

Coordinating Energy and Rehabilitation Services
for Lower-income Homeowners:
Lessons Learned from the Weatherization, Rehabilitation
and Asset Preservation Program

Prepared by:

William M. Rohe, Spencer M. Cowan and Roberto Quercia

Center for Urban and Regional Studies
The University of North Carolina at Chapel Hill
Chapel Hill, NC 27599
919-962-3077

Prepared for:

The Ford Foundation, the William Penn Foundation
and the Energy Programs Consortium

February 13, 2009

Acknowledgements

We would like to acknowledge and thank the Ford Foundation and the William Penn Foundation for supporting this research project. We would also like to acknowledge the contributions of both Mark Wolfe and Ester Segal of the Energy Programs Consortium who managed the overall WRAP program and assisted in data collection. Finally, we would like to thank the program staff at all the local WRAP programs for cooperating with this evaluation.

Coordinating Energy and Rehabilitation Services for Lower-income Homeowners:
Lessons Learned from the Weatherization, Rehabilitation
and Asset Preservation Program

Abstract

Recently, have focused considerable attention on assisting lower-income households in buying their own homes. Much less attention has been paid to assisting them keep their homes. Rapidly escalating home energy costs are straining the budgets of many lower-income homeowners, increasing the likelihood of under maintenance and mortgage default. This article presents an evaluation of a demonstration program designed to assist lower-income households decrease energy costs, and to improve the condition and value of their homes. The experience of eleven local nonprofit organizations, funded to develop programs to coordinate weatherization and housing rehabilitation services, were studied over a five-year period. The results of the evaluation indicate that there are many obstacles to coordinating weatherization and rehabilitation programs, but it can be accomplished under the right conditions. Policy recommendations for facilitating coordination are presented in this study.

Table of Contents

Introduction	1
The Plight of Many Lower-income Homeowners	2
Impacts of Rising Costs and Flat Incomes	3
Current Programs to Assist Lower-income Homeowners	4
Housing Rehabilitation Programs	4
Weatherization Programs	5
Post-purchase Counseling Programs	6
Other Programs Available to Low-income Homeowners	6
Need for Coordination	6
The WRAP Program.....	7
Evaluation of the WRAP Program	10
Program Outputs.....	12
Did the WRAP Program Serve a Truly Needy Population.....	13
What Major Repairs were Needed by the Lower-income Homeowners in the Program?	14
To What Extent was the WRAP Program Able to Address Those Needs?	14
What Were the Main Obstacles to Coordinating Weatherization and Rehab Programs?.....	18
Challenges Posed by Differing Federal Program Regulations.....	18
Program Eligibility Criteria and Procedures.....	18
Timing and Form of Funding.....	20
Challenges Posed by the WRAP Program and Local Program Administration	22
Staffing Challenges.....	22
Partnership Challenges	23
Targeting Challenges.....	24
Data Collection Challenges	25
Lessons Learned.....	26
References.....	30

Tables and Figures

Table 1: Taxonomy of WRAP Lead Agencies and Program Models	9
Table 2: WRAP Intakes, Inspections, and Completions.....	12
Figure 1: Exterior Shell, Interior, Health & Safety, and Energy Repairs Needed	15
Figure 2: Exterior Shell, Interior, Health & Safety, and Energy Repairs Done.....	16
Table 3: Funding Sources and Types.....	17
Table 4: Funding Amounts by Source and Type	17

Introduction

Homeownership has been linked to many positive outcomes. Owning a home, for example, is the primary means of wealth creation for most American families. In 2004, homeowners had a median net worth of \$184,400 compared with \$4,000 for renters (Bucks et al. 2006). Research also indicates that homeowners enjoy better quality housing than renters, with the cost burden for mortgage payments usually decreasing over time (McCarthy, Van Zandt, and Rohe 2001). Finally, homeownership has social benefits, including increased family stability, higher educational attainment for children, and is believed to make neighborhoods stronger and to increase civic participation (Rohe and Stewart 1996; Rohe et al. 2000).

Because of these perceived benefits, the public and nonprofit sectors have developed a variety of programs to assist lower-income families buy homes. For its part, the national government enacted legislation to promote the availability of credit to lower-income and other “nontraditional” borrowers including the Community Reinvestment Act (CRA), which requires that the regulated financial institutions lend to qualified applicants of all races and in all neighborhoods, and the Federal Housing Enterprises Financial Safety and Soundness Act (FHEFSSA) of 1992, which sets goals for the government sponsored enterprises including Fannie Mae and Freddy Mac for lending to low-income households (HUD 2002). In addition, state, and local governments have put in place programs that include down payment assistance, loans at below market interest rates, soft-second mortgages, and vouchers for home purchase. Nonprofit organizations have also developed programs to help lower-income families become homeowners, including pre-purchase counseling programs, which work with the financial assistance programs offered by both the public and private sectors (NeighborWorks® America 2005).

Complementing the initiatives of the public and nonprofit sectors to promote homeownership, the private sector has recognized that the greatest potential for growth in the rate of homeownership is in the segment of the market composed of lower-income households, including minorities and other nontraditional borrowers. The private-sector mortgage industry responded by developing increasingly innovative mortgage instruments and, at the same time,

relaxing underwriting standards and down payment requirements to make it easier for lower-income households to qualify for mortgages (Quercia 1999; Listokin et al 2001).

As a result of these initiatives, the homeownership rate reached a high of 69.1 percent in the first quarter of 2005, with much of the increase among minorities and nontraditional borrowers. Almost half of the rise in the number of homeowners from 1995 to 2005, about six million households, is attributable to new minority homeowners.¹ The homeownership rates among African-Americans rose from 42.7 percent in 1995 to 49.1 percent by 2004, with the rate for other minorities rising from 47.2 percent in 1995 to 59.9 percent in 2006 (U.S. Census Bureau, 2007). The homeownership rate for households in the second income quintile (between 25 and 50 percent of the income distribution) increased 5.6 percent from 1970 to 2003.²

The Plight of Many Lower-income Homeowners

While the public nonprofit and private sectors focused much of their attention on assisting lower-income and other nontraditional borrowers purchase housing, they focused much less attention on assisting them in being successful homeowners after the purchase. This is a serious omission because the most important benefits of homeownership, such as building wealth, only accrue over time.

Lower-income households face challenges on both the income and expense sides. They have lower and less stable incomes (Gosselin 2004), fewer additional resources to tap in case of emergency, and may be more prone to spells of unemployment or underemployment. They may also experience more rapidly rising housing costs because they are more likely to have adjustable rate mortgages that can lead to significantly higher monthly payments whenever the rate adjusts (Heavens 2006). Lower-income households are also more likely to own older, poorly insulated homes and have older, less energy-efficient appliances and systems, and so they are more likely to feel additional pressure on their budgets due to increases in the price of energy. Low-income families spend 16 percent of their income on energy compared with 5 percent among median-income households (U.S. Department of Energy 2006).

As expected, high cost burdens are most pronounced among owner households with extremely low incomes. A full 70 percent of homeowners with annual incomes less than \$20,000, over 6.1 million households, and 57 percent of households with annual income between \$20,000 and \$34,999, over 4.9 million households, paid more than 30 percent of their income for housing (U. S. Census Bureau 2006).

Impacts of Rising Costs and Flat Incomes

When energy costs increase more rapidly than income, the quality of life for household members can decline. To keep energy costs from overwhelming the family's budget, they may turn down the heat in the winter and the air conditioning in the summer. They may even close off rooms entirely to reduce utility bills. The average low-income family spends about \$1,673 annually for home energy (U.S. Department of Energy 2006). The more the family has to spend on energy to keep its home reasonably comfortable, the less is left for other necessities, such as food, clothing, and medical care.

Lower-income homeowners may also compensate for housing and energy costs increasing faster than income by deferring and/or not performing needed maintenance and repairs (Quercia and Stegman 1992), which can negatively affect the health, safety, and quality of life for the household members. Failure to maintain the heating system properly, for example, may contribute to respiratory problems. Safety hazards in the home, such as broken steps or rails, increase the risk of accidents if not repaired. The quality of life for household members can suffer as housing deficiencies change the way they use the property.

Deferring essential maintenance and repairs to make up for rapidly increasing housing and energy costs can, over time, contribute to a loss of equity in the home, which defeats one of the principal benefits of homeownership for lower-income families--wealth creation. Deferred maintenance has also been shown to raise the likelihood of default and foreclosure (Foster and Van Order 1985; Vandell and Thibodeau 1985; Quercia and Stegman 1992; Elul 2006).

Beyond harming individual households, lack of maintenance, loss of equity, and foreclosure negatively affect neighborhoods (Immergluck and Smith 2006). Foreclosures, for example, have

been shown to have a significant negative effect on neighborhood property values. The estimates of the impact on value range from between -0.9 and -1.136 percent on properties with an eighth of a mile of a foreclosure start (Immergluck and Smith 2006) to as much as -8.7 percent on properties near a foreclosed property, with decreasing impact out to a distance of 0.9 km (Lin et al. 2007). The negative impact was found to be even greater in lower-income neighborhoods, in weak markets, and to last for up to five years (Immergluck and Smith 2006, Lin et al. 2007).

Current Programs to Assist Lower-Income Homeowners

Policy makers have recognized the potential negative impacts of high housing cost burdens on individuals, families, and communities. As a result, they have developed a number of programs to assist lower-income homeowners with rising housing costs. These programs can be divided into four types: housing rehabilitation, weatherization, post-purchase counseling, and other social programs. Each type is described briefly below.

Housing Rehabilitation Programs

Housing rehabilitation (rehab) programs assist lower-income homeowners undertake necessary home maintenance and repair activities. These activities are seen as effective because they are believed to stabilize both the existing housing stock and the surrounding neighborhoods, thus providing decent, safe, and sanitary housing for lower-income households. As a rule, rehab assistance can be used to fund the repair, rehabilitation, or reconstruction of homes. For instance, these may include the installation of a new roof or a furnace, renovating entryways, modifying and improving bathrooms and kitchens, and making properties accessible for people with physical or sensory impairments (Council of Large Public Housing Authorities 2006). Rehab programs are typically funded by the Community Development Block Grant (CDBG) and HOME programs, with community development corporations and other nonprofit entities often participating in these efforts.

Weatherization Programs

Weatherization programs assist lower-income families reduce their energy costs. They pay for housing improvements that increase home energy efficiency and reduce energy costs. These improvements might include additional insulation; sealing of doors, windows, and cracks; replacing energy inefficient appliances; and addressing health and safety-related issues. Wolfe (2004) estimated that these activities can, on average, reduce a home's total energy consumption by about 20 percent. In general, assistance is provided to qualified households in the form of grants which do not have to be repaid.

The Weatherization Assistance Program (WAP), administered by the U.S. Department of Energy, is the main source of funding for home weatherization. WAP funds are provided to all fifty states and the District of Columbia. In 2004, \$227 million was appropriated for WAP. WAP funding comes from several sources: federal appropriations; contributions from utility companies; and monies from the Low Income Home Energy Assistance Program (LIHEAP) administered by the U.S. Department of Health and Human Services. Although LIHEAP is primarily a fuel assistance program, states transferred about \$213 million of LIHEAP funding to weatherization programs, almost doubling the amount directly appropriated for weatherization under WAP.³

Most states also provide additional weatherization assistance with funds from utility funds, public benefit funds, or combination or both. Public benefit funds are state-controlled funds generated by levying a small surcharge on consumer electricity and natural gas usage. These funds are administered by independent state energy entities, nonprofit corporations (such as community action programs), or the utilities under the oversight of the state's public utilities commission. Public funds designated for lower-income households are combined with general funds and made available through a network of providers of energy services for lower-income households, composed mostly of community action agencies. In general, depending on the sources of funding, states have more flexibility in determining how these funds are used to assist lower-income households than they do under the federal programs.

Post-purchase Counseling Programs

Post-purchase education and counseling programs assist homeowners once they are in their home. The two main types of post-purchase homeownership services are: 1) sustainable homeownership services; and 2) delinquency and foreclosure prevention services (Quercia, Gorham and Rohe 2006). Sustainable homeownership programs help homeowners acquire the skills to maintain and improve their housing investment, while delinquency and foreclosure prevention services are offered to homeowners who have encountered problems meeting their mortgage obligations.

Both types of assistance can help lower-income homeowners deal with rising housing costs while coping with incomes that fail to keep pace with those increased costs. Sustainable homeownership education and counseling provide training in home maintenance, repairs, insurance, home safety, budgeting, financial management, and how to avoid predatory lenders. This type of assistance is preventive in nature and can help lower the probability of default or foreclosure. Default counseling can help improve the financial stability of homeowners by providing budgeting, credit building or repair, and other such skills. Foreclosure prevention programs can offer alternatives to losing the home, including loan modification or partial forbearance, which can give the homeowner time to cure the default (Quercia and Cowan 2008).

Other Programs Available to Low-Income Homeowners

A number of other programs are also available to lower-income homeowners to help them meet rapidly increasing housing costs. Some forms of assistance increase the resources a homeowner has to meet rising housing costs, such as the cash benefits received under the Social Security Income, and Earned Income Tax Credit programs. Other forms of assistance decrease, or at least limit the rate of increase, of housing costs, such as property tax “circuit breakers” that cap or limit the amount of property taxes owed by lower-income, older homeowners. Often, however, lower-income homeowners lack information on the type or scope of assistance available.

Need for Coordination

Despite the availability of many forms of assistance, there is a lack of coordination among the various programs, which often results in eligible households not receiving help for which they

are eligible, failure to complete needed repairs, and significant inefficiencies for both programs and homeowners. The lack of coordination among programs is the result of several factors. First, the various assistance programs have different program eligibility criteria. Second, programs work with different time frames. Third, different state and local agencies administer rehabilitation and weatherization programs. Rehabilitation programs are often directed to community development corporations, while weatherization programs are usually directed towards community action agencies (Wolfe 2004). These agencies lack a history of collaboration.

In an attempt to improve the coordination among the range of services intended to assist lower-income homeowners, the Ford Foundation, in collaboration with the Energy Programs Consortium (EPC), developed a demonstration project called the Weatherization, Rehab and Asset Preservation (WRAP) program. The WRAP program was designed to assess the feasibility of coordinating housing rehabilitation and weatherization programs at the local level and to assess the benefits of that coordination.

In this paper, we first describe the WRAP program and homeowners it served. We then focus on several important policy-relevant questions.

- Did the WRAP program serve a truly needy population?
- What were the major repairs needed by the lower-income homeowners in the program?
- To what extent was the WRAP program able to address those needs?
- What were the main obstacles to coordinating weatherization and rehabilitation programs
- Finally, what lessons can we learn from the WRAP program about coordinating rehab and weatherization programs?

The WRAP Program

The Ford Foundation and the EPC established the WRAP program in 2002 as a demonstration program designed to test the feasibility of coordinating housing weatherization and rehabilitation services at the local level for the purpose of helping lower-income homeowners maintain their property, lower energy costs, reduce safety hazards, and increase the asset value of their homes. Ford and EPC initially designed the program with four key features: 1) the program would work

through local agencies; 2) the program would combine assistance from weatherization and rehab funding sources to make improvements to the homes; 3) each site would have a case manager to help the participating homeowners work with the lead agency and access other social services they might need; and 4) the program would maximize neighborhood impacts by concentrating its efforts in limited geographic areas. Ford and EPC also set performance goals for participating organizations. Each organization would be expected to weatherize and rehab an average of fifty homes per year for a three-year period, and that the total of 150 homes would be approximately 10 percent of all homes in the target neighborhood. Although the original focus was on physical improvements to the property, the program evolved to place greater emphasis on accessing social services and counseling for clients as the extent of the need for those services became more apparent.

Ford and EPC selected six nonprofit organizations in five states to participate in the first phase of the program, and then selected five additional organizations for a second phase of the program, which began a year later. They picked some organizations because they were already trying to combine rehab with weatherization. Others they chose because they were working with either Ford or EPC on other projects. All eleven organizations were judged to be capable, well managed and well respected in their respective communities. The six organizations chosen in the first phase were: 1) the Community Renewal Team, Hartford, CT; 2) the Massachusetts Affordable Housing Alliance (MAHA), Dorchester, MA; 3) the Action Energy, Gloucester, MA; 4) the Community Development Corporation of Long Island, Freeport, NY; 5) the Chattanooga Neighborhood Enterprise, Chattanooga, TN; and 6) the Community Action Council of South Texas, Rio Grande City, TX.

The five organizations chosen in the second phase were: 1) the Anchorage Neighborhood Housing Services, Anchorage, AK; 2) the St. Joseph's Carpenter Society, Camden, NJ; 3) the Neighborhood Housing Services of New York, Staten Island, NY; 4) the Energy Coordinating Agency, Philadelphia, PA; and 5) the Social Development Commission, Milwaukee, WI.

Ford provided each participating organization with a Challenge Grant of up to \$100,000 a year, renewable for up to three years to pay for half of the development and administrative costs of the

program. To receive the grant, each organization had to raise matching funds for the balance of the administrative costs, plus funding for the actual rehab and weatherization work. Local sources of funding varied among the organizations and included: 1) state public benefit funds; 2) utility company donations; 3) private foundation grants; 4) WAP and LIHEAP funds; 5) HOME and CDBG funds; and 6) state housing finance agency funds. Each organization also had to develop a strategic plan before it received program funds. Completing those two required tasks took some organizations longer than others, and so the programs in each phase have been operating for different lengths of time.

The two principal characteristics that distinguish the WRAP programs at the different locations are: 1) the type of lead organization and 2) the program model for combining rehab and weatherization services. The type of lead organization determined the expertise that it brought to the program while the program model determined what the lead agency needed to do to combine rehab and weatherization services. The lead agencies can be classified as one of four types: Community Development Corporations (CDCs), Community Action Agencies (CAAs), a stand-alone weatherization agency, and a housing advocacy group. Six of the lead organizations were CDCs, which typically have experience with HUD-funded housing rehab and loan programs (See Table 1). Three agencies were CAAs, which typically administer weatherization and social service grant programs funded by the Department of Energy and the Department of Health and Human Services. One agency was a stand-alone weatherization agency that administered Department of Energy weatherization grant programs, and one was a housing advocacy group with connections to home repair and renovation programs run by other local organizations.

Table 1: Taxonomy of WRAP Lead Agencies and Program Models

Type of Lead Organization	Program Model		
	Self-Contained	Partnership, Informal Relationship	Partnership, Formal Relationship
CDC/NHS	Freeport Rio Grande City	Anchorage Camden Chattanooga Staten Island	
CAA	Milwaukee	Gloucester Hartford	Gloucester Hartford
Weatherization			Philadelphia
Housing Advocacy		Dorchester	Dorchester

There were two basic program models for providing both weatherization and rehab services to clients: the self contained and partnership models. Some agencies developed self-contained programs by expanding the range of services they offered in-house to include the missing components of a coordinated program. The lead agency in Freeport, for example, greatly expanded its rehab capacity to complement its existing weatherization and limited rehab programs. Other lead agencies developed partnership models by coordinating with outside organizations which provided the missing components. In the partnership model, separate agencies provide the weatherization and rehab components. For example, in Camden, the lead agency provides the rehab, while the Camden County Office on Economic Opportunity and the Board of Public Utilities Comfort Partners Program provide the weatherization services.

Within the partnership model, there were two subsets that can be distinguished by the nature of the relationship between the agencies. Formal partnerships were created between participating agencies in some instances, with staff from the second agency participating directly in the WRAP program. At other sites, the relationships were informal, with the outside agency or agencies working with WRAP clients on a referral basis. The two subsets of the partnership model are not mutually exclusive, and three of the eight partnership-model lead agencies established both formal and informal relationships with other organizations. In Dorchester, for example, ABCD and MAHA are formal partners in the Challenge Grant, while other agencies in the area provide the rehab services on a referral basis. (Table 1 about here.)

At least four people were typically involved with the WRAP program at each site. The Executive Director had overall responsibility for the program as part of his/her general oversight of the organization. A project director directly managed the program. A WRAP counselor worked with the clients and coordinated all of the services. Finally, a housing specialist inspected the home, determined the work that needed to be done, and oversaw the work to ensure that it was done properly.

Evaluation of the WRAP Program

An evaluation is an integral part of the WRAP program. Ford and EPC wanted to determine whether a “business case” could be made for expanding the program, which meant documenting

the program's development and implementation, accomplishments, and impacts. Our overall evaluation consisted of three components: 1) process, which examined facilitators of and impediments to the development and implementation of the program; 2) output, which focused on who the program served, what their needs were, the extent to which the program was able to address those needs, and the resources used; and 3) impact, which examined the longer-term effects of the program on the clients, their neighborhoods, and the organizations that participated in the program.

The process evaluation focused on local-, state-, and/or national-level factors that either facilitated or hindered program implementation. For this component of the evaluation, we conducted key informant interviews with key personnel at each site at two points in time: first, late in the initial year of program operation and, second, during the last year of program operation. During the site visits, we interviewed each member of the program staff and representatives of public-sector and private-sector organizations which provided funding for the program. Each person was asked about what he/she perceived as obstacles to and facilitators of program development and operation. The process evaluation also draws on what we learned from our participation in semi-annual meetings of WRAP program staff, and on quarterly reports filed by local program directors.

The output evaluation was based on an intake questionnaire that all WRAP clients completed, initial property inspection reports that listed the repairs needed to each unit, and a completion report that listed the repairs that were actually made to each unit. The cost and sources of funding for the completed work was also recorded.

This paper is based on what we learned from the first two components of the evaluation. First, from the outputs component, we examine who the program served, what their needs were, how completely the program addressed those needs, and the resources the program accessed to do the work. From the process component, we examine the key obstacles to coordinating weatherization and rehab programs. Finally, we discuss the lessons learned for future efforts to coordinate rehabilitation and weatherization assistance to assist lower-income homeowners maintain and afford their homes.

Program Outputs

Table 2 shows the outputs of each WRAP program in terms of the number of clients enrolled, the number of properties inspected, and the number of properties completed. The initial program design set a target of 150 units to be completed within the three-year challenge grant period, but that proved to be difficult for each of the programs to reach within the three-year time period. Two of the more active sites, Rio Grande City and Philadelphia, achieved the goal of enrolling 150 homeowners within three years, but fell short of reaching 150 completions. The Freeport program completed fifty-one homes within three years, but it completed an additional sixty-two in the subsequent year. On the other end of the spectrum, the Hartford program was not able to raise sufficient matching funds and dropped out after one year. The Chattanooga program started, stopped for a period of time to reorganize, and restarted, only to stop again after an additional year when it lost its funding from the city. The Staten Island program was not able to form a viable partnership with the local weatherization agency and after one year withdrew from the program.

Table 2: WRAP Intakes, Inspections, and Completions

Site	Intakes	Inspections	Completions
Phase I Sites			
Chattanooga ¹	42	29	14
Dorchester ²	47	44	38
Freeport	126	118	113
Gloucester ²	70	70	70
Hartford ³	29	29	10
Rio Grande City	155	149	110
Phase II Sites			
Anchorage ⁴	44	26	22
Camden ⁴	53	49	2
Milwaukee ⁴	138	123	85
Philadelphia	160	146	140
Staten Island ⁵	41	31	0
TOTAL	927	814	604

Data as of 11/7/07

1. Chattanooga completed two years of the Challenge Grant period.
2. Dorchester and Gloucester considered one site for the WRAP Program administration, but they are treated separately for the evaluation.
3. Hartford completed one year of the Challenge Grant period.
4. Anchorage, Camden, and Milwaukee were still operating within the Challenge Grant period as of 11/7/07.
5. Staten Island completed one year of the Challenge Grant period.

Did the WRAP Program Serve a Truly Needy Population?

The WRAP program was designed to assist lower-income homeowners maintain their homes, reduce energy use, and increase the asset value of their homes. Data on the characteristics of program participants indicate that the local programs were well targeted to needy households. A full 39 percent of the program participants were extremely low income (less than 30 percent of the area median income), just under 33 percent were very low income (between 30 and 50 percent of the area median income), and 25 percent were low-income (between 50 and 80 percent of the area median income). Less than 3 percent had incomes above 80 percent of the area median. WRAP clients also tended to be considerably older than the general population (35 percent of them were 60 years of age or older) and more likely to be black or Latino (46 percent were black and 36 percent were Latino). Moreover, almost 40 percent of all WRAP households included at least one disabled person.

The characteristics of the WRAP householders did, however, vary considerably among the local programs. In Philadelphia, for example, 95 percent of the householders are black and 63 percent are 60 years old or older. In Gloucester, 97 percent of the householders are white, and only 20 percent are 60 years old or older. These differences are largely due to variation in both the overall demographic characteristics of the cities and in the specific neighborhoods targeted for the WRAP program.

WRAP program participants tended to own homes of modest values. Forty-two percent owned homes valued at less than \$100,000, 45 percent between \$100,000 and \$300,000 and 13 percent over \$300,000. A full 40 percent had no mortgage on their homes. A full 77 percent of those with mortgages had interest rates below 8 percent, while 23 percent had rates of 8 percent or higher. The energy bills of WRAP clients ranged from under \$50 to over \$1,000 per month with 63 percent paying less than \$300 per month and 27 percent paying \$300 per month or more. At the time they applied for the program, 46 percent of WRAP clients reported closing off one or more rooms in the winter because they were too cold to use. Twenty-one percent reported closing one or more rooms in the summer because they were too hot to comfortably use.

The characteristics of the properties, however, vary substantially among the sites. In Philadelphia, for example, 63 percent of the WRAP properties are valued at less than \$125,000, while in Gloucester 84.3 percent of the WRAP properties are valued at over \$250,000. These differences largely reflect home values in the various regional housing markets.

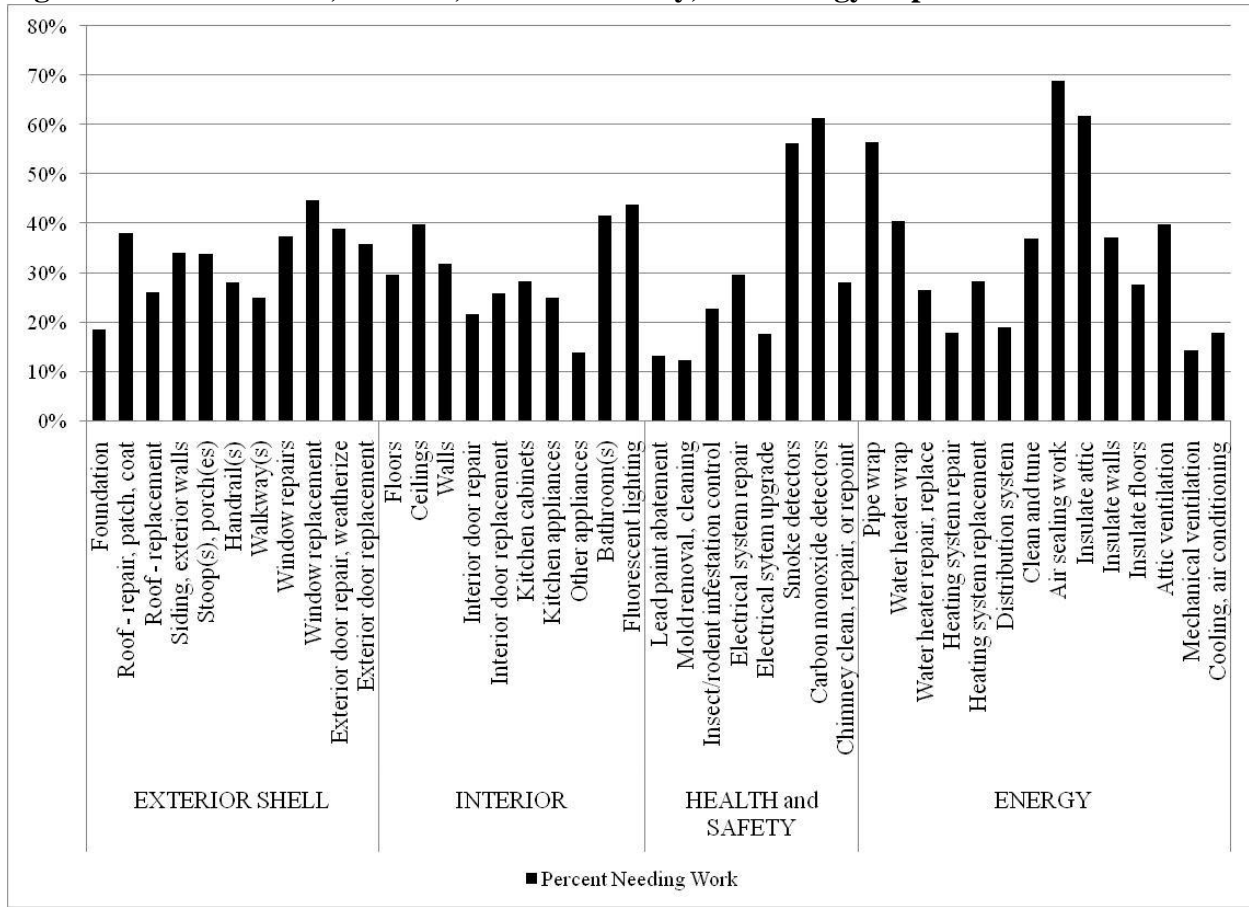
What Major Repairs Were Needed by the Lower-income Homeowners in the Program?

Data collected by the property inspectors at each WRAP site indicate a wide range of deficiencies in the homes owned by WRAP clients. Figure 1 indicates the percentage of housing units in need of various types of exterior, interior, health and safety, and energy repairs. Looking at the exterior shell, over 35 percent of all homes needed doors repaired or weatherized, windows repaired or replaced, and roofs repaired. Frequently-needed interior repairs included installing fluorescent lighting and problems with bathrooms and ceilings, which were often damaged by water from leaky roofs. The most frequently needed health and safety repairs were the installation of carbon-monoxide and smoke detectors and repairs to electrical systems. Finally, the most frequently needed energy-related items were attic ventilation, attic insulation, air sealing, water heater and pipe wrapping.

To What Extent Was the WRAP Program Able to Address Those Needs?

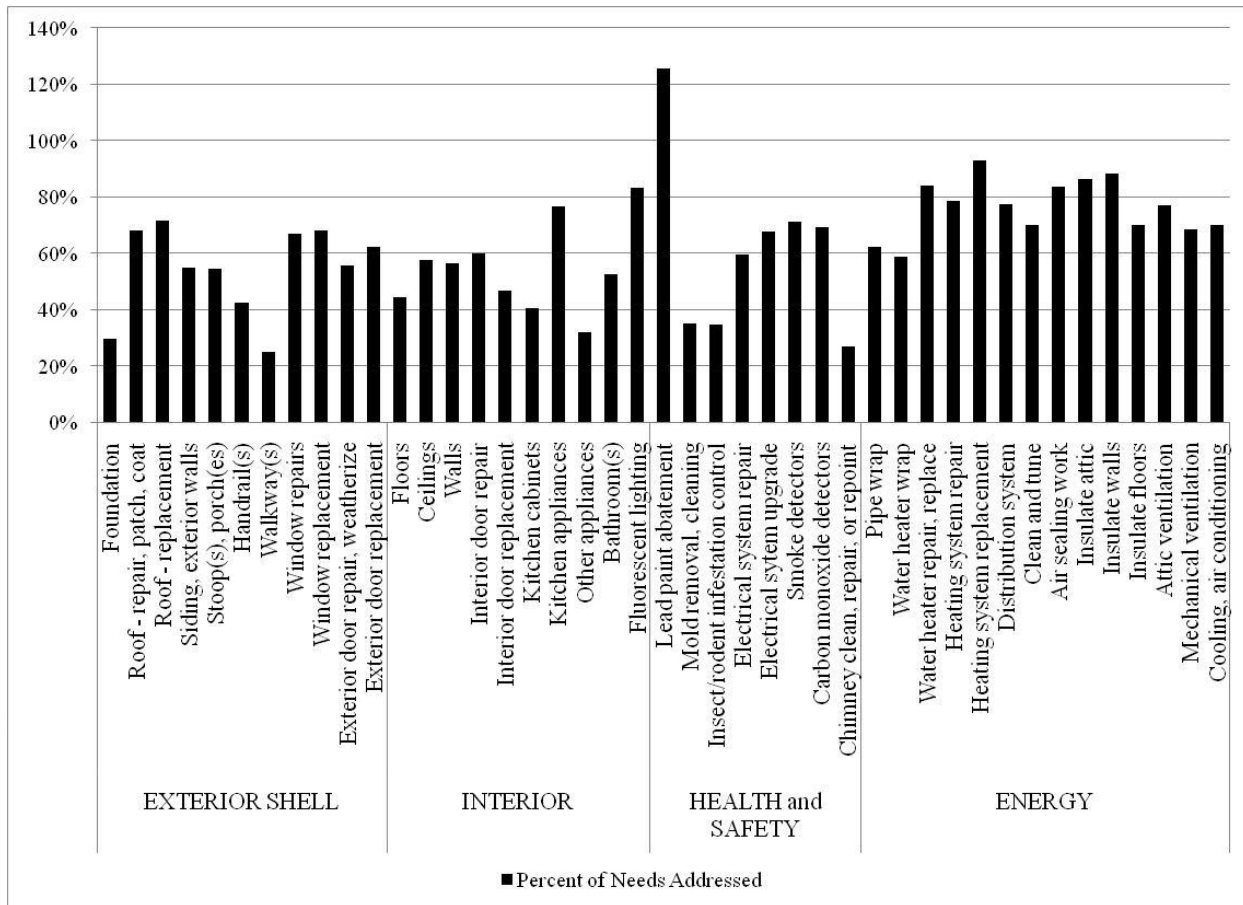
Figure 2 shows the percentage of units for which the identified need was address by the WRAP programs.⁴ The programs were not able to address all of the identified needs, but they were able to address over 75 percent of the units needing most types of energy-related repairs, as well as those needing the replacement of inefficient kitchen appliances and installation of fluorescent lighting. Other needs, such as repairs to foundations, walkways, kitchen cabinets, or chimneys, were more frequently left undone. The more frequently addressed needs are those typically paid for with weatherization grants while the less frequently addressed needs are those more frequently paid for with rehabilitation loans.

Figure 1: Exterior Shell, Interior, Health & Safety, and Energy Repairs Needed



Data from 814 units inspected as of 11/7/07

Figure 2: Exterior Shell, Interior, Health & Safety, and Energy Repairs Done



Data from 604 units finished as of 11/07/07

result of deliberate choices made by the homeowners in consultation with the housing specialists and WRAP counselors. Other repairs, however, were left undone because the client was unwilling to secure a loan to do the work. The reasons homeowners refused to take loans will be discussed below.

The WRAP programs typically relied on multiple funding sources for work. In over 60 percent of the cases the sites managed to blend (rehab and weatherization funds). Both rehab and weatherization funds were used to finance 371 of the 604 units completed.⁵ The sites, however, have not been as successful at blending loans and grants. Only two sites--Freeport and Gloucester--used more than thirty loans. Overall the sites averaged 1.7 grants per units versus 0.5 loans. Table 3 shows the funding sources and types.

Table 3: Funding Sources and Types

Site	Total Completions	Rehab		Weatherization	
		Grants	Loans	Grants	Loans
Anchorage	25	20	0	0	0
Camden	2	3	0	0	0
Chattanooga	14	2	23	0	10
Dorchester	38	14	18	28	0
Freeport	113	7	100	112	0
Gloucester	70	6	89	122	1
Hartford	10	3	5	2	0
Milwaukee	85	35	24	91	0
Philadelphia	140	239	8	139	0
Rio Grande City	110	60	12	184	0
Staten Island	0	0	0	0	0
TOTAL	604	389	279	681	11

Table 4 shows the amount of funding by source and type. The WRAP program organizations have done over \$8.5 million in rehab and weatherization work on the 604 homes--an overall average of over \$14,000 per unit. For organizations that completed the challenge grant period or had more than fifty completions,⁶ the average amount per unit ranged from a low of \$6,698 in Philadelphia, to a high of \$28,905 in Gloucester. Rehab funding split about 58/42 between the number of loans and grants, but loans accounted for 70 percent of the dollar amount.

Weatherization, on the other hand, was over 98 percent grants, both in type of assistance and dollar amount.

Table 4: Funding Amounts by Source and Type

Site	Rehab		Weatherization	
	Grants	Loans	Grants	Loans
Anchorage	\$92,541	\$0	\$0	\$0
Camden	\$8,000	\$0	\$1,300	\$0
Chattanooga	\$10,445	\$331,105	\$0	\$11,380
Dorchester	\$139,168	\$283,028	\$159,245	\$0
Freeport	\$48,295	\$1,519,323	\$748,113	\$0
Gloucester	\$28,977	\$1,694,909	\$273,754	\$25,680
Hartford	\$6,000	\$54,089	\$11,067	\$0
Milwaukee	\$463,437	\$82,280	\$568,011	\$0
Philadelphia	\$400,041	\$202,200	\$335,617	\$0
Rio Grande City	\$636,783	\$161,390	\$252,072	\$0
Staten Island	\$0	\$0	\$0	\$0
TOTAL	\$1,883,687	\$4,328,324	\$2,349,179	\$37,060

What Were the Main Obstacles to Coordinating Weatherization and Rehab Programs?

As discussed above, there was great variation among local WRAP programs in the number of units successfully rehabilitated and weatherized. Three of the local WRAP organizations did not complete the three-year Challenge Grant period, and one other has only reported two completions through its second year. Other sites experienced a variety of difficulties in coming up to speed, although they eventually managed to overcome the obstacles. Clearly, coordinating rehab and weatherization assistance was more challenging than anticipated by all those involved with the program. In this section of the paper we discuss the challenges faced by the local WRAP programs and how they were addressed. The challenges can be broken down into two categories: (1) those that relate to differences in the federal and state programs that fund weatherization and rehabilitation programs, and (2) those that relate to the WRAP program requirements and local program administration. In the next section, we will consider the lessons learned about coordinating weatherization and rehabilitation programs.

Challenges Posed by Differing Federal Program Regulations

One of the key objectives of the WRAP program was to develop new strategies to address the barriers presented by the current system of support for housing weatherization and rehabilitation. Those barriers, however, are more formidable than anticipated. Differences in program eligibility criteria and procedures, and the timing and form of funding greatly inhibited the ability of the WRAP programs to offer comprehensive services to their clients in an efficient manner.

Program Eligibility Criteria and Procedures. A major challenge of coordinating weatherization and rehab programs at the local level is that the federal programs that support these activities have different eligibility standards rooted in different philosophies about assistance to lower-income homeowners. Weatherization programs target the neediest households and impose no responsibility for the homeowner to contribute to the costs. Rehab programs typically target a somewhat higher income group and often require the homeowner to bear part or all of the cost of repairs. Eligibility for DOE and HHS weatherization programs is based on the federally defined poverty level. Although the DOE allows the states some flexibility in establishing eligibility guidelines for its programs, client income cannot exceed the greater of 65 percent of state median income or 150 percent of the federal poverty level unless households receive support from Social

Security or Temporary Assistance to Needy Families programs. Moreover, states typically use these same guidelines in determining eligibility for their public benefit programs (EPC 2004). Housing and Urban Development guidelines, however, use area median income (AMI) as the basis for eligibility and allow funds to go to clients who make up to 80 percent of AMI. The income cutoffs based on the HUD guidelines are often substantially higher than those based on the DOE guidelines. Thus, many prospective WRAP clients qualified for rehab assistance but not weatherization assistance.

WRAP staff members in seven of the eleven local programs cited differences in the eligibility criteria of HUD and DOE programs as a significant obstacle to serving their clients. For example, many owners of two- and three-family homes, quite common in Dorchester, were over the income limits for weatherization assistance due to the rental payments they received. In other instances, the income of adult children who had moved back home made households ineligible for weatherization assistance. WRAP clients had to have income low enough to qualify for weatherization grants but high enough to qualify for rehab loans, which severely constrained the number of households that could be assisted. Adding to this problem is that the DOE and HUD programs have different procedures for calculating qualifying incomes. This means that the local WRAP staff had to calculate client eligibility incomes at least two different ways.

Three WRAP programs were able to overcome the problem of inconsistent eligibility criteria by working with their state or local public benefit funds to raise their income limits. The program directors in both Dorchester and Gloucester lobbied the Massachusetts' Public Service Commission, which agreed to raise the public benefit program's income eligibility limit to match the Housing and Urban Development guidelines. The WRAP program in Freeport also worked with town and state officials and received approval to use their public benefit funds for weatherization work on the homes of clients whose incomes exceeded DOE limits. The waivers allowed those sites to bridge the gap at the upper levels of eligibility while subsidized loans (zero interest, deferred payment, forgivable) helped at the lower levels. No other WRAP site had similar success in standardizing their income eligibility criteria.

Differing program inspection procedures and criteria also served as obstacles to effective and efficient program coordination. The specified procedures for inspecting homes, the certification of inspectors, the criteria for determining the repairs to be done, and the requirements for collecting and reporting data vary substantially between DOE- and HUD-funded programs. Thus, most local WRAP programs were unable to arrange for one coordinated home inspection. Rather, they had to conduct two separate inspections--an inconvenience to homeowners and a duplication of effort.

Timing and Form of Funding. For a variety of reasons local WRAP programs often had trouble coordinating the availability of weatherization and rehabilitation funding. They often found themselves sitting on weatherization funding that had to be spent by a certain date, while they waited for rehabilitation funding to become available.

During the Freeport program's first year, for example, a substantial amount of weatherization funding was available, but their application for HOME funds was delayed. Faced with clients who expected work to commence and the need to spend the weatherization funds by the end of the program year, the staff decided to go ahead with the weatherization work and to return at a later date to finish the other needed repairs. This frustrated both program staff and clients and undermined the goal of a more efficient rehabilitation process with fewer burdens on the clients. Moreover, given the time that passed between the weatherization work and the arrival of funds for the rehabilitation work clients had to be recertified for funding--and some no longer qualified.

The program staff in Rio Grande City had a similar problem which it described in a quarterly report.

Because funds for one project are rarely available at the same time they are available for another, it has proven difficult to coordinate projects in the way that WRAP envisions. An example of this is the \$600,000 that the TDHCA Energy Office made available for weatherization activities in the WRAP colonias. The money had to be spent by July 31, 2003, yet we did not have any rehab money available to combine with the weatherization money. Thus, our weatherization director had to select homes that could be weatherized without the need for major rehab. As funds become available, we will go back and offer rehabilitation to those clients, but unfortunately, some of the neediest people in the

colonias had to be passed over since their homes could not be weatherized without extensive rehab work.

Staff members in Anchorage, Dorchester, Gloucester, Hartford and Camden also identified the timing of funds as a major obstacle to program implementation and success. They offered two suggestions for avoiding this problem. First, wait until funds for both weatherization and rehabilitation are in hand before beginning the program. The WRAP program in Camden tried to pursue this strategy, but it still ran into problems when the distribution of rehabilitation funding approved by the state was delayed for over a year. Second, several program staff members suggested the creation of a single fund that could be used for both weatherization and rehabilitation. There were no successful examples of this among the WRAP programs.

The goal of the WRAP program was to assist lower-income homeowners in repairing their homes by blending weatherization and rehabilitation program funds. Weatherization assistance, however, is typically provided to clients in the form of grants, while rehabilitation assistance is typically provided in the form of loans, grants, or both (See Table 5). The typical WRAP client receives a grant for some or all of the weatherization-related improvements, and takes out a loan to cover the remaining improvements. Based on interviews with staff members at six sites, relying on clients' ability and willingness to take out loans significantly reduced the percentage of needs that the programs could address because of the wide range of incomes the program served, as well as other important differences among lower-income homeowners. Many lower-income families simply cannot qualify for loans due to bad credit or high debt payments. Owners of properties without mortgages, or with relatively small mortgages, may have the equity to qualify for loans, but not the discretionary income to pay them back. Some key informants also noted that homeowners without mortgages seemed to be less willing to encumber their properties.

As shown in Table 4, the sites with the highest percentages of extremely low-income clients and the lowest percentages of properties with a mortgage (Milwaukee, Philadelphia, and Rio Grande City) had the highest grant-to-loan ratios. Moreover, many of those interviewed said that older homeowners were often unwilling to take loans for fear of burdening their children with debt. Clouded titles prevented yet others from obtaining loans since lending institutions normally require clear title before a loan is given. As described in a quarterly report from Philadelphia: We have come across at

least half a dozen clients in the WRAP area that have been beset by tangled titles. A tangled title, of course, precludes clients from using the property as collateral on home improvement loans, and renders them ineligible to access rehab-related assistance programs.

Many homeowners, even those who could qualify, simply did not want to take out loans. According to a quarterly report from Chattanooga, “The biggest challenge is convincing the clients that there is a possibility that they will have to apply for a loan for the rehab.” This led the Chattanooga program staff to develop a new deferred-payment loan product, which is forgiven after seven years. Another manifestation of the refusal to take out loans was what one informant referred to as the “free money” syndrome. Clients were “spoiled” by the grants and unwilling to go into debt to make additional repairs.

Challenges Posed by the WRAP Program and Local Program Administration

The challenges related to local administration and program design included: 1) staffing; 2) developing effective partnerships; and 3) the targeting requirement and data collection.

Staffing Challenges. Implementation of the WRAP programs in several sites was slowed by staffing problems, including intra-agency conflict, staff turnover, and lack of staff skills. Interagency conflict arose in several WRAP programs since the program required cooperation between units with little or no experience in working together. The WRAP program in Rio Grande City, for example, reported conflict between the WRAP program staff and the site’s Weatherization Department staff. Issues of turf, who gets credit for work done, and interpersonal conflict undermined the early implementation of the program. These problems led to the termination of the original WRAP program staff, the hiring of new staff and a reorganization of the program to clarify staff responsibilities. The WRAP program in Freeport also experienced some early tension among staff members in the organization’s Homeownership Division and its Weatherization Division who were asked to cooperate in carrying out the WRAP program. Again, the tension revolved around lines of authority. Mediation by the CDC’s executive director resolved this tension and the program moved forward.

Lack of staff skills was also mentioned as an important challenge by those interviewed in several sites. In Philadelphia, for example, the WRAP inspectors were well trained in weatherization inspections but had little experience conducting general rehabilitation inspections. Thus, many of the early home inspections did not identify rehabilitation needs. The agency responded by sending inspectors to rehabilitation training and having them re-inspect many of the units. Rio Grande City also reported difficulty, given its remote location, in finding someone with the skills necessary to manage the multifaceted WRAP program.

Staff turnover also slowed program implementation in several sites. Beyond the turnover in the Rio Grande City program, the programs in Chattanooga, Hartford, Milwaukee, and Philadelphia reported staff turnover as an important obstacle to program implementation. In some cases it was turnover in the program directors, in others it was turnover in the case managers or rehab specialists. Given the unique characteristics of the WRAP program it took a considerable amount of time for new staff members to learn the program procedures.

Partnership Challenges. To meet the goals of the WRAP program, the lead agencies had to have developed formal and/or informal partnerships with one or more state and local organizations. If the lead agency was a weatherization agency, for example, they needed to develop partnerships with the state and/or local organization responsible for housing rehabilitation as well as social service agencies that could assist families to address a range of problems such as unemployment and substance abuse. The most productive agencies tended to be the ones that established those relationships.

The WRAP program in Gloucester, for example, benefited from close relationships with their state's energy agency. As mentioned earlier, it was willing to provide a waiver to its income guidelines to allow WRAP clients with incomes up to 80 percent of the AMI to access its weatherization funds. Gloucester also developed an effective partnership with the city's Department of Community Development, which provided funding for the rehabilitation work done on the houses of WRAP clients. Rio Grande City also benefited from a close relationship with its state's weatherization agency, which helped it secure an extra allocation of

weatherization funds for the WRAP program, while the program in Freeport established a productive partnership with the town's Department of Community Development.

In several other instances, however, the lead agencies did not have or were unable to develop those partnerships, which led them to withdraw from the program. The lead agency in Staten Island, for example, was not able to convince the local weatherization agency to partner with it. According to local staff, the weatherization organization felt that it should have been chosen as the lead agency and, thus, it was unwilling to participate in the program. In Hartford, the lead agency's inability to forge a partnership with the city's housing rehabilitation program led to its dropping out of the program. According to the program staff, the rehabilitation agency which was part of the mayor's office, saw the WRAP program as competition and would not make rehab funds available to it.

Other partnerships were established but were not as effective as hoped. The staff of the WRAP program in Dorchester, for example, worked hard to secure referral agreements with several social service agencies serving residents of their target community. Yet, few or no referrals were received from those partnering agencies. Also, the weatherization and rehabilitation agencies to which the program referred clients were said to be slow in getting back to the clients, slow to schedule inspections, and slow to begin work on their homes.

Targeting Challenges. In designing the local WRAP programs, the sponsoring agencies were asked to target the program to specific neighborhoods within their communities. More specifically, they asked that an area be chosen so that 10 percent of the units could be included in the program. This guideline was designed to encourage other property owners to fix up their homes and to increase overall property values in the targeted communities. This targeting requirement, however, resulted in several unforeseen problems. First, by restricting the pool of potential applicants, it made it more difficult for several sites to recruit a sufficient number of clients to meet the goal of 150 participants. At least two sites, Dorchester and Anchorage, found it difficult to recruit a sufficient number of WRAP clients so sought to expand their respective target areas.

Second, several WRAP staff members expressed frustration over their inability to serve otherwise eligible clients who lived outside the target area. Third, targeting the local WRAP programs to relatively small areas made it more difficult for some local program staffs to garner political support for the program. The WRAP program in Dorchester, for example, found it difficult to gain the support of city agencies, which argued that giving priority to WRAP clients would be seen as favoring the Dorchester area over other areas of the city. The WRAP programs in both Gloucester and Rio Grande City chose larger target areas to begin with, making it easier to find a sufficient number of interested and qualified participants.

Data Collection Challenges. As a demonstration program, the Ford Foundation wanted to carefully document the impacts of the WRAP program on the participating organizations, the clients, and the target neighborhoods to see if could develop a “business case” for the program and interest other organizations in supporting it. The Foundation also wanted to help the participating organizations in further developing their program evaluation and monitoring capabilities. To this end, the Ford Foundation made it clear that a portion of the \$100,000 per year that it provided to each organization was to cover the costs of collecting data on program outputs and impacts. The data collection protocols developed for the evaluation required local program staff to: conduct extensive intake interviews with program clients; provide data on both the repair needs and the actual work done on each home; take photographs of a random sample of properties in both the WRAP neighborhoods and a comparison neighborhood every six months; record staff time devoted to the program; and submit quarterly narrative reports on program progress.

Several organizations found these data collection requirements to be more difficult and time consuming than anticipated. The program staff in Chattanooga was the most critical of data collection requirements. In one quarterly report they say that, “a continuing challenge is difficulty in convincing our customers to answer long and tedious questions that are not directly related to their credit issues.” In fact, the intake questionnaire did contain questions on health issues, insurance claims and other issues unrelated to eligibility issues but important for the impact evaluation. Also, as one of the largest and most sophisticated organizations involved in the WRAP program, CNE has its own data collection protocols and data bases. They had

originally thought they could extract much of the data needed for WRAP program evaluation from their normal data bases but this proved more difficult than anticipated. Staff at many of the other sites also felt that the data reporting requirements were excessive and diverted staff time away from actually running the program.

Lessons Learned

Policy makers have focused considerable attention on expanding homeownership opportunities to lower-income families. They have paid much less attention, however, to assisting them in sustaining homeownership. Rising housing costs--due to increases in variable-rate mortgages, taxes, and energy and maintenance costs--coupled with flat incomes pose significant threats to lower-income homeowners and the neighborhoods in which they live.

There are several programs designed to assist lower-income families sustain homeownership, however, those programs are seldom coordinated. Weatherization programs, for example, may assist lower-income homeowners with energy saving improvements but often ignore important structural defects such as sinking foundations or worn out roofs. Rehabilitation programs, on the other hand, may overlook important energy conservation measures such as replacing an old furnace or replacing single-pane windows with energy efficient ones. Thus, there is a strong logic for coordinating lower-income homeowner assistance programs.

With this idea in mind, the Ford Foundation and EPC developed a demonstration program designed to coordinate weatherization and housing rehabilitation and other services at the local level. The WRAP program provided a total of eleven nonprofit organizations with operating support to develop coordinated homeownership assistance programs targeted to lower-income families. The participating organizations included community development corporations, community action agencies, independent weatherization agencies and housing advocacy organizations. The participating organizations either expanded the services they offered in-house, such as developing a new housing rehabilitation program, or developed partnerships with other local agencies.

The overriding lesson we draw from this evaluation is that coordinating weatherization and rehabilitation assistance at the local level is very difficult. As reported above, three of the local WRAP programs were unable to develop the local relationships needed to implement their programs, while the others fell well short of their goals to provide coordinated assistance to 150 families over the three-year demonstration period. Having said this, several of the WRAP programs were able to provide coordinated homeownership services to their clients and a total of 604 low-income households received assistance with a wide variety of weatherization and home repair needs.

The reasons for the difficulty in coordinating weatherization and rehabilitation programs are many. First, the federal programs that support these programs have rigid guidelines concerning program eligibility and inspection procedures that greatly inhibit the ability of local programs to provide comprehensive services to low-income homeowners. Many potential WRAP clients, for example, qualified for rehab assistance but were “over income” for weatherization assistance, or qualified for weatherization assistance but were not interested in or could not qualify for a rehabilitation loan. Moreover, several local programs also had difficulty in coordinating the timing of weatherization and rehabilitation funding. They had weatherization funds that needed to be spent by the end of a program year while waiting for rehabilitation funds to arrive.

The most obvious solution to the problem is for HUD and DOE officials to work to better coordinate their respective program guidelines. Interagency working groups have addressed this topic in the past but no real action has been taken. Given that energy costs have become a much larger share of total housing costs and that higher income groups are also struggling to meet high energy bills this topic should be revisited. Even relatively small changes, such as standardizing the way household incomes are calculated, would facilitate program coordination.

Changing to a unified definition of what is included as income does not mean changing income eligibility levels. The threshold for one program could be 150 percent of poverty, for example, while it could still be 80 percent of AMI for a different program. The change would allow one agency to certify income and have another agency use that to determine whether the family was

eligible for its programs, which would save staff time. The change would also allow a single agency to look at the eligibility level for different programs and tell its client if he/she qualifies.

The WRAP program has also shown that state energy agencies can play an important role in helping local agencies offer comprehensive rehabilitation services. By granting waivers or changing the eligibility criteria for the public benefits funds they control, weatherization funds can be used to serve clients that fall between the DOE and HUD eligibility guidelines. The states might also grant waivers to allow their funds to be used over a longer period of time which would eliminate the timing issues experienced by several WRAP programs.

The WRAP demonstration program also found that many lower-income homeowners, particularly elderly ones, are reluctant to take out loans for housing rehabilitation. There is not much that can be done by local program officials about this reluctance other than to anticipate it and to be prepared to do weatherization work with grant funds without addressing other rehabilitation needs. The reluctance of many program clients to take out loans also means that it may be difficult to achieve a concentration of rehabilitated units and the positive spin-off effects originally hoped for.

A host of local management issues also contributed to the difficulty in offering comprehensive homeownership assistance programs. Those problems included difficulties in establishing effective partnerships with other local organizations, internal conflicts between divisions within the managing agencies, and finding and keeping skilled program staff. Some of these problems are not unfamiliar to those involved in managing small nonprofit organizations, however the unique nature of the WRAP program and its emphasis on the coordination of services made them more salient.

Although some WRAP programs found ways to overcome the many challenges to coordinating weatherization and rehabilitation programs at the local level, this evaluation clearly shows that the WRAP approach is limited in its ability to address the needs of the many lower-income homeowners in the country. This has led the Ford Foundation and EPC to try a different approach with the creation of WRAP II.

WRAP II builds on lessons learned from the first WRAP program. The new program will offer an energy-efficient mortgage with subsidized rates for lower-income households participating in existing weatherization programs or who want to make energy efficiency upgrades to their homes. The mortgages will allow those homeowners to refinance out of higher-rate mortgages to finance the improvements and, in effect, apply the savings from improved efficiency to pay for the additional amounts borrowed. WRAP II will address the need for both weatherization and rehab repairs that the WRAP program documented and will be available to homeowners whose incomes are in the gap between the eligibility limits for existing weatherization and rehab programs. The energy-efficient mortgage is intended to fill the gap in financing options--the lack of weatherization loans--that the WRAP program revealed, and to expand weatherization options beyond the range of incomes currently served by the grant programs. While WRAP II is still in the development stage, it is scheduled to begin operating in three states in the fall of 2008--Maine, Massachusetts, and New York.

REFERENCES

- Belsky, Eric; Nicholas Retsinas, and Mark Duda. 2005. *The Financial Returns to Low-Income Homeownership*. Joint Center for Housing Studies, Harvard University. W05-9
- Blanton, Kimberly. 2005. Mortgages for those with bad credit leap in popularity despite high foreclosure rate. *The Boston Globe*. August 3, 2005. World Wide Web, accessed 10/9/06. http://www.boston.com/business/personalfinance/articles/2005/08/03/dark_side_of_subprime_loans/
- Bucks, Brian K., Arthur B. Kennickell, and Kevin B. Moore. 2006. Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances. *Federal Reserve Bulletin* 92(February 2006): A1-A38.
- Council of Large Public Housing Authorities. 2006. Industry Needs and Administration Proposal. World Wide Web accessed 10/10/06 <http://www.clpha.org/page.cfm?pageID=839>
- Elul, Ronel. 2006. Residential Mortgage Default. *Business Review* Q3, pp. 21-29.
- Foster, Chester and Robert Van Order 1984. An Option Based Model of Mortgage Default. *Housing Finance Review* 3(4):351-72.
- Gosselin, Peter G. 2004. The Poor Have More Things Today – Including Wild Income Swings. *The Los Angeles Times*. December 12, 2004.
- Heavens, Al. 2006. Low-income Borrowers Take on "Exotic" Loans. *Realty Times*. October 6, 2006. http://www.realtytimes.com/rtcpages/20060608_lowincomeborrow.htm, accessed 10/6/06.
- Immergluck, Dan, and Geoff Smith. 2006. The External Costs of Foreclosure: The Impact of Single-Family Mortgage Foreclosures on Property Values. *Housing Policy Debate* 17(1):57-79.

Joint Center for Housing Studies. 2002. *The 25th Anniversary of the Community Reinvestment Act: Access to Capital in an Evolving Financial Services System*. Cambridge, MA: Author. (Joint Center)

Lin, Zhenguo, Eric Rosenblatt, and Vincent W. Yao. 2008. Spillover Effects of Foreclosure on Neighborhood Property Values. *Journal of Real Estate Finance and Economics* (Forthcoming).

Louie, Josephine, Eric S. Belsky, Nancy McArdle. 1998. The Housing Needs of Lower-Income Homeowners. With a Preface by Nicolas P. Retsinas. Joint Center for Housing Studies, Harvard University. W98-8. August 1998

McCarthy, George and Roberto G. Quercia. 2000. Bridging the Gap between Supply and Demand: The Evolution of the Homeownership, Education, and Counseling Industry. Research Institute for Housing America. Institute Report 00-01. Washington, DC.

McCarthy, George, Shannon Van Zandt, and William Rohe. 2001. *The Economic Costs and Benefits of Homeownership*. Research Institute for Housing America Working Paper 00-01

National Low Income Housing Coalition. 2006. 2006 Advocates' Guide To Housing and Community Development Policy. <http://www.nlihc.org/advocates/housingtenure.htm>, accessed 10/9/06

NeighborWorks® America. 2005. *Measuring the Delivery Costs of Prepurchase Homeownership Education and Counseling*. Washington, DC: Author.

Opportunity Agenda, 2006. The State of Opportunity in America: Housing, Neighborhoods, and Opportunity. World Wide Web accessed 9/25/06
<http://www.opportunityagenda.org/site/c.mwL5KkN0LvH/b.1405867/k.BF38/Home.htm>

Quercia, Roberto G. 1999. Assessing the Performance of Affordable Loans: Implications for Research and Policy. *Journal of Planning Literature*. 14(1): 17-26.

Quercia, Roberto, and Spencer M. Cowan. 2008. The Impact of Community-based Foreclosure Prevention Programs. *Housing Studies* (Forthcoming).

Quercia, Roberto G. and Michael A. Stegman. 1992. Residential Mortgage Default: A Review of the Literature. *Journal of Housing Research* 3(2):341-79.

RealtyTrac. 2008. Foreclosure Activity Increase 5 Percent in March.

<http://www.realtytrac.com/ContentManagement/pressrelease.aspx?ChannelID=9&ItemID=4450&acct=64847>, accessed April 15, 2008.

Rohe, William M., George McCarthy, and Shannon Van Zandt. 2000. *The Social Benefits and Costs of Homeownership: A Critical Assessment of the Research*. Washington, DC: Research Institute for Housing America. (Working Paper No. 00-01).

Rohe, William M., and Leslie S. Stewart. 1996. Homeownership and Neighborhood Stability. *Housing Policy Debate* 7(1): 37-81.

U. S. Census Bureau. 2007. Housing Vacancies and Homeownership, Table 4 – Homeownership Rates for the U.S.: 1994 – 2007, available from <http://www.census.gov/hhes/www/housing/hvs/annual07/anno07t20.html>, accessed April 14, 2008.

U. S. Census Bureau. 2006. American Community Survey, Table B25106.

U.S. Department of Energy. 2006. Weatherization Assistance Program.

http://www1.eere.energy.gov/office_eere/pdfs/wap_fs.pdf, accessed April 14, 2008.

U.S. Department of Housing and Urban Development. 2002. An Analysis of the Effects of the GSE Affordable Goals on Low- and Moderate-Income Families.

<http://www.huduser.org/publications/hsgfin/gsegoals.html>, accessed September 25, 2006.

Vandell, Kerry and Thomas Thibodeau. 1985. Estimation of Mortgage Defaults Using Disaggregate Loan History Data. *AREUEA Journal* 13(3):292-316.

Wolf, Mark. 2004. Weatherization, Rehab, and asset Preservation Partnership. Issue Brief. August 5, 2004.

ENDNOTES:

¹ Despite the gains, the gap between white and minority homeownership remains at 25 percent. The continued gap is attributable in part to the rapid growth in young minority households that tend to have lower homeownership rates than older households (Joint Center for Housing Studies 2006).

² During the same period, the homeownership rate declined by almost 1 percent for households in the lowest income quintile and increased by more than 10 percent for households in the highest income quintile (The Opportunity Agenda 2006).

³ LIHEAP received a \$5.1 billion in fiscal year 2006. Despite its magnitude, LIHEAP currently serves only about 17 percent of the eligible population with average payments of \$311 per family.

⁴ The data for lead abatement are due to under-reporting of the presence of lead paint in the initial inspection reports. Some of the inspectors were not familiar with rehab requirements and did not document the lead problem when inspecting the property, but the problem was addressed during the actual rehab work.

⁵ The sites reported the funding sources and amounts, although some data on the sources was missing. The reports indicate sources for 557 of the 604 units, with 371 combined, fifty-nine rehab only, and 127 weatherization only.