discussion to make the final selection of that would comprise the score, possible combinations of related individual hazards, and how to handle missing observations. The home hazard score includes 19 elements: 15 individual hazards and 4 combinations of related hazards. For example, "rodents" is the presence or evidence of mice and/or rats. After considering a weighting scheme, the expert panel decided that all 19 hazards would be weighted equally but decided that further weighting was not warranted because no information about the extent or magnitude of the hazard was collected.

Study samples

We selected dwellings that had an initial visit in 2008-2012 where at least 15 of the 19 hazards had been assessed. To be included in the analysis of the change from the initial visit to the revisit, the dwellings had to have a revisit 60 to 240 days after the initial visit and have at least 15 hazards assessed at the revisit. The final sample included 28 491 dwellings with initial visits and 6436 dwellings with both an initial visit and a revisit.

Home hazard score

Hazards assessed during the initial visit are recorded as present or absent; during the revisit, hazards are recorded as present, absent, or improved. For this analysis, if a hazard was present at the initial visit and absent or improved at the revisit, the hazard was classified as improved. Each hazard present in the home was assigned a weight of 1, and each that was absent was assigned a weight of zero. For homes with 4 or fewer missing hazards, the prevalence of the hazard was used as follows. If a hazard was missing at the initial visit, the weight was set to the initial visit prevalence of the hazard among the nonmissing observations. If a hazard was missing at the revisit but was reported at the initial visit, the weight was set to the conditional prevalence that the hazard was present at the revisit, given the observation at the initial visit. If a hazard was missing at both the initial visit and the revisit, the revisit weight was set to the revisit prevalence of the hazard among the nonmissing observations.

The home hazard score is the sum of the weights of the hazards at each visit. Subtracting the revisit score from the initial visit score is the change; a negative difference indicates a reduction in the score or improvement in the conditions assessed. We also calculated the sum of the number of residents living in a home with 1 or more hazards at the initial visit and estimated the number of residents impacted by improvements by assuming that the proportion of homes where 1 or more hazards were corrected was the same whether or not a home was revisited.

Statistical analysis

We used McNemar's test to assess whether the percentage of homes with the individual hazard changed from the initial visit to the revisit. For each dwelling, we categorized the change in the scores as improved, worsened, and no change. We used a weighted least squares test to assess whether the percent improved was different from the percent worsened. To test that there was a change in the mean scores from the initial visit to the revisit, we used a paired t test. The signed-rank test was used to test that median change in scores was nonzero. Statistical significance for all tests was defined as $P < .05$. All analyses were conducted with SAS (version 9.4; SAS Institute, Inc, Cary, North Carolina).

Results

The demographics of the dwellings, primary respondents, and households are presented in Table 1. Of the dwellings with an initial visit (N = 28 491), most had 1 to 5 units, two-thirds were built before 1950, and two-thirds were rental units. About 40% of primary respondents were black or African American, 16% were Hispanic, and about three-fourths had a high school diploma. Half of the households received public assistance. The percentages were similar for the dwellings with a revisit (N = 6436).

Table 2 lists the prevalence of the home environmental hazards that were included in the home hazard score. Although the prevalence of hazards at the initial visit differed between all dwellings with an initial visit and the dwellings that also had a revisit, most were within 2 percentage points. In the revisited dwellings, the most prevalent conditions at the initial visits were a missing CO detector (68%), missing smoke detectors (40%), and smoking in the home (39%), followed by odors of chemicals or scented products (24%), ineffective cleaning/dust accumulation (17%), rodents (14%), and significant clutter (13%). Twenty-seven percent of homes were built before 1978 and had a lead paint hazard inside or outside the home.

Among conditions included in the home hazard score, all but chemical smells were significantly improved after the interventions ($P < .05$). The highest percentages of improved homes were for missing smoke detectors (95%), missing CO detectors (76%), malfunctioning appliances (68%), blocked exits (67%), rodents (65%), cockroaches (58%), leaks (54%), electrical hazards (54%), and mold (53%).

Table 3 presents the summary statistics for the home hazard score. The mean home hazard score at the initial visit for all dwellings was comparable with the dwellings with a revisit (2.7 and 2.8, respectively). In addition, 9% of all dwellings had a home hazard score of zero (ie, 91% had a nonzero score) compared with 7% of the revisited dwellings. The mean change in the home hazard score was −1.3 (a reduction of 1.3 hazards per home, $P < .001$). The home hazard score decreased in 75% of homes and increased in 5% ($P < .001$). A total of 74 479 residents were living in homes affected by 1 or more types of housing hazards at the initial visit. Of these, we estimate that 59 483 (80%) were impacted by improvements in housing conditions after the intervention.

Discussion

Within a short follow-up period, the NYS HNP was able to reduce the overall number of hazards per home and demonstrate significant improvements in the conditions assessed for fire safety, indoor air quality, tobacco control, lead poisoning prevention, pest control, mold and moisture, and other environmental health and safety

TABLE 1
Baseline Characteristics of Dwellings and Households, Dwellings With an Initial Visit and Dwellings With a Revisit

Characteristic	All Dwellings With an Initial Visit (N = 28 491)		Dwellings With a Revisit (N = 6436)	
	n[a]	%[b]	n[a]	%[b]
Home is rented or owned				
Owned	9 611	34	2 711	42
Private rental	16 450	58	3 429	54
Public rental	2 356	8	281	4
1-5 housing units per building	23 556	84	5 798	91
Age of building				
Before 1950	17 774	69	4 450	72
1950-1978	5 821	22	1 136	19
After 1978	2 284	9	565	9
Race of primary respondent (not mutually exclusive)				
White	13 894	49	3 650	57
Black	11 987	42	2 467	38
Other	481	2	79	1
Hispanic ethnicity of primary respondent	4 349	16	723	12
Primary respondent has high school diploma or equivalent	20 894	78	4 946	80
Household receives public assistance	14 192	52	3 326	53
Number of residents				
Adults	49 565	61	11 284	62
Children (<18 y)	31 112	39	6 916	38
Adults per household				
1	12 595	44	2 732	42
2	12 167	43	2 865	45
3+	3 707	13	835	13
Children per household				
0	14 161	50	3 331	52
1	5 227	18	1 051	16
2	4 621	16	1 012	16
3+	4 482	16	1 042	16
Female residents	45 508	56	10 286	57
Age of residents, y				
0-4	12 356	15	2 544	14
5-9	8 615	11	1 939	11
10-14	6 636	8	1 614	9
15-17	3 527	4	822	4
18-24	8 329	10	1 601	9
25-44	20 162	25	4 326	24
45-64	13 575	17	3 324	18
65+	7 477	9	2 030	11

[a] *Because of missing data, the number of observations may be less than the total number of dwellings and residents.*
[b] *Percentage of nonmissing observations.*

TABLE 2

Prevalence of Environmental Hazards Used in the Scores and Percent Improved, Dwellings With an Initial Visit and Dwellings With a Revisit

	All Dwellings With an Initial Visit (N = 28 491)	Dwellings With a Revisit (N = 6436)			
Hazard	With Hazard at the Initial Visit[a]	With Hazard at the Initial Visit[a]	With Hazard at the Revisit[a]	Improved at the Revisit Among Those With Hazard at the Initial Visit[a,b]	95% CI for Percent Improved at the Revisit[c]
Smoking in the home (H)	34%	39%	37%[d]	8%	7-9
Ineffective cleaning or significant dust accumulation (H)	16%	17%	12%[d]	38%	35-41
Ineffective cleaning	12%	12%	8%[d]	40%	37-44
Significant dust accumulation	10%	11%	8%[d]	39%	36-43
Significant clutter (H)	11%	13%	10%[d]	36%	32-39
Improperly stored garbage/rubbish in the home (H)	3%	3%	2%[d]	44%	37-51
Improperly stored garbage/rubbish in or near building (H)	5%	5%	4%[d]	38%	33-44
Rodents (evidence or report of rats/mice) (H)	14%	14%	6%[d]	65%	62-68
Rats (evidence or report)	3%	2%	1%[d]	83%	76-88
Mice (evidence or report)	12%	13%	6%[d]	64%	60-67
Cockroaches (evidence or report) (H)	8%	7%	4%[d]	58%	53-62
Roofing, structural, or plumbing leaks	10%	10%	6%[d]	54%	50-58
Roofing or structural leaks (H)	6%	6%	4%[d]	50%	45-55
Plumbing leaks (H)	6%	5%	3%[d]	64%	58-69
Mold or mildew (H)	10%	11%	7%[d]	53%	49-57
Walls, ceilings, floors, doors, and stairs in disrepair (H)	11%	10%	7%[d]	42%	39-46
Lacks smoke detector on every floor or not audible from sleeping spaces (H)	34%	40%	3%[d]	95%	94-96
Lacks smoke detector on every floor	29%	35%	2%[d]	96%	95-96
Smoke detector(s) not audible from sleeping spaces	31%	36%	2%[d]	95%	95-96
Exits do not function properly (H)	3%	2%	1%[d]	67%	59-74
Electrical hazards (H)	5%	5%	3%[d]	54%	48-59
Improperly stored flammables (H)	1%	1%	1%[d]	46%	33-59
Lead paint hazards (homes built before 1978), chipping, peeling, deteriorated, or chalking paint indoors or outdoors (H)	27%	27%	23%[d]	20%	18-22
Lacks working CO detector (H)	67%	68%	18%[d]	76%	75-77
Malfunctioning appliances (H)	4%	3%	2%[d]	68%	62-75
One or more rooms lack ventilation (H)	4%	3%	2%[d]	37%	30-44
Chemical smell or odor-scented products	23%	24%	22%[e]	19%	15-24
Chemical smell	4%	4%	3%	30%	18-45
Odor-scented products	20%	20%	19%[e]	19%	14-24

Abbreviation: H, hazard included in the home hazard score. Combined or individual hazards without H were not included in the score.

[a] *Percentage among nonmissing values. All items had less than 5% of missing values.*

[b] *Percentage with hazard improved at revisit: number of dwellings where the hazard was absent/eradicated/improved at the revisit divided by the number of revisited dwellings where the hazard was present at the initial visit.*

[c] *95% CI: exact binomial confidence interval with continuity correction.*

[d] *$P < .001$; McNemar's test.*

[e] *$.001 \leq P < .05$; McNemar's test.*

TABLE 3
Home Hazard Scores at the Initial Visit and Revisit, Dwellings With an Initial Visit and Dwellings With a Revisit

Dwellings and Scores	Mean	SD	Score = 0	Median	Min, Max	Improved	No Change	Worsened
Initial visits (N = 28 491)	2.7	2.2	9%	2	0, 19			
Initial visits and revisit (N = 6436)								
Initial visit	2.8	2.1	7%	2	0, 14			
Revisit	1.5	1.7	30%	1	0, 14			
Change: initial visit to revisit	−1.3[a]	1.5	19%	−1	−12, 9	75%[b]	19%	5%

[a] *P* < .001 from the paired t test that the mean score changed from the initial visit to the revisit. (The signed-rank test that median change from the initial to the revisit was nonzero produced the same P value.)
[b] *P* < .001 from the weighted least squares test that there was a difference in the percent improved (decreased score) and the percent worsened (increased score).

hazards in the homes of residents in high-risk neighborhoods.

Fire safety, lack of a CO detector, and smoking in the home were the most common types of hazards identified. With the exception of chemical smells, all 29 hazards, including all 19 used in the hazard score, were significantly improved following the intervention. Hazards associated with fire safety, CO safety, pests, leaks, and mold showed the greatest magnitude of improvement. Homes generally had more than 1 environmental health and safety hazard identified at the initial visit, but, despite a reduction in the overall number of hazards, were not hazard-free at the revisit.

Others have previously reported on similar efforts to assess and reduce environmental health and safety hazards in the home environment. These programs vary in the scope of what is addressed, the size and characteristics of the populations served, and the intensity of the interventions provided, which can make direct comparisons challenging. The proportion of homes impacted by specific hazards at the initial visit varies greatly across published studies, perhaps reflecting differences both in geography and in the population recruited.[21,23,30-34] However, reports by Dixon et al[21] and Klitzman et al[23] affirm our findings that homes typically have more than 1 hazard and are not hazard-free at the revisit but reported a greater number of hazards at the initial visit.

In general, the magnitude of improvement reported by the NYS HNP was either comparable with or more modest than improvements reported by other programs, but direct comparisons are again complicated by the differences in prevalence at the initial visit and in the intensity of the intervention offered.[21,23,35,36] However, in contrast to the HNP, previous studies with smaller sample sizes, including some that reported higher magnitudes of improvement for individual outcomes, often failed to demonstrate that their outcomes were statistically significant. In terms of the home hazard score, both Dixon et al[21] and Klitzman et al[23] reported more dramatic improvements in the overall number of hazards per home than our study, perhaps reflecting differences in the types of hazards counted and in the intensity and focus of the intervention provided.

The reduction in the overall number of hazards per home provides evidence in support of a comprehensive healthy homes approach that addresses multiple hazards in a single visit. In developing the home hazard score, we also examined, but did not present, the bivariate relationships between all pairs of the 29 hazards in Table 2 (see Table, Supplemental Digital Content 4, available at: http://links.lww.com/JPHMP/A288). Of 406 associations tested, 331 were significantly positively associated (with odds ratios ranging from 1.2 to 108.6), 22 were significantly negatively associated (with odds ratios ranging from 0.3 to 0.5), and 41 did not have a significant association. In keeping with the healthy homes premise, positive associations confirmed that not only one type of hazard is often significantly associated with a range of other possible outcomes (eg, mold, pests, and lead paint hazards were all significantly associated with leaks) but also those outcomes are associated with each other (eg, lead paint hazards were positively associated with mold). Of note among the negative associations were the relationships between odors from scented products and ineffective housecleaning, dust accumulation, clutter, and rodents. Although odors from scented products are often considered an asthma trigger, people who use them may maintain cleaner homes.

Strengths and limitations

This evaluation is important and unique, particularly due to its large sample size, geographically diverse population, and real-world setting. However, there are also a number of important limitations of this evaluation. The short follow-up period prevents us from assessing longer-term sustainability of improvements in housing conditions, and the lack of

a comparison group precludes us from attributing the entirety of the observed improvements to the intervention. The flexible protocol means there may be important differences in the way that homes are assessed and problems addressed, and it was not possible to attribute improvements to individual intervention components (eg, education vs referrals). While this flexibility is advantageous for providing services to residents in a variety of settings, the range of challenges faced by residents in HNP communities (in housing conditions, occupant behaviors/attitudes, resources available) may not be representative of communities elsewhere. Conversely, aggregating findings across counties may mask geographic variation in housing conditions and improvements.

The development of the hazard score was constrained by the list of hazards assessed by the program. Other efforts to develop similar scores have also relied on a combination of evidence from the peer-reviewed literature and expert opinion, but, in contrast to our approach, the ability to generate a hazard score influenced the design of the assessment.[21,23,25,34,37,38]

Finally, the evaluation is subject to bias, including selection bias (which homes allow access, which are targeted for revisit), recall bias (resident reporting of childhood lead screening), social desirability bias (for issues such as tobacco use or presence of cockroaches), and reporting bias (surveyors' subjectivity in evaluating their own work at the revisit). However, no differences were observed between the improvements reported when a different surveyor conducted the revisit (data not shown) and the impact of social desirability bias is mitigated by a reliance on visual assessment (eg, the presence of ashtrays outweighs a statement that no smoking occurs in the home). While some conditions are more easily assessed than others, evidence suggests that visual assessment, although not as rigorous as environmental sampling, is an acceptable proxy for estimating the potential presence of allergens and irritants in the home environment.[39]

Conclusion

This evaluation of the NYS HNP adds to the evidence that a low-intensity healthy homes approach can be used to achieve striking improvements in housing conditions that have public health impact for both adults and children and across diverse geographic settings. Future evaluations of this and similar programs should attempt to assess long-term sustainability, associations with a wider range of health outcomes, attribution of improvement to intervention components (eg, health education, use of provided products or referrals), comparative impact of higher-intensity interventions, and cost-effectiveness of the full range of home environmental improvements.

Implications for Policy & Practice

- As resources for public health interventions are increasingly constrained, lessons learned from healthy homes programs such as the NYS HNP may be of great value to decision makers.
- One way to increase provision of healthy homes services is to expand the focus of existing programs so that they address multiple housing issues.
- This evaluation provides information about hazards that are common, easily assessed, and easily corrected or improved, which may be of use to a variety of programs that already provide in-home services and are seeking to expand the scope of their visits.
- In addition, these findings can inform the development of new healthy homes programs and policy so that both resources and public health benefits are maximized.

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