U.S. Department of Housing and Urban Development
Office of Policy Development and Research

Study on Section 8 Voucher Success Rates

Volume I
Quantitative Study of Success Rates in Metropolitan Areas

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Contract # C-OPC-18571

Final Report

November 2001

Prepared for
Robert Leonard
U.S. Department of Housing and Urban Development
Office of Policy Development and Research
451 Seventh Street, SW, Room 8140
Washington, DC 20410

Prepared by
Meryl Finkel
Larry Buron
Abt Associates Inc.
55 Wheeler Street
Cambridge, MA 02138

Acknowledgements

The authors of this report gratefully acknowledge the important contributions of many others in this Study of Section 8 Success Rates. The large data collection effort could not have been so successful without the assistance and cooperation of many people. First and foremost, we would like to thank the Section 8 staff at the participating Public Housing Agencies (PHAs) for providing the data that was the basis of this report. Thank you for your persistence in collecting the requested data.

We would also like to thank Neelima Grover and Max Shestopalov of QED Group, LLC for programming the Section 8 Housing Choice Voucher Program Tracking System that was provided to the participating PHAs for data collection. At Abt Associates, Carissa Climaco deserves special thanks for leading the data collection effort, designing automated quality control and tracking procedures, writing a comprehensive, yet easy to use training manual, and for training staff on how to use the Tracking System. Mike Baker, Joy Flood, Satyendra Patrabansh, and Heather Schwartz are also thanked for their work in training PHA staff to use the tracking system and then serving as site liaisons to solve technical problems and collect accurate and timely data.

Linda Pistilli and Joy Flood of Abt Associates and Gene Rizor, Zoey Siwek, Roberta Graham, Sheila Murphy, and Martha Fisher of Quadel Consulting Corporation deserve recognition for their effort to recruit sites for the study, collect PHA policies and procedures data, and train sites on the use of the Tracking System. Linda, Joy, and Gene also provided invaluable input into the data collection instruments.

Claudia Solari, with assistance from Satyendra Patrabansh in crunch times, did an excellent job in combining various data sources and conducting the large amount of analysis needed for the report. Jill Khadduri, Linda Pistilli, and Steve Kennedy provided thoughtful and constructive technical review of the preliminary versions of the report. Missy Robinson did an excellent job formatting and producing the report.

Finally, we would to thank the HUD project manager, Robert Leonard, for his enthusiasm and guidance throughout the study. His assistance in helping us obtain the various data needed for this report was invaluable. We also thank and greatly appreciate the feedback provided by other HUD staff on the research design and earlier versions of this report.

FOREWORD

The "Study on Section 8 Voucher Success Rates" is a two-volume set. This volume, Volume I, is the "Quantitative Study of Success Rates in Metropolitan Areas." The companion volume, Volume II, is entitled "Qualitative Study of Five Rural Areas."

The Housing Choice Voucher Program (HCVP) is the largest of the rental subsidy programs administered by the Department of Housing and Urban Development (HUD). In the HCVP, a family is offered a voucher, which it can use to rent any privately owned unit that meets program requirements. The HCVP "success rate" is the proportion of families issued a voucher who succeed in leasing a unit within the timeframe provided by the program.

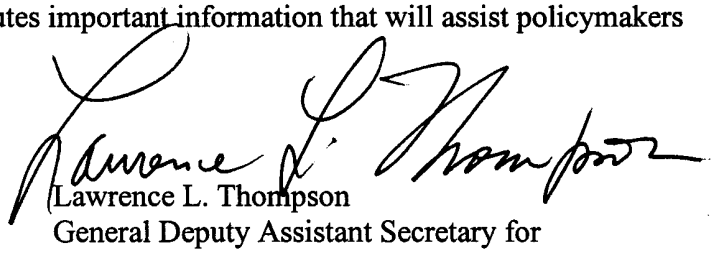
This is the third major effort by HUD to assess HCVP success rates. A study in the mid-1980's estimated the national success rate to be 68 percent. A 1993 study found an increase in success rates to 81 percent nationally. This current study, based on data collected during 2000, estimates the national HCVP success rate to be 69 percent. Thus, approximately seven out of ten families issued a voucher at the time of the study succeeded in using it to lease housing.

Vouchers not used by the original recipients are available for use by other families. Well-managed housing agencies anticipate a certain amount of turnback of vouchers and thus strive to issue enough vouchers to ensure that all available vouchers are being utilized to assist needy families. For this reason, the "utilization rate" of vouchers – i.e., the proportion of available vouchers being used to help families – is significantly higher than the "success rate."

This study finds that success rates vary with local market conditions. In very tight markets, the success rate was estimated to be 61 percent, while in loose markets 80 percent of families who were issued vouchers used them to lease housing. Despite this general relationship, some housing agencies had relatively high voucher success rates even in tight markets. Further work is needed to identify whether lessons can be learned from these agencies to help others boost their success rates.

Importantly, success rates did not differ by such characteristics as the race, ethnicity, gender, or disability status of the head of household. This suggests that the voucher program works equally well for many different types of households. There were some variations in success rates, however. For example, families with very low incomes were somewhat more successful in finding units than were those with higher incomes. In addition, large households with five or more members had a lower probability of success than did smaller households.

The Department is committed to ensuring that the HCVP provides high-quality housing opportunities to low-income families. By studying recent HCVP success rates for different groups of households, this study contributes important information that will assist policymakers in the Department and Congress.



Lawrence L. Thompson
General Deputy Assistant Secretary for
Policy Development and Research

Table of Contents

Executive Summary ..... **i**

Chapter One – Introduction **1-1**
- 1.1 Overview of Section 8 Program and Historical Success Rates 1-1
- 1.2 Objectives of the Research 1-2
- 1.3 Sampling Design Overview 1-4
- 1.4 Data Collection Overview 1-10

Chapter Two – National Success Rate for Large Metropolitan Areas **2-1**
- 2.1 Estimates of Success Rates at the National Level 2-1
- 2.2 Success Rates at the PHA Level 2-4
- 2.3 Time to Succeed 2-5
- 2.4 Success in Place 2-10
- 2.5 Summary of Findings 2-13

Chapter Three – Factors Affecting Success Rates **3-1**
- 3.1 Success Rates by Demographic Characteristics and Voucher Type 3-6
- 3.2 Role of Local Housing Markets in Success Rates 3-14
- 3.3 Success Rate by PHA Practices and Procedures 3-18
- 3.4 Summary of Findings Regarding Factors Affecting Success Rates 3-22

Chapter Four – Development of a System for Tracking Voucher Success Rates **4-1**
- 4.1 Design of the Study's Tracking System 4-2
- 4.2 Challenges in Implementation of the System 4-4
- 4.3 Recommendations for a System for Tracking Success Rates 4-5

Appendix A – Sampling and Weighting Design for Quantitative Analysis of Success Rates in Urban PHAs **A-1**
- A.1 Sampling Frame A-2
- A.2 Sample Selection A-10
- A.3 Imputation of Success Status for Voucher Holders with Unknown Final Status A-24

Appendix B – Data Collection Forms **B-1**

Appendix C – Success Status of Section 8 Voucher Holders in Sample, by PHA **C-1**

Appendix D – Multivariate Analysis of Factors Relating to Enrollee Success **D-1**

Executive Summary

The Section 8 tenant-based voucher program is the largest subsidized housing program in the U.S. In 2000, it subsidized rents for more than 1.5 million low-income households and cost the Federal Government approximately $8 billion dollars. Under the voucher program, participants must find and lease qualifying units in the private rental market within the time allowed by the program. The household's rent is then subsidized by HUD. Not every family or individual that receives a Section 8 tenant-based voucher succeeds in finding a qualifying unit.

The primary objectives of this study are: 1) to provide a national estimate of the success rate for Section 8 voucher holders in metropolitan areas and to compare success rates by demographic group and type of voucher issued; 2) to examine the role the tightness of a local housing market plays in success rates and in the time it takes successful voucher holders to lease a unit, and; 3) to examine the role specific PHA policies and procedures play in success rates. These policies and procedures include applicant screening criteria, the level at which the PHA sets the payment standard compared with HUD's published Fair Market Rents (FMRs), and assistance provided to voucher holders searching for housing.

The study's estimates of success rates and the factors than affect them are based on a sample of more than 2,600 households that received vouchers from 48 PHAs across the country. The sample is representative of all voucher holders in metropolitan PHAs that administer programs with more than 800 units. (The study universe includes about 60 percent of all vouchers.) Data collection on the issuance of vouchers to households in the sample began in the spring of 2000, and collection of information on search outcomes continued through early 2001. Thus, the estimates of success and other study findings reflect the situation for large metropolitan PHAs in 2000.

National Success Rate Estimates. Success rates varied widely from PHA to PHA in 2000, from a low of 37 percent to a high of 100 percent. Less than half of the voucher holders succeeded in leasing up at 15 percent of large metropolitan-area PHAs. At the other end of the distribution, a similar share of PHAs (12 percent) had success rates greater than 90 percent.

At the national level, the primary finding from this study is that success rates in 2000 are similar to the 1985-87 level, but substantially lower than found in 1993, the last time success rates were estimated. Nationally, 69 percent of families and individuals who received vouchers from large metropolitan PHAs succeeded in using them to lease units under the Section 8 program. This compares to a rate of 81 percent in 1993. PHAs generally attribute the decline in success rates between 1993 and 2000 to a tightening of rental markets during the intervening years. Another possible explanation may be a decrease in the FMRs from the

45th to the 40th percentile of rents, a Federal policy change that was implemented in 1995. However, when the voucher and certificate programs were merged in late 1999, PHAs were given the flexibility to set payment standards as high as 110 percent of the FMR. This may have mitigated the impact of the decrease in the FMR standard. Other changes when the program was merged (such as the 40 percent rent burden cap), may serve to depress success rates. This is the first study of success rates in the merged Housing Choice Voucher program.

Prior to this study, success rates had increased each time they were estimated. When the first study of success under the tenant-based Section 8 program was performed in the early 1980s, roughly 50 percent of voucher holders (at that time, called certificate holders) succeeded in finding housing. In the 1985-87 period, that number had risen to 68 percent, and by 1993 it had risen to 81 percent. These results are summarized in Exhibit ES-1.

Exhibit ES-1
National Estimates of Success Rates in Large Metropolitan-Area PHAs Over Time

Year	National Success Rate in Large Metropolitan PHAs[1]	Success Rate Excluding New York City and City of Los Angeles	Success Rate in New York City	Success Rate in City of Los Angeles
1985 to1987	68%	74%	33%	72%
1993	81%	86%	62%	NA
2000	69%	71%	57%	47%

[1] For comparability over time, these national success rate estimates exclude the City of Los Angeles PHA, because they were not part of the 1993 study. Adding the City of Los Angeles PHA does not change the 1985 to 1987 estimate (after rounding), and reduces the 2000 estimate by only one percentage point to 68 percent.

Sources: 1985-1987 estimates: Mirielle Leger and Stephen Kennedy "Final Comprehensive Report of the Freestanding Housing Voucher Demonstration" HUD, May 1990. The national estimates were estimated by the current authors using weights derived from the PHAs' probability of selection and program size as reported in Appendix A of the report and PHA success rates reported in Appendix G of the report.

1993 estimates: Stephen Kennedy and Meryl Finkel "Section 8 Rental Voucher and Rental Certificate Utilization Study: Final Report", May 1994. This report did not calculate a national success rate including NYC. It was calculated by the current authors using the 1993 study weights from unpublished reports and PHA-level success rates in reported in Exhibit 1.1 of the report . The 1993 success rate excluding NYC and the City of LA is from Exhibit 2.1 on page 12 of the report. 2000 estimates: Current Success Rate Study (2,674 observations)

To reduce the possible impact of different samples in comparing success rates over time, success rates can be looked at separately for eight sites (excluding New York City) that overlap across the 1993 and 2000 studies. Weighting the success rates in these sites to reflect the current sizes of the PHAs' tenant-based programs, we find that the success rate dropped from 80 percent to 63 percent between 1993 and 2000. In seven of these eight sites, the success rate is lower in 2000 than in 1993. In New York City the success rate also declined between 1993 and 2000, from 62 to 57 percent.

Search time. In addition to the lower success rates overall compared with 1993, the study found that successful households are taking a longer time to find units: 83 days on average. Nearly one quarter of successful households took more than 120 days to lease a unit, including 7 percent who leased a program qualifying unit more than 180 days after receiving the voucher. In contrast, all successful voucher holders in the 1993 study had found their unit within the first 90 days. Data on the breakdown of search time by activity is not available for the 1993 study. Thus, it is not clear whether the lengthy search times compared with 1993 are a result of longer search times for voucher holders, longer processing times for the various administrative steps that the PHA must take, or a combination of the two. What is clear is that for current study participants, most (almost 70 percent) of the time between issuance and lease-up is taken up by the time to find a unit and submit a request for lease approval rather than time waiting for an inspection or other administrative activities.

In addition, more successful searchers are now moving to new units, rather than leasing their pre-program units which also adds to average search time. Households that became recipients of voucher subsidies in their pre-program unit succeeded more quickly than movers, but it took a long time even for these households to begin receiving subsidies. On average, households that leased in place took 59 days from issuance of their voucher until lease-up, compared with 89 days for movers.

Leasing in Place. Only 21 percent of successful voucher holders used their vouchers to rent their pre-program unit. In contrast, in 1993, 37 percent of successful voucher holders used their vouchers to lease their pre-program unit. There had been some speculation that in the current period of tighter rental markets, a larger percentage of households would use their vouchers to qualify in place because finding new units would be more difficult.

Households that succeed by moving tend to be younger than those who lease their pre-program units and they are more likely to be single parents. Households that lease their pre-program units are more likely to include elderly or disabled members compared with households that move to new units.

Characteristics of Successful Voucher Holders. The study found that once other factors were controlled for success rates did not differ by race, ethnicity, or gender of the head of household or by disability status of household members.

Success rates did vary by household size, age of household head, and by household composition. Elderly households comprised 7 percent of voucher holders, and had lower success rates than other household types. Households with non-elderly, non-disabled persons and no children comprised 9 percent of voucher holders, and also had low success rates. This latter group includes many extremely low-income households, they are more likely to be male-headed, to be age 45 to 61 and have zero income. They are also much more to have

moved up the waiting list based on a preference for homelessness and to be from New York City. Large households with five or more members also had a lower probability of success.

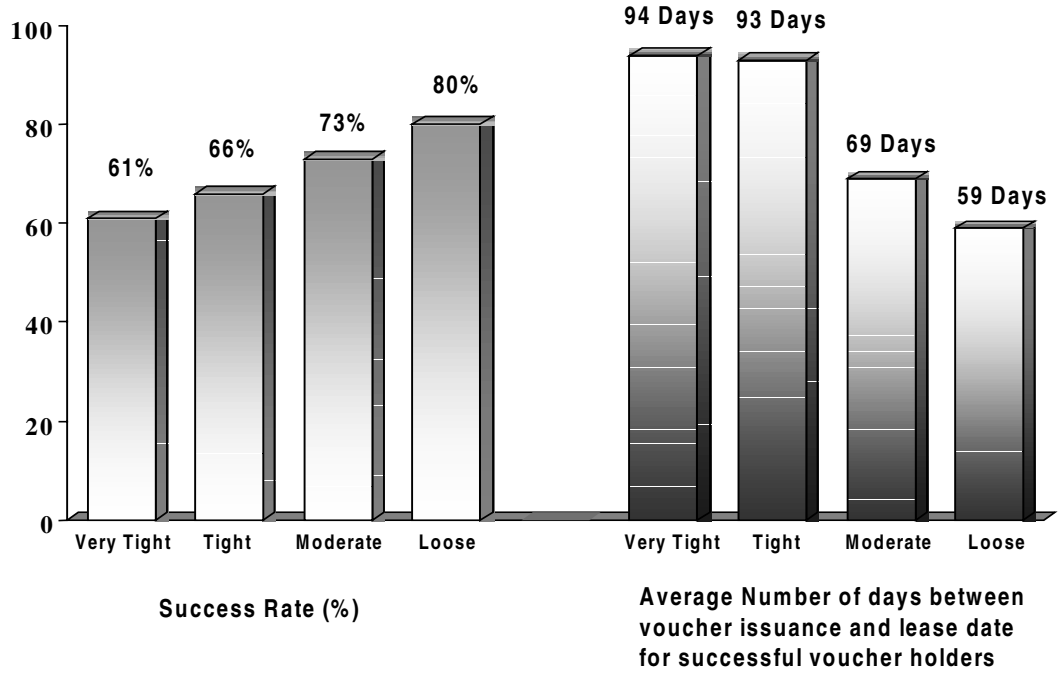
Three-quarters of households holding vouchers had incomes above zero but at or below 30 percent of the local median for their household size. Seventy-two percent of this group succeeded in becoming program recipients. In contrast, only 59 percent of households with incomes greater than 30 percent of local median succeeded. This is consistent with the expectation that the lower a household's income, the greater the benefit from Section 8, and thus the higher the success rate. In spite of their expected high potential benefits from participation, households with zero income also have lower success rates than those with some income but below 30 percent of the local median. These households often overlap with the group of individuals who are neither elderly nor disabled nor have children living with them. Success rates did not vary by source of income.

Voucher Type and Time on Waiting List. The raw data shows that households with Welfare-to-Work vouchers (a new program involving a special allocation of vouchers during the study period) had higher success rates than households with regular, turnover vouchers. However, once other factors were controlled for in a multivariate regression, this difference was no longer statistically significant. The time the household had spent on the waiting list before receiving a voucher does not appear to be correlated with ultimate success.

Market Factors. As expected, success rates were lower in tight housing markets compared with looser markets. Market tightness was proxied by vacancy rates estimated by local housing professionals for the portion of the housing market in each PHA's jurisdiction that was geographically and economically available to Section 8 voucher holders. The average success rate was 61 percent in very tight markets, 66 percent in tight markets, 73 percent in moderate markets, and 80 percent in loose markets. In addition, search time for successful households was longer in tight markets, averaging 93 to 94 days in both tight and very tight markets, 69 days in moderate markets, and 59 days in loose markets. These findings are summarized in Exhibit ES-2.

Most PHAs (66 percent) set their payment standard equal to the FMR. Success rates were higher in these PHAs compared with PHAs that set the payment standard above or below the FMR. Being in a jurisdiction with some sort of protection against discrimination based on source of income also improved the chances of success. Voucher holders in PHAs where most units pass the HQS inspection on the first try had a higher probability of success. The probability of success was not associated with PHA size.

Exhibit ES-2
Success Rates and Time to Lease by Market Tightness



Source: Abt Associates composite vacancy measure and voucher holder tracking system.
Sample: 2609 (1780 successful voucher holders) weighted to reflect national population of vouchers holders in large metropolitan-area PHAs.

PHA Policies and Procedures. Success rates were compared based on several PHA practices and procedures that could play a role in success, including briefings for voucher holders, policies for extending the permitted search time, policies for screening households, housing search assistance, and PHA outreach to landlords. When comparing raw success rates, the only practice that has a statistically significant association with success is landlord outreach. Once other factors are controlled for, briefing size also appears to be associated with the probability of success. Being in a PHA that reports conducting individual briefings is associated with a higher likelihood of success, as is being in a PHA that conducts large group briefings.

The study results regarding the role of PHA practices should be viewed with caution for several reasons. The direction of causality of PHA actions is not always clear. PHA actions may be a result of prevailing conditions or they may cause a particular condition. For example, we do not know whether infrequent landlord outreach somehow contributes to success or whether PHAs in markets with high success rates do not feel they need to conduct frequent outreach. In addition, we do not know if the voucher holders in our sample took advantage of any of the services offered.

Chapter One
Introduction

The Section 8 tenant-based program is the largest subsidized housing program in the U.S. In 2000, some 1.5 million low-income households received subsidies through the program and it cost the Federal Government approximately $8 billion dollars to operate. However, not every family who is provided a Section 8 tenant-based voucher succeeds in finding a unit to rent. The purpose of this study is to estimate the success rate for Section 8 voucher holders in metropolitan areas and to explore the factors that affect chances for success (e.g., market tightness, voucher holder characteristics, and housing authority policies and procedures). Success rate is defined as the percentage of all families provided vouchers who lease a housing unit meeting the program requirements within the allotted amount of time.

1.1 Overview of Section 8 Program and Historical Success Rates

The Section 8 Housing Choice Voucher program is administered locally by public housing agencies (PHAs) under contract with HUD. In the Section 8 program, participants find and lease a unit in the private rental market, but their rent is subsidized by HUD. The units must meet HUD's Housing Quality Standards, and the rents charged cannot exceed rents for comparable units in the market area (rent reasonableness). The subsidy paid on behalf of the participants is based on a payment standard set by the PHA between 90 and 110 percent of the Fair Market Rent (FMR),[1] the HUD-published figure representing the fortieth percentile rents for all rental units of a given bedroom size in an MSA. If the approved rent for the unit is equal to or below the payment standard, the participant pays 30 percent of their adjusted income toward rent and utilities (the gross rent), and the PHA pays the difference between the tenant payment and gross rent. If the gross rent exceeds the payment standard, the housing authority pays the difference between the payment standard and 30 percent of the participant's adjusted income, and the participant pays 30 percent of their adjusted income plus the amount by which the gross rent exceeds the payment standard. If the total tenant payment for a unit would exceed 40 percent of the recipients' income, the unit does not meet program requirements and cannot be rented with a Section 8 Voucher.[2]

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[1] PHAs can set different payment standards in different parts of their jurisdiction as long as the payment standard is between 90 and 110 percent of FMR. PHAs can also apply to HUD for exception rents that exceed 110 percent of the FMR for all or parts of their jurisdiction and can make their own exceptions for people needing special accommodations (e.g., people needing wheelchair accessible units).

[2] Prior to implementation of the Housing Choice Voucher Program in October 1999, two versions of the Section 8 program existed. In the Section 8 Certificate Program, the tenant contribution was fixed, and the program paid the difference between the fixed tenant contribution and the unit's gross rent. In order to limit program costs, gross rents could not exceed the local Fair Market Rent (FMR) which HUD established at the 45th percentile of rents in the MSA until 1994 and the 40th percentile thereafter. In the

Like the public housing program and the various project-based Section 8 programs, the voucher program requires that an interested applicant place his or her name on a waiting list, rise to the top of the list based on the date of application and any local preferences that the PHA has adopted, and document eligibility before becoming a successful program applicant. When this has been completed, however, the successful voucher program applicant is not guaranteed an affordable place to live. Instead, he or she receives a voucher that guarantees an opportunity to receive housing assistance if the voucher holder finds a housing unit with a landlord who is willing to participate in the program that meets both the program standards and the household's needs.

Many voucher holders never succeed in becoming successful Section 8 recipients because they do not find and lease units under the program. Success rates for Section 8 voucher holders vary widely from jurisdiction to jurisdiction, but at the national level they increased dramatically from the early 1980s to mid 1990s. When the first study of Section 8 success was performed in the early 1980s, roughly 50 percent of Section 8 certificate holders succeeded in finding housing. In the 1985-87 period, that number had risen to 68 percent. In its 1993 study of Section 8 success rates, Abt Associates found that nearly 81 percent of families receiving certificates and vouchers leased units.[3] As documented in this study, the success rate in 2000 (69 percent) is almost identical to the 1985-87 estimated success rate, but substantially lower than the 1993 rate.[4]

1.2 Objectives of the Research

Several important policy concerns are raised by the fact that not all successful voucher holders succeed in becoming program recipients. It is important for policy makers to learn more about the types of applicants who succeed and those who do not succeed in becoming recipients in the program. Concern about unsuccessful voucher holders will increase or decrease to the extent they are more or less in need of assistance than successful voucher holders. If it turns out that particular demographic groups are not succeeding in finding units, appropriate policies can be enacted to improve outcomes for these groups. Understanding how market factors and PHA-level practices and procedures affect success

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Voucher Program, the program assistance was fixed, and was equal to the difference between the Payment Standard and 30 percent of tenant income regardless of the actual gross rent. The Payment Standard was established by the PHA between 80 and 100 percent of the local FMR. Effective October 1, 1999 the new Housing Choice Voucher Program replaced both programs. The new program takes features from both programs.

[3] Kennedy, Stephen, and Meryl Finkel. 1994. *Section 8 Rental Voucher and Rental Certificate Utilization Study: Final Report.* A report written by Abt Associates Inc. for the U.S. Department of Housing and Urban Development. (Despite its name, the 1993 study is about success rates, not utilization rates.)

[4] The success rate for the second largest Section 8 program, the City of Los Angeles, was not available for 1993. To maintain comparability over time, all the success rate estimates cited here exclude the City of Los Angeles.

rates is important so that changes to program practices and procedures can be implemented if needed. Accurate measures of local success rates are also important for local program administrators so they can estimate the number of issuances required to be sure that their programs maintain high lease-up rates and earn full administrative fees. Identifying policies that can increase success rates can also reduce the PHAs' administrative costs by reducing costs from intake, eligibility determination, and briefings for unsuccessful applicants.[5]

This research addresses these policy concerns by calculating the current national success rate for all voucher holders in metropolitan areas, comparing the success rate across various subgroups of the population, and exploring the role of market tightness, voucher holder characteristics, and PHA policies and procedures in success. The overall goal is to increase our understanding of the factors that are associated with success so that PHA and HUD staff can make informed decisions about Section 8 policies and procedures.

Specifically, the objectives of this study are to:

- determine the national success rates for voucher holders in metropolitan areas;
- compare success rates by demographic group (race/ethnicity, age, family composition, disability status, income level and sources);
- calculate success rate by type of voucher issued (e.g., regular waiting list, welfare to work);
- examine the relationship between market tightness and both success rates and the time it takes successful voucher holders to lease a unit;
- examine the role specific PHA policies and procedures play in success rates (e.g., applicant screening criteria, payment standard as percent of FMR, and assistance provided to voucher holders searching for housing);
- determine the relationship between time on the waiting list and success; and
- investigate the relationship between the portion of a PHA's voucher holders that lease in place and the success rate.

The rest of this chapter provides an overview of our sampling design and data collection activities. The next chapter shows our national estimates of success rates and discuss national trends over time (Chapter 2). We then present cross-tabulations of success rates by

[5] PHAs earn administrative fees to operate their program based on the number of Section 8 recipients under lease, not the number they process and issue a voucher to search for housing. Hence, a PHA with a low success rate must absorb the extra costs associated with processing more voucher holders.

various demographic, market, and PHA characteristics and use a regression framework to investigate the factors that have a significant effect on success rates when controlling for other factors that might also influence success (Chapter 3). The last chapter describes the development of our voucher holder tracking software and makes recommendations for further development of such systems (Chapter 4). The report concludes with several appendices. Appendix A describes our sampling and weighting procedures, Appendix B presents our data collection instruments, Appendix C provides PHA level results, and Appendix D provides the regression model results.

1.3 Sampling Design Overview

The target population for this study is all voucher holders in non-rural areas in the lower 48 states. In order to meet the study's time and analytic constraints, we also restricted the target population to PHAs with at least 800 vouchers, a program size large enough that the PHA was expected to issue at least 50 vouchers over the first four months of the data collection period.[6]

Our approach to sampling involved using a two-stage sampling design. In the first stage we selected a representative sample of 50 large, urban PHAs in the lower 48 states that were expected to issue at least 50 vouchers during the first four months of the data collection period. From each of these 50 PHAs, we selected the second stage sample of about 50 voucher holders (more for the largest sites) for inclusion in the data collection. Appendix A provides a detailed description of our sample selection procedures, which are briefly described below.

First Stage Sampling: PHAs

The goal of the first stage sampling was to include 50 PHAs in the study. In the 1993 study, 33 PHAs were included in the sample. At that time programs were more homogeneous in terms of the types of vouchers being issued because there were fewer special programs. A sample size of 50 PHAs was chosen for this study to ensure we captured the range of market conditions and voucher types currently being issued.

To determine the PHAs that were eligible for the study, we started with a list of the size and operating area (metropolitan or non-metropolitan) of all PHAs in the country. The list, provided by HUD in November 1999, contained the number of reserved vouchers and certificates in each PHA at the end of the PHA's most recent fiscal year.[7] In total, 1,662,163 certificates and vouchers in 2,534 PHAs were included on this list.

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[6] Assuming 14 percent of the vouchers turn over each year and a success rate of 75 percent, a PHA with at least 804 vouchers would issue 50 in a four-month period. See Appendix A for details of this calculation.

[7] The file was provided by HUD on November 16, 1999 and was based on HUDCAPS data. It identified PHAs that operate in metropolitan areas, non-metropolitan areas and both. PHAs that operate in

From that list, we excluded the following PHAs from our sampling frame:

- All 921 non-metro PHAs.
- All 1,183 remaining small PHAs with fewer than 800 certificates and vouchers.
- The remaining 24 PHAs in Alaska, Hawaii, Guam, Puerto Rico, the U.S. Virgin Islands (not in the lower 48 states) and Statewide PHAs that did not operate a metro-area component that met the study's size requirements program.

Our final sampling frame thus consisted of 406 PHAs with 1,034,756 certificates and vouchers.[8] To be sure that we ended up with 50 PHAs that were eligible for the study (i.e., issuing at least 50 vouchers over first four months of the study) and willing to participate, we randomly selected 100 of the 406 PHAs using the probability proportionate to size (PPS) sampling method. PPS is a simple selection procedure that gives rise to specified probabilities of selection for each site. Such probabilities are necessary to derive a sample from which statistical inferences can be made about the sampling universe (e.g., whether success rates are statistically significantly different across demographic groups).

All 100 of the selected PHAs were contacted by senior Abt Associates or Quadel Consulting Corporation staff as part of the screening and recruitment effort. Of the 100 PHAs, 30 were either ineligible for the study or unwilling to participate,[9] while 70 were eligible and willing to participate in the study. We selected 50 of the 70 sites for the study. At this stage, the five largest sites were selected with certainty, because statistical analysis showed they needed to be in the study for the final sample of voucher holders to be representative of voucher holders in urban areas. The remaining 45 sites were selected using systematic random sampling after ordering PHAs by size. Systematic random sampling simply means selecting every nth site where n is inverse of the fraction of sites to be selected. All non-certainty sites had an equal selection probability at this stage, and we maintained a similar distribution of PHAs by size as in the initial selection.

Once data collection started, two of the 50 PHAs were dropped, resulting in 48 PHAs in the final sample.[10] A comparison of the sample PHAs and the eligible, but unwilling or not

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metropolitan areas or both metropolitan and non-metropolitan areas were kept in the sampling frame if they met the other eligibility criteria listed. The file did not include Welfare to Work Vouchers that had been awarded to PHAs around that time.

[8] See Appendix A, Exhibit A-1 for a list of the 406 PHAs in our sampling frame.

[9] 16 sites were ineligible because they would not be issuing enough vouchers or because of extensive Moving to Work exceptions to their program rules; 9 were eligible, but unwilling to participate; and 5 were unwilling to participate, but it was not clear whether they were eligible for the study.

[10] One PHA was ineligible because it did not issue any vouchers during the data collection period, even though it had anticipated issuing vouchers at the time of the recruitment call. The second PHA was

selected PHAs show that the sample of 48 PHAs provides a good representation of the PHAs in the sampling frame (see Appendix A). That is, the sites that were unwilling to participate (or were not selected) do not appear to be substantially different from the PHAs in our sample.

In Exhibit 1-1, we present some basic characteristics of the 48 PHAs in the study. The participating PHAs' Section 8 programs ranged in size from 808 to 76,980 certificates and vouchers. Most of the participating PHAs held between 2,000 and 10,000 vouchers, but seven PHAs controlled over 10,000 vouchers and 11 controlled less than 2,000. Geographically, the South had the highest number of PHAs in the study (15 PHAs) while the Northeast had the least (9 PHAs). Most of the participating PHAs (32 of 48) operate primarily in the central city portion of the MSA, while only four PHAs operate primarily in suburban areas. The jurisdictions of the other 12 PHAs were evenly split between central city and suburban areas.

Second-Stage Sampling: Voucher Holders

The second stage sampling involved selecting specific voucher holders in each of the study sites. Our goal was to sample the first 50 voucher holders (more from the three largest sites) after we trained PHA staff at a site on the study. Most sites were trained in April and May of 2000.

At several sites, the number of voucher holders in the sample was different from the targeted number and we ended up with information on 2,674 voucher holders (rather than the 2,717 targeted). In addition, PHAs were not able to provide the final success status on 65 voucher holders. Most of the analysis in this report is based on the 2,609 voucher holders for whom we know their final success status.[11]

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dropped because the wrong PHA in the city (i.e., not the one selected) was recruited to participate. This was discovered too late to add the correct PHA, so the incorrect PHA was dropped.

[11] By the end of our data collection period, PHAs did not know the final success outcome for 65 of the 2,674 voucher holders that they provided information resulting in a sample of 2,609 voucher holders with known final outcomes. The 65 not finals consisted of 51 voucher holders who were still searching after a minimum of 220 days since their voucher was issued and 14 voucher holders who ported out, but the PHA had no information on their final outcome.

Exhibit 1-1
Characteristics of PHAs in Study Sample

Characteristic	# of PHAs	Percent of Sample PHAs
Number of PHAs in Study	48	100%
Number of Section 8 Vouchers in PHA Program		
10,001 or more	7	15%
4,001 to 10,000	15	31%
2,001 to 4,000	15	31%
800 to 2,000	11	23%
Census Region of PHA		
South	15	31%
Midwest	13	27%
West	11	23%
Northeast	9	19%
PHA Jurisdiction		
Primarily central city	32	67%
Primarily suburban	4	8%
Even mix of central city and suburban	12	25%

Note: Data in this exhibit are not weighted.

Sample Size: 48 PHAs.

Sources: Size of PHAs based on HUDCAPS data provided by HUD on November 16, 1999. It reflects the number of reserved certificates and vouchers in each PHA at the end of their most recent fiscal year. Region is based on the Census Bureau's definitions, and type of jurisdiction is self-reported by PHA staff.

Exhibit 1-2 shows the type of vouchers and the month they were issued for the 2,609 voucher holders in the study sample. Corresponding with the training times, half of the voucher holders were issued vouchers in May 2000 and most of the rest received their vouchers in the contiguous months (April and June). A small share (2 percent) were issued their voucher as late as September 2000, reflecting both smaller PHAs who took several months to issue 50 vouchers and some larger sites that could not schedule a training date until July.

Most of the voucher holders (71 percent) came from the general waiting list and received a regular Section 8 voucher that had been turned over from a previous recipient. Welfare-to-Work vouchers were the most common special program voucher, held by18 percent of the study sample. Only three other special program vouchers were held by at least one percent of the sample: family unification, public housing relocation, and Section 8 opt out vouchers.

The largest share (40 percent) of voucher holders needed a two-bedroom unit. Seven percent of the sample voucher holders needed a four-bedroom or larger unit, while 4 percent required only a studio (0 bedroom).

Exhibit 1-2
Type of Voucher and Month Issued to Sample Households

Characteristics	# of Households	Percent of Sample Households
Month Voucher Issued (in Year 2000)		
April	363	14%
May	1,297	50%
June	518	20%
July	187	7%
August	199	8%
September	42	2%
Other months	3	0.1%
Type of Voucher Issued		
General waiting list	1,852	71%
Welfare to Work	465	18%
Family Unification	115	4%
Public housing relocation	73	3%
Section 8 Opt Out	32	1%
Other types or unreported	72	3%
Bedroom Size Needed		
0 BR	95	4%
1 BR	554	21%
2 BR	1,034	40%
3 BR	747	29%
4 BR or larger	179	7%

Note: Data in this exhibit are unweighted.

Sample Size: 2,609

Source: Enrollment module of the voucher holder tracking system.

Exhibit 1-3 shows the demographic characteristics of voucher holders in our sample. Most of the voucher holders were extremely low income, minority families, headed by a female. Only 7 percent of the sample is elderly, but 22 percent of the voucher holders had a disabled family member. Nearly three-quarters of the families were relatively small, containing only one to three people in the household. Corresponding to the small household sizes, one-quarter of the voucher holders had no children in the household, and only 4 percent had five or more children.

Exhibit 1-3
Characteristics of Households in Study Sample

Characteristics	# of Households	Percent of Sample Households
Household Income as a Percent of Family-Size Adjusted Area Median Income		
less than 30%	2,042	78%
30 to 49 %	552	21%
50% or above	15	1%
Race/Ethnicity of Household Head		
White, non-Hispanic	502	19%
Black, non-Hispanic	1,476	57%
Hispanic	575	22%
Asian/Pacific Islander	34	1%
American Indian/Alaska Native	19	1%
Unreported	3	0.1%
Female Head of Household	2,186	84%
Spouse Present	244	9%
Age of Household Head		
< 25	465	18%
25-44	1,547	59%
45-61	421	16%
62 or older	172	7%
Unreported	4	0.1%
Disabled Household Member	581	22%
Household Size		
1 person	534	21%
2 people	636	24%
3 people	662	25%
4 people	415	16%
5 people	231	9%
6 or more people	131	5%
Number of Children		
No children	646	25%
1 child	608	23%
2 children	667	26%
3 or 4 children	591	24%
5 or more children	97	4%

Note: Data in this exhibit are unweighted.

Sample Size: 2,609

Source: Enrollment module of the voucher holder tracking system.

Weighting

The objective of this study is to produce national estimates of success rates for voucher holders at PHAs in the lower 48 states. Since the estimates are based on a sample of voucher holders and each voucher holder in the population did not have an equal chance of being in the sample, the data need to be weighted to better represent the national population.

Weights were created that took into account the probability that a PHA was selected for the sample in the first stage of the selection process and the probability that a voucher holder was selected in the second stage of the selection process. The weights at this point were equal to the inverse probability of the voucher holder being selected for the sample. Weights were then adjusted to reflect non-response. That is, the weights were adjusted to 1) reflect the PHAs that were eligible, but unwilling to participate in the study, and 2) to reflect the actual number of voucher holders in each PHAs' samples rather than the number of voucher holders targeted at each PHA.

Weighted estimates from the study sample are representative of voucher holders in PHAs that have at least 800 vouchers and operate in metropolitan areas in the lower 48 states. This means that the success rate estimates should be interpreted as the expected likelihood of success if random voucher slot opens up and a voucher is issued to the next eligible household. This is the same methodology and interpretation used in the 1993 success rate study, and hence results are comparable. See Appendix A for more details on the calculation of weights and alternative weighting schemes considered.

1.4 Data Collection Overview

Data collection for this study included the following components.

- Information from PHAs on local market conditions and the policies and procedures in their Section 8 program that might affect success rates. These data were collected through telephone interviews with PHA staff.

- Administrative data on the characteristics and search experiences of a sample of voucher holders. These data were collected through the automated tracking system developed for this study.

- Data on local vacancy rates from the U.S. Census data and from local experts in each jurisdiction.

Our data collection activities are summarized below. Appendix B contains copies of the data collection instruments.

PHA Policies and Procedures

We conducted telephone interviews with the Section 8 Director or other knowledgeable staff about the operation of their Section 8 Program. These calls took place in the spring of 2000, just before the PHA started tracking the experiences of a sample of voucher holders for this study. The purpose of the calls was to obtain information from the PHAs on their Section 8 practices and procedures and local market conditions. The information was needed to investigate factors associated with success rates. These data include:

- Fair market rent (FMR) and payment standard relative to FMR;
- Exception rents and total area covered by exception rents;
- PHA's perception of adequacy of FMR and payment standards;
- PHA's perception of landlord acceptance of Section 8;
- Estimated percent of units that pass initial inspection;
- Presence and frequency of updating of lists of vacant units and /or willing landlords;
- Screening criteria for voucher holders;
- PHA search assistance provided;
- Length of time vouchers valid and extension policies;
- PHA role in rent negotiation;
- Presence of anti-discrimination laws based on source of income and/or source of rental payment;
- Overall market tightness; and
- Market tightness in the segment of the market affordable to voucher holders.

The complete list of variables collected for each PHA is shown in the PHA Data Coding Sheet (Appendix B, Exhibit B-1).

Search Experiences of Voucher Holders

An automated tracking system was developed for this study to collect information on the search experiences of voucher holders. The system was developed to be a stand-alone system, so PHAs did not need to have any particular software to be able to use it. PHA staff simply entered data on an electronic form and it automatically created an ACCESS data base which could easily be e-mailed to Abt Associates or copy to a disk and mailed.

The electronic form had a number of automated checks to reduce the number of data entry errors and inconsistent dates. In addition, PHAs were asked to submit their data on a monthly basis so that Abt Associates staff could review it and work with them to resolve any inconsistent data not captured in the automated checks.

The information collected on the electronic form was administrative data that PHAs already collected as part of their operating procedures, although some of it was in paper files and the information might not all reside in the same area of the Section 8 department. The data collected included enrollment data at the time of voucher issuance, extensions granted, inspections requests and results, and contract information for households that successfully leased up. The complete data collection form is shown in Appendix B, Exhibit B-2 and briefly described below.

Enrollment data. The first section of the electronic form collected basic information about voucher holders that was collected as part of the PHAs normal intake procedures. This included demographic information on the voucher holder and his or her household, pre-program address and whether the unit was in public housing, total income by source, income adjustments, bedroom size needed, type of voucher and issuance date, preference categories (if any), and application date for the program.

Extension information. Whenever a PHA granted an extension to a sample voucher holder, the date the extension was granted and the new extension date was entered on the electronic form.

Inspection/request for lease approval information. For each inspection request/request for lease approval, the PHA entered data on the unit address, date of the request, date of the inspection, result of inspection, re-inspection information (if needed), bedroom size of unit, and whether or not the voucher holder leased the unit. If the unit passed inspection, but the voucher holder did not lease the unit, the PHA entered the reason the unit was not leased (e.g., did not meet rent reasonableness, landlord refused).

Contract information. For voucher holders who successfully leased a unit meeting the program criteria, contract information was collected. This information included unit address, bedroom size, gross rent, utility allowance, tenant-paid portion of rent, date of lease approval, and type of successful outcome (i.e., lease in place, lease by moving within jurisdiction, or lease by porting out of jurisdiction).

Final unsuccessful status. For voucher holders who did not succeed in finding a unit by the end of their allotted search time (including extensions and tolling), PHAs simply indicated the voucher holder was unsuccessful and checked the main reason the voucher holder was unsuccessful, if known (e.g., turned down by landlords, unable to find unit).

Data on Rental Vacancies

Data on MSA rental vacancy rates in 1999 were collected from *The Census Housing Vacancies and Homeownership Survey*. However, vacancy rates from this source are only available for the 75 largest MSAs, thus data were not available for all of the metropolitan areas covered by the PHAs in the study. These vacancy rates also tend to be unstable from year to year for the smaller MSAs because the sample sizes are inadequate for precise estimates. In addition, these MSA-wide vacancy rates often cover a larger jurisdiction than the jurisdiction of a PHA operating within the MSA. Finally, Census vacancy rates are not specific to the part of the housing market affordable to voucher holders. Nevertheless, these data provide an objective, independent measure of market conditions and were used to supplement other measures of market conditions in analyzing the relationship between success rates and market tightness.

We also gathered subjective data from PHA staff and independent, local market experts on market tightness in each of the participating PHAs' jurisdictions. We started by contacting HUD's Field Office economists to get their perceptions of the market conditions faced by voucher holders in the PHAs' jurisdiction. We also contacted local apartment associations and local community development/planning department staff to get estimates of market conditions.

These assessments were used to form an overall measure of market tightness for the area. Our plan was to try to reach a consensus from these sources. If consensus could not be reached, we used our judgement on which source or sources seemed most knowledgeable about the market to categorize rental market tightness in the area.

Market tightness was categorized into one of five categories: extremely tight (2 percent or lower vacancy rate); tight (between 2 and 4 percent vacancy rate); moderate (between 4 and 7 percent vacancy rate); loose (between 7 and 10 percent); and extremely loose (10 percent or higher).

Chapter Two
National Success Rate for Large Metropolitan Areas

This chapter begins with estimates of the national success rate and changes in that rate over time. It then presents the distribution of success rates across PHAs followed by a discussion of the time it took successful voucher holders to lease a unit. Finally, the chapter discusses trends over time in the percentage of voucher holders who lease their pre-program units compared to those who lease a new unit, and characteristics of these two groups of successful voucher holders.

2.1 Estimates of Success Rates at the National Level

The success rate is defined as the percentage of families who are provided vouchers and lease a housing unit that meets all program requirements within the time the PHA provides for search. The national success rate, as calculated for this study, should be interpreted as the average success rate in large, metropolitan areas if vouchers are issued in proportion to the number of vouchers held by PHAs. It is the expected success rate for a randomly selected voucher slot among the PHAs' allocation of vouchers. This is not necessarily the same as the success rate for all the vouchers issued by PHAs, because PHAs may not issue vouchers in proportion to the total number of vouchers they hold.[12] The current estimate is conceptually comparable to the estimated success rate that was developed for the 1993 study of success rates and for the mid-1980s housing voucher demonstration study.[13]

Our procedures for selecting PHAs and voucher holders[14] generated a sample that, when appropriately weighted, allow us to calculate a national success rate for the portion of the universe represented by the study sample—PHAs in metropolitan areas in the lower 48 states

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[12] There are several reasons that actual voucher issuances across PHAs may not be exactly proportional to the allocation of vouchers across PHAs. If a PHA has a higher turnover rate, received an allocation of new vouchers, or has a low success rate, then it may issue more vouchers than expected based on its size. It is not possible to predict whether a national success rate based on voucher issuances would be higher or lower than the success rate estimates presented. Of the three factors mentioned, only the possibility that PHAs with a lower success rate might issue more vouchers has a clear directional effect on the success rate. If PHAs with low success rates issue disproportionately more vouchers for each voucher opening, then taking this into account would lower the national success rate. However, the results would then not be comparable to prior studies.

[13] See: Stephen Kennedy and Meryl Finkel. (1994) "Section 8 Rental Voucher and Rental Certificate Utilization Study: Final Report," and Mirielle Leger and Stephen Kennedy (1990) "Final Comprehensive Report of the Freestanding Housing Voucher Demonstration." The 1990 study found that success rates for voucher holders were slightly higher than for certificate holders (65 versus 61 percent).

[14] The sample selection procedures are described in detail in Appendix A and summarized in Chapter 1.

that administer programs larger than 800 vouchers and certificates. We estimated the national success rate both with and without New York City and the City of Los Angeles for comparison to the same estimates from the 1993 study of success rates. The rationale for analyzing New York City separately is that it is by far the largest Section 8 program in the U.S., and the unique conditions in New York City are not thought to be representative of other Section 8 programs. The rationale for providing national estimates without the City of Los Angeles is that it is the second largest program, and was selected with certainty for the 1993 study, but ultimately did not participate in the study.

The national success rate was calculated as the weighted average across PHAs of:

(number of known successful + imputed successful among unknowns[15])/total number of households in the PHA's sample.

The national estimate of the success rate for large metropolitan areas during 2000 is 69.2 percent, with a standard error of 0.0218.[16] Thus, the 95 percent confidence interval for the success rate is 64.9 to 73.4 percent.[17] The current success rate is almost identical to the 1985-1987 estimated success rate (68 percent), but substantially lower than the 1993 rate (81 percent).

Excluding New York City (NYC), with a 57 percent success rate, the national success rate rises to 70.7 percent in 2000. The analogous rate in the 1985-1987 period was 74 percent and in 1993 was 86 percent. Excluding NYC, the success rate rises in all three time periods, but the overall pattern remains the same: the 1985-1987 and 2000 success rates are similar, but the 1993 rate is substantially higher than the other two time periods. Exhibit 2-1 displays the changes in the national success rate over time.

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[15] Of the 2,674 voucher holders in our sample, 65 had unknown outcomes at the end of the study's data collection period. Some outcomes were unknown because the voucher holder attempted to port out of the jurisdiction, but the sending PHA did not obtain a final status from the receiving PHA (14 voucher holders). Others were households that had been issued vouchers at least 7 months prior to the end of data collection, but had extensions beyond the data collection period and had not yet leased a unit (51 voucher holders). To calculate the national success rate, the success rate of the 65 households with unknown outcomes was imputed based on the experiences of other voucher holders who had extended search periods. The imputation procedures had a trivial impact on the estimated success rate: the success rate for those with known outcomes was 68.3 percent, compared with a 68.1 percent estimate after imputation. See Appendix A (Section A.3) for a detailed description of the imputation procedures.

[16] For comparability over time, the national success rate for large metropolitan areas excludes the City of Los Angeles PHA, because they did not participate in the 1993 study. Inclusion of the City of Los Angeles in the estimates would not change the success rate in the 1985-1987 period (after rounding) and would reduce the 2000 estimate by one percentage point.

[17] There is a 95 percent probability that the true percent successful among the entire population of vouchers issued at all large metropolitan PHAs during the study period would be within this range.

Exhibit 2-1
National Estimates of Success Rates in Large Metropolitan-Area PHAs over Time

Year	National Success Rate in Large Metropolitan PHAs[1]	Success Rate Excluding New York City and City of Los Angeles	Success Rate in New York City	Success Rate in City of Los Angeles
1985 to1987	68%	74%	33%	72%
1993	81%	86%	62%	NA
2000	69%	71%	57%	47%

[1] For comparability over time, these national success rate estimates exclude the City of Los Angeles PHA, because they were not part of the 1993 study. Adding the City of Los Angeles PHA does not change the 1985 to 1987 estimate (after rounding), and reduces the 2000 estimate by only one percentage point to 68 percent.

Sources: 1985-1987 estimates: Mirielle Leger and Stephen Kennedy "Final Comprehensive Report of the Freestanding Housing Voucher Demonstration" HUD, May 1990. The national estimates were estimated by the current authors using weights derived from the PHAs' probability of selection and program size as reported in Appendix A of the report and PHA success rates reported in Appendix G of the report.
1993 estimates: Stephen Kennedy and Meryl Finkel "Section 8 Rental Voucher and Rental Certificate Utilization Study: Final Report", May 1994. This report did not calculate a national success rate including NYC. It was calculated by the current authors using the 1993 study weights from unpublished reports and PHA-level success rates in reported in Exhibit 1.1 of the report. The 1993 success rate excluding NYC and the City of LA is from Exhibit 2.1 on page 12 of the report.
2000 estimates: Current Success Rate Study (2,674 observations)

One possible reason for the decrease in success rate since 1993 is a tightening of rental markets. The housing market is thought to be much tighter in 2000 than in 1993. The 2000 findings are more consistent with the success rates found in the mid-1980s, which was another period of reportedly tight rental markets.[18]

Another factor that may have affected the success rate was a decrease in FMRs from the 45th percentile rent to the 40th percentile in 1995. However, starting in late 1999, PHAs were allowed to set their payment standard between 90 and 110 percent of the FMR without having to apply for exception rents. If implemented by PHAs, this could negate the impact of the reduction in FMR percentile. In most cases 110 percent of the FMR would be above

[18] Census figures on vacancies from the Housing Vacancies and Homeownership Statistics reports do not show a large change in vacancy rates over time. The Census reported national average vacancy rate for metropolitan areas was 7.2 percent in 1986, 7.6 percent in 1993, and 7.8 percent in 1999. However, in many of the markets covered in the study, informants indicated that markets had tightened, particularly in the portion of the market available to Section 8 voucher holders. This is supported by census data on vacancy rates in metropolitan areas where the study PHAs operate. The average vacancy rates in these MSAs was 7.3% in 1986, 8.3% in 1993, and 7.8% in 1999. The 1986 and 1993 figures are based on 34 of the 48 metropolitan areas and the 1999 figure is based on 40 metropolitan areas. These reflect all of the available census vacancy rate data on metropolitan areas in our study.

the 45th percentile rent. Earlier, the payment standard had to be set between 80 and 100 percent of the FMR unless the PHA was granted an exception by HUD.[19]

To reduce the possible impact of different samples in comparing success rates over time, the success rates can be looked at separately for the eight PHAs outside of New York City that provided data for both the 1993 study and the current study.[20] Using the PHA weights from the current study, the success rate for the eight overlapping PHAs other than New York City was 80 percent in 1993, compared with the current estimate of 63 percent. The success rate in all but one of the overlapping PHAs decreased between 1993 and 2000.

2.2 Success Rates at the PHA Level

Across PHAs, there was a wide range in the percentage of the voucher holders who successfully leased a unit under the program: 37 percent to 100 percent. As can be seen in Exhibit 2-2, it is estimated that less than half of voucher holders succeed at 15 percent of large PHAs operating in metropolitan areas. On the other end of the distribution, a slightly smaller share of PHAs (12 percent) have success rates over 90 percent. The most common result is that between 61 and 70 percent of the voucher holders were successful (28 percent of PHAs).

Exhibit 2-2
Success Rates at PHA Level

Success Rate	Percentage of PHAs
50 percent or less	15%
51 to 60 percent	12%
61 to 70 percent	28%
71 to 80 percent	15%
81 to 90 percent	18%
91 to 100 percent	12%

Source: Baseline Enrollment and Successful Enrollee Lease-up Modules of the enrollee tracking system.
Sample Size: 48 PHAs with most PHA sample sizes around 50 voucher holders

[19] In December 2000, the FMR at PHAs in select markets (e.g., markets with a concentration of Section 8 recipients based on distribution of units affordable when payment standard based on 40th percentile FMR) were eligible to have the FMR set at the 50th percentile, but this occurred too late to have an impact on voucher holders in this study. See October 2, 2000 Federal Register Notice, pages 58870 to 58875.

[20] The overlapping sites are Phoenix, Atlanta, Baltimore County, Metro Council MN, Oklahoma City, Tulsa, Montgomery County PA, and Milwaukee County.

Appendix C provides results by site. These site-specific results should be used with caution. Because of the small sample sizes at each PHA (usually 50), the estimated probability for success at the PHA has a large sampling error. This means that the actual success rate at particular PHAs may be substantially different than the success rate estimated from the sample in this study.

2.3 Time to Succeed

It was anticipated that PHAs would limit search time to between 60 and 120 days. However, program rules changed in late 1999, allowing PHAs to establish search periods longer than 120 days. As shown in Exhibit 2-3, one of the key findings of this study is that it is taking successful households a long time to find units. The average search time among successful households was 83 days, with a median of 69 days. Nearly one quarter (23 percent) of successful households searched for more than 120 days, including 7 percent who leased a unit after more than 180 days.[21]

Exhibit 2-3
Time to Lease for Successful Households

Time Between Voucher Issuance and Lease Date	Percent of Successful Households
Fewer than 30 Days	18%
30 to 59 Days	25%
60 to 89 Days	19%
90 to 119 Days	15%
120 to 179 Days	16%
180 Days or More	7%
Average Number of Days	83 days
Median Number of Days	69 days

Source: Baseline Enrollment and Successful Enrollee Lease-up Modules of the enrollee tracking system.
Sample Size: 1,780, weighted to reflect national totals

Current search times are clearly longer than during the early 1990s. During that period voucher holders were usually allotted four months at most to search for housing. Data from the 1993 success rate study show that all successful households found their units within the

[21] Time to Succeed is defined as the number of days between issuance date and effective date of lease up. It ***does not*** exclude any days where the clock may have been stopped while a family was awaiting inspection of a unit (i.e., tolling).

first three months of search.[22] Furthermore, 80 percent of unsuccessful households stopped searching by the end of the third month. In contrast, it took 38 percent of the successful households in 2000 longer than three months to lease a unit.

Below, we explore whether the long period it took successful voucher holders to lease units was a result of the time it took to find a unit and submit an RFLA, the time it took get a unit inspected, or the time between the final inspection and the effective date of lease up. We do not have comparable information from the 1993 study, so we cannot determine which of these processes contributed to the longer period between issuance and lease date in 2000 compared with 1993.

One factor that would affect the time between issuance and lease date is whether the first unit selected by the voucher holder passes the initial inspection, needs to be re-inspected before passing, or whether the unit is ultimately rejected and a new unit needs to be found. Most of the successful voucher holders in 2000 leased the first unit for which they submitted an RFLA. Only 4 percent submitted more than one RFLA. Overall, over two-thirds (68 percent) of the successful voucher holders submitted one RFLA and the unit passed on the initial inspection. The remaining 28 percent also leased the first unit, but it had to be inspected multiple times before passing inspection. This substantially increased the time it took for these households to lease a unit. Exhibit 2-4 shows average time to find, inspect, and lease a unit for these three groups of successful voucher holders.

For successful voucher holders who leased their unit after one inspection, almost 70 percent of the time between voucher issuance and lease date was between the issuance date and the submission of the RFLA (51 days). Initial inspections were completed within an average of two weeks, and only one week passed on average between the inspection and the effective date of the lease.

Voucher holders who leased the second or third unit inspected took twice as long as those who leased their first unit after only one inspection (147 versus 74 days). The difference was made up mostly of the additional time it took to find another unit after the first unit was not leased. It took on average 45 days between the final inspection for the first unit and the date an RFLA is submitted for another unit. This is only one week shorter than the average time it took these households to find the first unit. It appears that when they begin the search for the second unit, these households are starting from scratch. That is, they do not appear to have gained much information about the search process that helps shorten the search period.

[22] See Stephen Kennedy and Meryl Finkel "Section 8 Rental voucher and Rental Certificate Utilization Study: Final Report", May 1994, pp. 24-25.

Voucher holders who leased their first unit after multiple inspections took an average of 91 days, about 2.5 weeks longer than those who leased the first unit after one inspection. This difference is completely explained by the extra time it took to obtain multiple inspections.

Exhibit 2-4
Average Days to Find, Inspect, and Lease a Unit by Number of Units Inspected

	Leased First Unit on First Inspection (n=1125)	Leased First Unit on Re-inspection (n=458)	Leased Second or Third Unit Inspected (n=71)	Overall Average Days (n=1670)
Percent in Category	68%	28%	4%	100%
Issuance to Initial RFLA				
Average Days	52	54	52	53
Initial RFLA to Final Unit 1 Inspection				
Average Days	14	30	24	19
Final Unit 1 Inspection to Unit 2 RFLA				
Average Days	--	--	45	1
Unit 2 RFLA to Final Unit 2 Inspection				
Average Days	--	--	22	1
Final Unit 2 Inspection to Unit 3 RFLA				
Average Days	--	--	5[1]	0
Unit 3 RFLA to Final Unit 3 Inspection				
Average Days	--	--	2[1]	0
Last Inspection to Lease				
Average Days	7	6	8	7
Time to Lease (issuance to final lease)				
Average Days	75	92	147	83

[1] These are averaged over all people in this group, whether or not they had a third unit inspected (set to zero for those who leased their second unit).

Source: Enrollee Tracking System

Sample Size: 1670 Voucher Holders (Successful in place or successful by moving), weighted to reflect national totals. Other successful voucher holders (successful port outs and unknown type of success) are excluded due to a lack of information on dates of events.

To further understand the steps in the process that are leading to long search times, Exhibit 2-5 shows the average time to find, inspect, and lease a unit for voucher holders who leased a unit within a 120 days versus those who took longer, and for those who leased in place versus those who leased by moving.

The clear finding is that the length of the process is driven primarily by how long it takes voucher holders to find a unit they want and to submit an RFLA. Voucher holders who took over 120 days to lease a unit took over three times as long as other successful voucher holders to submit their first RFLA (116 days versus 34 days). Other factors that contribute to a longer time to lease a unit include a longer time to finalize inspection (30 versus 14 days),[23] and a longer time between the final inspection and the lease date (14 versus 5 days). Another contributing factor is that 11 percent of the voucher holders who took more than 120 days to lease their unit, leased their second or third unit whereas only 2 percent of the other voucher holders did this.

Voucher holders who leased in place took an average of 59 days between the voucher issuance date and the effective date of their Section 8 lease. Households that leased another unit in their jurisdiction took an average of one month longer, 89 days. The only substantial difference between the two groups is the amount of time it took to find a unit and submit an RFLA (31 versus 59 days). People who lease in place save search time, allowing them to start receiving a subsidy more quickly than other households.

The most fertile ground for reducing the time between issuance and lease date would appear to be some combination of providing housing search assistance and increasing the motivation of voucher holders to identify units they would like to rent in a more timely manner. It may be efficient to target assistance to voucher holders who submit an RFLA for a unit that they do not ultimately lease. It takes these voucher holders almost as long to find a second unit as it took to find the first unit, thus it appears they could benefit from assistance. Moreover, about 9 percent of unsuccessful voucher holders submitted at least one RFLA, so by targeting voucher holders who submit an RFLA, but do not lease the unit, PHAs may also be able to increase the success rate of their voucher holders.

[23] This, is in part, because voucher holders who took more than 120 days to lease a unit were also more likely than other successful voucher holders to need to have their unit re-inspected. However, inspection times were longer for them than other voucher holders even when their unit passed on the first inspection (22 versus 13 days).

Exhibit 2-5
Average Days to Find, Inspect, and Lease a Unit by Total Search Time and Whether Leased in Place

	Leased Unit in Less than 120 Days or Less (n=1,287)	Leased Unit in More than 120 Days (n=383)	Leased in Place (n=382)	Leased by Moving within Jurisdiction (n=1,288)
Issuance to Initial RFLA				
Average Days	34	116	31	59
Initial RFLA to Final Unit 1 Inspection				
Average Days	16	30	21	19
Final Unit 1 Inspection to Unit 2 RFLA				
Average Days[1]	0	4	0	1
Unit 2 RFLA to Final Unit 2 Inspection				
Average Days[1]	0	3	0	1
Final Unit 2 Inspection to Unit 3 RFLA				
Average Days	0	1	0	0
Unit 3 RFLA to Final Unit 3 Inspection				
Average Days[1]	0	0	0	0
Last Inspection to Lease				
Average Days	5	14	7	7
Time to Lease (issuance to final lease)				
Average Days	56	169	59	89

[1] These are averaged over all people in this group, whether or not they had a second or third unit inspected (set to zero for those who leased their first unit).

Source: Enrollee Tracking System

Sample Size: 1670 Voucher Holders (Successful in place or successful by moving), weighted to reflect national totals. Other successful voucher holders (successful port outs and unknown type of success) are excluded due to a lack of information on dates of events.

Reducing the time period between RFLA submissions and initial inspections could also help speed up the leasing process. An average of two weeks between an RFLA submission and an inspection may be reasonable, but it is taking longer than that for some initial inspections to

occur. Furthermore, even two weeks may seem like a long time to landlords who have many options for renting their units. Reducing the number of units requiring multiple inspections, either through increased education of landlords, or incentives to landlords to rectify problems before the first inspection, are possible interventions for shortening the time it takes a voucher holder to lease a unit.

2.4 Success in Place

Voucher holders can qualify for the Section 8 program by renting their pre-program unit if it meets program requirements and the landlord is willing to participate. Alternatively, a voucher holder can move to a new unit within the issuing PHA's jurisdiction or move to a unit in another PHA's jurisdiction (often referred to as "porting out"). As can be seen in Exhibit 2-6, nearly three-quarters of successful voucher holders succeeded by moving from their pre-program unit to another unit within their jurisdiction, 21 percent leased in place, and 5 percent leased a unit outside the issuing PHAs' jurisdiction.

Exhibit 2-6
Success by Leasing in Place or Moving

Success Status	All Voucher Holders	Successful Voucher Holders
Success, lease in place	15%	21%
Success, move within jurisdiction	49%	72%
Success, port-out	3%	5%
Success, unknown type[1]	1%	2%
Not Successful	32%[2]	na

[1] Data on final unit address and type of success were missing for some voucher holders.

[2] The national success rate including voucher holders from the City of Los Angeles PHA is 68 percent.

Source: Successful and Unsuccessful modules of Tracking System.

Sample Size: 2,609 (1,780 in successful sample), weighted to reflect national totals

The 1993 success rate study found that 37 percent of all successful voucher holders succeeded by renting their pre-program unit, and 63 percent succeeded by moving to new units.[24] The 1985-87 study also found that 37 percent of successful voucher holders leased in place. There had been some speculation that, in the current period, with rental housing markets perceived to be tighter, households would be more likely to succeed in their pre-

[24] Excluding New York City, the percent of successful households that leased in place decreased from 30 percent in 1993 to 22 percent in 2000. In 2000, 15 percent of successful NYC voucher holders leased in place. However, in 1993, 61 percent of successful voucher holders in NYC leased in place. [See page 5 of Kennedy and Finkel (1994)] The 1993 finding for NYC was thought to be largely a function of the unique sample in New York City that included mostly elderly and handicapped households.

program units, because finding new units has become more difficult. However, the current study found that in 2000, fewer successful households leased in place. Only 21 percent of successful households nationwide succeeded by renting their pre-program unit.

Exhibit 2-7 compares some characteristics of those who leased in place and those who moved. Voucher users in very tight markets are a higher share of the people who leased in place than of the families who leased by moving. Of all the voucher users that leased in place, 19 percent are in very tight markets, while only 12 percent of those who moved are in very tight markets. So there is some evidence for the hypothesis that moving is relatively more difficult in a tighter market.

One hypothesis for the increasing share over time of successful voucher holders moving to a new unit is that, to an increasing extent, voucher holders are leaving their parental household to start a new household.[25] PHAs do not collect information on the pre-program housing composition, so this cannot be investigated directly. Nevertheless, the hypothesis would suggest that younger people (less than age 25) and single parents—the two groups that are most likely to be sharing a unit with their parents or other relatives—are most likely to move out of their pre-program unit. Both of these groups do in fact constitute a larger share of those who move compared with those who lease in place. Over two-third of the movers (68 percent) are single parents, compared with 45 percent of those who lease in place. Similarly, 22 percent of the movers are under age 25 compared with 10 percent of those who lease in place. While consistent with the hypothesis of new household creation leading to a smaller share of leasing in place, these results are not definitive evidence. There are reasons other than new household creation that these two groups are most likely to succeed by moving. For example, younger people may be less tied to their current community or have more job mobility, making it easier to move to a new location.[26]

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[25] The Quality Housing and Work Responsibility Act of 1998 eliminated mandatory federal preferences for Section 8 assistance that were in place for the 1985-87 and 1993 studies. None of the mandatory federal preferences gave priority to "doubled-up" families who would need to move to lease a unit in the program. The elimination of the mandatory federal preferences could lead to more "doubled-up" households rising to the top of the waiting list and becoming voucher holders after this law went into effect.

[26] The share of single parents (non-elderly, non-disabled) in the study population decreased from the 1993 to 2000 study (71 percent to 61 percent). This is the opposite direction we would expect the share of single parents to change if this compositional change were to explain the decrease in the share of successful voucher holders that leased in place. [See Exhibit 2-9 in Kennedy and Finkel (1994).] Voucher holders under age 25 comprised 18 percent of the 2000 sample. No comparable numbers are available from the 1993 study.

Exhibit 2-7
Characteristics by Type of Success

	Characteristics of Households that Leased in Place	Characteristics of Households that Succeeded by Moving
Market Tightness		
Very Tight	19%	12%*
Tight	48%	48%
Moderate	23%	31%
Loose	10%	9%
Age of Head of Household		
Less than 25	10%	21%**
25 to 44	51%	61%**
45 to 61	24%	15%**
62 or older	15%	3%**
Household Composition		
Not elderly, not disabled, single parent	45%	68%**
Not elderly, not disabled, two parents	8%	5%
Not elderly, not disabled, no Children	4%	8%
Elderly or disabled, with Children	10%	8%
Elderly or disabled, no Children	33%	12%**
Time to Lease		
Less than 30 days	32%	14%**
30 to 59 days	32%	24%*
60 to 119 days	25%	36%**
120 to 179 days	8%	18%**
180 or more days	4%	8%**
Success Rate at PHA		
Less than 60 percent	22%	27%
60 to 79 percent	34%	39%
80 percent	44%	34%
Average Days to Lease	59 days	89 days
Median Days to Lease	44 days	76 days

Source: Abt Associates Composite Market Tightness Measure, Enrollment, Successful and Unsuccessful modules of Tracking System.

Sample Size: 1,670 (382 success in place and 1,288 success by moving), weighted to reflect national totals

* Signifies difference between the share of those who leased in place and the share that leased in another unit at the 10% significance level.

** Signifies difference between the share of those who leased in place and the share that leased in another unit at the 5% significance level.

The other noteworthy difference in the type of program success by household composition is that elderly or disabled households with no children are more likely to lease in place than other groups. Elderly and disabled households comprise 33 percent of the successful voucher holders who lease in place, but only 12 percent of those who moved.[27]

Households that succeeded in place leased their units more quickly than movers, but it took a long time even for these households to become successful recipients. On average, households that leased in place spent 59 days from issuance of their voucher until lease-up, compared with 89 days for movers. Sixty-four percent of households that leased in place, began receiving assistance from the program within 60 days, but for 11 percent it took more than 120 days. These long search times may be for households that spent some time searching for other units before deciding to lease in place.[28] Only 38 percent of households that succeeded by moving within the jurisdiction leased a program-qualifying unit within 60 days of issuance, and 26 percent of successful movers searched for more than 120 days before leasing-up in their new units.

There is not a strong correlation between leasing in place and the overall success rate at the PHA. Voucher holders in PHAs with high success rates comprise a higher share of those who lease in place (44 percent) than of those who lease by moving (34 percent), but the difference is not statistically significant.

2.5 Summary of Findings

The primary finding from this study is that success rates have decreased substantially since the early 1990s, which was the last time they were estimated. Nationally, 69 percent of households who receive vouchers succeed in using them to lease units under the Section 8 program. This is almost identical to the 1985-1987 success rate of 68 percent, but substantially lower than the comparable rate in 1993, 81 percent. PHAs generally attribute the decline in the success rate over the last decade to tightening of rental markets during the intervening years. Another possible explanation may be a decrease in the FMRs from the 45th to the 40th percentile of rents in 1995. However, when the voucher and certificate programs were merged in late 1999, PHAs were given the flexibility to set payment standards as high as 110 percent of the FMR. This may have mitigated the impact of the

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[27] Voucher holders who are elderly or disabled (with no children living with them) comprise 17 percent of the current study population and 13 percent of the 1993 study population. [See Exhibit 2-9 in Kennedy and Finkel (1994).] Thus, a change in the share of elderly and disabled voucher holders (who are more likely than other age groups to lease in place) is not an explanation for the decreasing share of successful voucher holders that leased in place.

[28] Almost none of the voucher holders who leased in place submitted a request for lease approval (RFLA) for a unit other than their pre-program unit, according to data provided by PHAs on the inspection module of the tracking system. This suggests that they either did not look for another unit prior to attempting to lease in place or looked, but did not find another suitable unit.

decrease in the FMR standard. Other changes when the program was merged (such as the 40 percent rent burden cap), may serve to depress success rates. This is the first study of success rates in the merged Housing Choice Voucher program.

In addition to the lower success rates overall, the study found that successful households are taking a long time to find units, on average 83 days. Nearly one quarter of successful households took more than 120 days to lease a unit. Households that succeeded in place leased their units more quickly than movers, but it took a long time even for these households to become successful recipients. On average, households that leased in place took 59 days from issuance of their voucher until lease-up, compared with 89 days for movers. Overall, the long time period between voucher issuance and the effective date of lease up appears to be driven by the length of time it takes voucher holders to find a unit they want to lease and submit an RFLA (53 days on average).

Despite the lower national success rates and the tightening housing markets, a smaller share of successful households leased in place in 2000. Only 21 percent of the successful households leased their pre-program unit, compared with 37 percent in the mid 1980s and in 1993. Households that are headed by an elderly person or that contain a household member with a disability comprise a much larger share of voucher holders who successfully lease in place as compared to voucher holders who succeed by moving. In contrast, households headed by younger people (less than age 25) and single parents comprise a larger share of the households that succeed by moving.

Chapter Three
Factors Affecting Success Rates

Successfully leasing a unit qualifying for the voucher program is a function of many factors, including: the characteristics of the voucher holder's household; the motivation and search effort of the voucher holder; factors affecting desirability as a tenant (e.g., credit history); the voucher holder's understanding of program rules; PHA policies and procedures; pre-program living conditions; the tightness of the housing market; and the degree to which local landlords accept Section 8. This chapter examines the role these sorts of factors play in the ability of voucher holders to successfully use their vouchers. Data on many of these factors were collected in this study through the tracking system, through interviews with PHA staff, and through supplementary sources. However, not all of these factors could be included in the study. Information on factors affecting desirability as a tenant (e.g., credit history), the voucher holder's understanding of the Section 8 program, the nature and extent of search effort, and pre-program living conditions could have been collected only through direct surveys of voucher holders, which were beyond the scope of this study. Exhibit 3-1 displays the factors for which information is available and the expected and actual direction of their effects of the probability of success.

The relationships between these voucher holder, market, and PHA characteristics and success rates are examined two ways. First, we examine success rates for various categories of voucher holders, including voucher holders with different demographic characteristics, voucher holders in different types of housing markets, and voucher holders in PHAs with different administrative practices. Tables present both the estimated proportion of voucher holders with a specific characteristic and the success rate for that group.

The chapter also presents results of a multivariate regression model that isolates the effects of particular factors on the probability of success. In regression models, all factors thought to affect success (and for which data are available) are included. This permits the importance of each factor in the success or failure of voucher holders to be estimated while controlling for other factors that might also affect success. For example, this analysis helps assess the role market tightness plays in success once voucher holder characteristics and PHA policies are held constant.

The regression was estimated using the logistic estimation procedure, in which the probability of success is expressed as a function of a set of household, market and PHA characteristics expected to be associated with success. Various specifications were tested as part of the model development process. The results presented in this chapter are typical of the models tested in terms of direction and significance levels of variables. The actual model results are presented in Appendix D.

Exhibit 3-1
Possible Factors Affecting Success

Possible Demographic Factors Affecting Success

Factor	Expected Direction of Effect on Success	Comments	Raw Effect	Regression Result
Race/Ethnicity	?	In a discriminatory environment, may expect a lower rate for minorities, otherwise no effect.	None	None
Participant Age	+/-	Older enrollees may have a harder time searching, but also may be considered more desirable as tenants	<25 higher success 62+ lower success	62+ lower success
Disability	-	Households with disabled members may have a harder time searching and have fewer choices in acceptable units	Elderly and disabled lower	None
Household Size	-	Harder to find large units	Some single person lower	5+ person lower
Single parent household	-	May be harder to have time to search for units	None	None
Two parent household, other non-elderly, non-disabled households with no children	+	Easier to look for units	Non-elderly, non-disabled, no kids lower	Non-elderly, non-disabled, no kids lower
Income above 30% of median	-	Lower subsidy means less benefit from program participation	Lower	High income lower, also no income lower (reference category 0<income <=30% of median)
Primary source of income wages	?	Working people have less time to search, but may be considered more desirable as tenants.	None	None

Exhibit 3-1 *(Continued)*
Possible Factors Affecting Success

Possible Demographic Factors Affecting Success

Factor	Expected Direction of Effect on Success	Comments	Raw Effect	Regression Result
Preference due to homelessness	+/-	On one hand homeless households may be more motivated to succeed, on the other hand may be less desirable as tenants	None	None
Welfare to Work Voucher	+	Highly motivated participants, plus program services	Higher Success	None
Time on the Waiting List	?	People who have waited a long time may be highly motivated, may have found alternative housing. However, once they come in for a voucher, may be just like newer people on the list.	None	None

Exhibit 3-1 *(Continued)*
Possible Factors Affecting Success

Possible Housing Market Factors Affecting Success

Factor	Expected Direction of Effect on Success	Comments	Raw Effect	Regression Result
Vacancy Rate	+	Easier to find units in looser markets	Higher vacancy higher success	Higher vacancy higher success
Local Acceptance of Section 8 Program	+	Easier to find an agreeing landlord. Note: this is based on PHA perception of acceptance	None	None
Local laws that prohibit discrimination based on source of income or receipt of Section 8	+	Easier to find units to rent in the program	None	Any protection offered, higher success
Payment Standard/FMR	+ – if PS>110% of FMR	More units affordable under program subsidy. If the Payment Standard is above 110% of FMR, the PHA had to request the exception, which may not be high enough to offset the effects of a tight market	None	If PS < FMR, or FMR<PS<=110% FMR lower success
Adequacy of Payment Standard	+	More units affordable under program subsidy. Note: this is based on PHA perception of adequacy.	PS too low, lower success	None
PHA size	-	There is some speculation that aside from other factors, success rate is lower in large PHAs	None	None
Percent of Units that reportedly pass on first inspection (as reported by PHA)	+	More units that pass may be an indication of better quality housing (or a more lenient PHA)	None	Success higher in PHAs where the PHA reports over 75% of units typically pass on the first inspection

Exhibit 3-1 *(Continued)*
Possible Factors Affecting Success

Possible PHA Practices and Procedures Affecting Success

Factor	Expected Direction of Effect on Success	Comments	Raw Effect	Regression Result
Briefing size	-/+	Perhaps less individual attention as size increases, however, in a larger briefing more chance to hear answers to questions	Individual briefing higher success (though result is not statistically significant)	Individual briefing, higher success,
Large group briefing	-/+	Less individual attention, but more chance to hear answers to questions	None	Large group briefing, higher success
Extension to anyone who requests	+	More time to find units	None	None
Assistance denied based on drug or violent criminal arrests, or other criminal convictions	+	Screens out tenants that may be undesirable to landlords. Note that almost all PHAs screen based on violent or drug-related arrests, so there is no variation across PHAs to explore for those screening criteria.	None	None
Assistance denied based on poor landlord references, poor housekeeping, or bad credit history	+	Screens out tenants that may be undesirable to landlords.	None	None
Search counseling available to everyone	+	Helps find housing	None	None
Frequency of update of lists of vacant units or of landlords	+/-	Expect more frequent updates to increase success rates. However frequent updates may be in response to low success rate.	Highest when updated monthly or not available (but not statistically significant)	None
Frequency of outreach to new landlords	+/-	Expect more frequent outreach to increase success rates. However frequent outreach may be in response to low success rate.	Highest when conducted every few months	Higher when conducted ever few months and when less frequently than annually.

In this regression the dependent variable, success in leasing a qualifying unit under the voucher program is a categorical (yes/no) variable. The explanatory variables are also categorical variables. When using categorical variables in regressions one category must be omitted in order for the regression to converge to a unique solution. The largest category is generally chosen as the omitted category for each characteristic and then becomes essentially a reference category. The regression results can be interpreted as the effect on the probability of having a particular characteristic relative to having the reference characteristic. Sometimes there is an analytic reason to choose a different reference category. For example, for the race/ethnicity characteristic, although the largest fraction of voucher holders was non-Hispanic blacks, the reference category selected was non-Hispanic whites, because we expect that if there are any racial or ethnic differences in success rates they would be for minority groups relative to whites. The regression coefficient for non-Hispanic blacks or Hispanics shows how their success rates compare with the rates for non-Hispanic whites, controlling for the other factors in the model.

Because the regression uses the logistic estimation specification, the coefficients can be used to estimate the effect of each characteristic on the probability of success. Appendix D explains the estimation process and provides the estimates of the effects of each significant variable on the probability of success.

3.1 Success Rates by Demographic Characteristics and Voucher Type

Race/Ethnicity. As shown in Exhibit 3-2, more than half (56 percent) of voucher holders were black, non-Hispanic. Whites and Hispanics made up 19 and 22 percent of the sample respectively. Success rates did not differ by race/ethnicity.[29] Sixty-nine percent of white non-Hispanic enrollees succeeded in leasing units, as did 68 percent of black non-Hispanic and Hispanic enrollees.[30]

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[29] Statistical significance tests were conducted relative to the bold-italicized reference category for each demographic, market, and PHA characteristic in Exhibits 3-2 through 3-7. The reference category is typically the largest category. Tests could also be conducted to test the significance of differences between other non-reference categories. In the exhibits, ** signifies statistically significant differences at the 5 percent significance level, and * signifies differences that are statistically significant at the 10 percent significance level.

Significance patterns may sometimes seem counter-intuitive. In particular, a large difference between two groups may not be statistically significant even though smaller differences between two other groups are statistically significant. This reflects the sampling structure. The size of the difference between population values that we can detect depends on the sample size of PHAs, the number of voucher holders within each PHA and the variability of the characteristic of interest between PHAs and within PHAs. With a large number of PHAs in the sample from each group and a large number of voucher holders within each selected PHA we may be able to declare even small differences as statistically significant.

If the PHAs are very similar with respect to the characteristic of interest within each group, then even with moderate sample sizes we can detect small differences between the two groups. The more spread out

The regression model used white non-Hispanics as the reference category, (rather than the largest category, black non-Hispanics) because the hypothesis is that if any material racial differences appeared they would be relative to the success rate for non-Hispanic whites. In fact the regression continues to shows no racial effects on the probability of success.

Age of Head of Household. We might expect that, all else equal, the probability of success would decrease with age. Younger households are assumed to have an easier time looking for housing. It may be hard for elderly households to look at many units, so it may be more difficult for them to qualify by moving. This may be partially offset by the fact that elderly voucher holders often are considered good tenants. In fact, the data show that the success rate decreased as age increased. The success rate was 73 percent among households headed by members under age 25. The rate for 25 to 44 year olds and for 45 to 62 year olds was similar, at about 68 percent. Only 54 percent of households headed by persons age 62 or older succeeded in using their vouchers. Elderly-headed households made up only 7 percent of voucher holders, and more than 80 percent of these elderly households had disabled members as well.

Once other factors are controlled for in the regression model, only being age 62 or above continues to have a significant effect on the probability of success.

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voucher holders in each group are across PHAs (i.e., the more PHAs that have voucher holders with this characteristic the smaller the standard error, or for PHA-level characteristics, the more PHAs that have these characteristics, the smaller the standard error). This means that smaller differences will be found to be statistically significant when the voucher holders with this characteristic are spread across all 48 PHAs (e.g., gender) than for PHA-level characteristics (e.g., market tightness or large briefing size), which are the same for all voucher holders at a PHA. Hence, differences in success rates based on PHA-level characteristics will need to be relatively large to be declared as statistically significant. Differences will have to be even larger when the sample is divided into more than two groups based on a PHA-level characteristic, because only part of the sample is being used for the comparison thus reducing the sample size.

The lack of significant difference between success rates does not mean that the difference is not important or not a true difference, it just means that there is too much sampling error to determine whether this difference is just an artifact of the sample or likely a true difference between the two populations.

[30] Although raw success rates did not vary by race/ethnicity, the characteristics of voucher holders varied by race. Black and Hispanic voucher holders had similar characteristics, but whites were more likely to be elderly (17 percent of whites versus 3-6 percent for the other groups); male (30 percent of whites versus 12-14 percent for the other groups); disabled (43 percent of whites versus 17-18 percent for the other groups); and in single person households (36 percent of whites versus 14-19 percent for the other groups).

Exhibit 3-2
Success Rates By Demographic Characteristics

	Percent of all Households	Success Rate
Race Ethnicity		
White non-Hispanic	19%	69%
Black non-Hispanic	***56%***	***68%***
Hispanic	22%	68%
Other	2%	73%
Age of Head of Household		
Less than 25	18%	73%*
25 to 44	***59%***	***68%***
45 to 61	17%	70%
62 or Older	7%	54%**
Gender of Head of Household		
Female	***83%***	***69%***
Male	17%	64%*
Household Size/Disability		
1 person not elderly, not disabled	8%	56%**
1 person elderly, not disabled	1%	63%
1 person elderly and disabled	3%	54%**
1 person not elderly but disabled	9%	74%
2 people	24%	69%
3-4 people	***41%***	***72%***
5+ people	14%	67%*
Household Composition		
Not elderly, with Children	***74%***	***70%***
Elderly	7%[1]	54%**
Disabled, Single	10%	73%
Not Elderly or disabled No Children	9%	56%**
Preference Homeless		
Yes	***6%***	***60%***
No	94%	69%**
Income Relative to Local Median		
Income = $0	4%	63%
$0<Income <=30% of Local Median	***75%***	***71%***
Income > 30% of Local Median	21%	59%**

Exhibit 3-2 *(Continued)*
Success Rates By Demographic Characteristics

	Percent of all Households	Success Rate
Primary Source of Income		
Wages	***44%***	***69%***
Social Security	24%	66%
Welfare	24%	71%
Other (includes combinations)	5%	71%
Total Income is zero	4%	63%

[1] MTCS data indicate about 15 percent of Section Recipients in the nation are elderly. However, only 7 percent of the voucher holders in this study and 6 percent of the voucher holders in the 1993 study were elderly. Some possible reasons for this difference are: elderly people have lower exit rates for the program, near-elderly people who become participants age into the elderly category; or smaller urban PHAs or rural PHAs (not in this study) have a higher share of elderly recipients.

Source: Enrollment, Successful Lease-up and Unsuccessful Enrollee Data modules from Tracking System.

Sample Size: 2,609. Weighted to reflect national totals

* Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the10% significance level.

** Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the 5% significance level.

Gender of Head of Household. The vast majority (83 percent) of households were headed by females. Although the success rate for households headed by females (69 percent) was similar to the rate for households headed by males (64 percent), this 5 percentage point difference is statistically significant at the 10 percent significance level.[31] However, the regression showed no relationship between gender and the probability success once other factors were controlled for.

Household Size. The raw success rate varied somewhat by household size. A priori we might expect that larger households would have a lower success rate because they need larger units, which are reportedly harder to find in some markets. In fact, the study showed that both some categories of single person households as well as large households had lower success rates than households with 2 to 4 people. Households with 2 to 4 people had success rates between 69 and 72 percent, compared with 67 percent for households with 5 or more people.

The regression model included a separate variable for large household size (5 or more people). Consistent with our original expectations, larger households had a lower likelihood of success. At the mean success rate, being in this group reduced the probability of success by about 7 percentage points.

[31] Excluding NYC, the national success rates for males is 67 percent and females is 70 percent. This difference is not statistically significant.

Two types of single-person households had significantly lower success rates: non-elderly, non-disabled individuals (56 percent) and disabled, elderly individuals (54 percent). At 74 percent, single non-elderly, disabled people had the highest success rates of all.[32]

Household Composition. Based on preliminary analysis, we have grouped household composition into four groups:[33]

- Non-elderly households with children, regardless of disability status;
- Elderly households, regardless of disability status and household size;
- Disabled single households; and
- Households with no children, no disabled members and no elderly members, regardless of household size.

Nearly three quarters (74 percent) of the households included children. The success rate for this group was 70 percent. Households comprised of single disabled members had the highest average success rate of 73 percent. This is contrary to the expectation that disabled households would have a harder time searching and finding units they could rent. Their higher success rate may be due to special assistance they receive.

As discussed above, at 54 percent, elderly households had the lowest probability of success, perhaps due to the difficulties in searching for units. The regression model found that at the mean success rate, being in this group reduces the probability of success by about 14 percentage points.[34]

Another group with a significantly lower likelihood of success is households with no elderly or disabled members and no children. These households comprise 9 percent of all voucher holders. They are primarily extremely low-income, more likely to be male-headed, to be age 45 to 61, and have zero income. They are also much more likely to have moved up the waiting list based on a preference for homelessness and/or to be from New York City. The

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[32] The elderly are discussed under age above, and non-elderly, non-disabled are discussed under household composition below.

[33] Other groupings were considered. For example, we initially thought that single parent households would differ from households with children and 2 or more adults, but found that success rates for the two groups were identical. Similarly, disability status was not correlated with success for households with children present.

[34] See Appendix D for the derivation of the estimate.

regression model found that at the mean success rate, being in this group reduces the probability of success by about 11 percentage points.[35]

Preference Due to Homelessness. We do not have direct information on the homeless status of voucher holders, only information on whether they had a preference due to homelessness. Six percent of voucher holders had such a preference. These households had a lower success rate (60 percent) compared with other households (69 percent). However, this difference is not statistically significant at the 10 percent level, nor is the difference significant in a regression model.

Income. Three-quarters of voucher holders had incomes below 30 percent of the local median for their household size. Seventy-one percent of this group succeeded in becoming program recipients. In contrast, only 59 percent of households with incomes greater than 30 percent of local median succeeded. (This difference is statistically significant at the 5 percent significance level.[36]) This is consistent with the expectation that the lower a household's income, the greater the benefit from Section 8, and thus the higher the success rate.[37]

Four percent of voucher holders reported no income. The success rate for this group was 63 percent. In spite of the fact that these households receive substantial benefits from the program, they may be viewed as unattractive tenants by potential landlords.

The regression analysis shows that the effects of both high income and zero income on the probability of success remain statistically significant after controlling for other characteristics. Having no income reduces the probability of success by about 10 percentage points, and having income above 30 percent of the local median increases the probability by about 14 percentage points.

Primary Source of Income. Wages were the primary source of income for nearly half (44 percent) the voucher holders. The primary source of income for the rest was evenly divided between social security and welfare. Working voucher holders often have less time to search for housing than others and may have more geographic limitations because they need a location convenient to their workplace, so they may be less likely to succeed. However, they

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[35] See Appendix D for the derivation of the estimate.

[36] Differences that are statistically significant at the 5 percent significance level are indicated by an * next to the corresponding number in the exhibit. If the difference is not statistically significant at the 5 percent significance level, but it is significant at the 10 percent significance, this is indicated by ** next to the relevant number.

[37] The higher success rate of voucher holders with incomes under 30 percent of the local median suggests that even if PHAs issue less than 75 percent of their vouchers to people with incomes under 30 percent of the median, they can still meet the QWHRA requirement that 75 percent of new recipients have incomes less than 30 percent of the local median.

may be considered more desirable tenants, which could partly offset this. In fact, the success rate did not vary significantly based on source of income. This result holds in the regression analysis.

Program Category. As shown in Exhibit 3-3, most voucher holders (71 percent) came directly from the general waiting list. The success rate for this group was 65 percent. The second most common source of participants was the Welfare-to-Work (WtW) program, accounting for 18 percent of program participants. Under WtW, programs may offer services to voucher holders to enhance their ability to find housing that qualifies for the program. The Notice of Funding Availability (NOFA) indicates that such services may be offered but does not offer detailed guidelines on what they might include. The nature of these services can be expected to vary quite a bit from agency to agency. PHAs are expected to target services to families for whom housing assistance is deemed critical to the family's ability to successfully obtain or retain employment. Since participants must be motivated to participate in this program and the program may offer additional services to voucher holders, we would expect them to be more likely to succeed in leasing up.

In fact, Welfare-to-Work participants had a statistically significantly higher success rate (77 percent) than participants from the general waiting list. It is not clear whether this is because these families were more motivated or because of the additional services they may have received. Also, WtW sites were reportedly under pressure to make sure that all WtW vouchers were used within a specified time period or risk having them recaptured. If so, this would create an incentive to concentrate resources on WtW voucher holders.

Once household, market and PHA characteristics were controlled for in the regression model, having a Welfare-to-Work voucher still had a positive effect on the probability of success, but the effect was no longer statistically significant.

Exhibit 3-3
Success Rates by Program Category[1]

	Percent of All Households	Success Rate
General Waiting List	***71%***	***65%***
Welfare-to-Work	18%	77%**
Family Unification	4%	66%

[1] 7 percent of program participants had vouchers from small categories, including public housing relocation and Section 8 Optouts/preservation.

Source: Enrollment, Successful Lease-up and Unsuccessful enrollee data modules from Tracking System.

Sample Size: 2,609. Weighted to reflect national totals.

* Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the 10% significance level.

** Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the 5% significance level.

Only 4 percent of households received their voucher from the family unification program, which provides housing assistance to families who need it to retain or regain control of a child. The success rate for these voucher holders was similar to the rate for the voucher holders from the general waiting list.

Very few participants were from other special groups such as public housing relocation or Section 8 Optouts or preservation. Therefore, results are not presented separately for these groups.

Time on the Waiting List. Households often wait a long time from when they put their names on the Section 8 waiting list until the time they are issued a voucher. As shown in Exhibit 3-4, nearly half of all voucher holders (44 percent) waited a year or more for their voucher, including 20 percent who waited more than three years. Enrollees who are on the waiting list for a longer time may be more likely to lease units because the fact that they have stayed on the waiting list for a long time may be an indication of their motivation and need for Section 8 assistance. On the other hand, after such a long wait they may have found acceptable alternative housing, decreasing their motivation to succeed in the program.[38] In fact, the success rate did not vary by time on the waiting list. The success rate for households that had been on the waiting list less than 90 days was 70 percent, compared with 66 percent for those who had waited between 1 and 3 years and 72 percent for those who had been on the waiting list more than three years. These results hold in the regression model as well.

Exhibit 3-4
Success Rates by Time on the Waiting List

	Percent of all Households	Success Rate
Time on the Waiting List		
Less than 90 days	21%	70%
90 to 179 days	16%	70%
180 to 365 days (one year)	18%	65%
366 to 1095 days (three years)	24%	66%
More than 1095 days	20%	72%

Source: Enrollment, Successful Lease-up and Unsuccessful Enrollee Data modules from Tracking System.
Sample Size: 2,609. Weighted to reflect national totals

[38] People on the waiting list for a long time may have a higher "no show" rate when invited to a briefing, but this was not investigated in this study. No shows were not included in the voucher holder sample for this study, only households that attended a Section 8 briefing and were issued a voucher are in the study sample.

3.2 Role of Local Housing Markets in Success Rates

An important goal of this study was to explore the relationship between local housing markets and success rates. Several indicators of local housing markets were used, including estimates of vacancy rates, PHA assessments of the local market, and local Fair Market Rents (FMRs) and Payment Standards (PSs). Exhibit 3-5 presents findings on the relationship between local housing markets and success. Key findings are discussed below.

Exhibit 3-5
Role of Market Factors in Success

	Percent of all Households	Success Rate
Market Tightness[1] (Composite measure)		
Very tight	16%	61%
Tight	***49%***	***66%***
Moderate	28%	73%
Loose	7%	80%
Market Tightness[1] (Census weighted Avg)		
Tight	6%	64%
Moderate	***37%***	***65%***
Loose	38%	68%
Very Loose	19%	71%
(Missing for 13% of sample)		
PHA perceived Acceptance of Section 8		
High Acceptance	30%	73%
Moderate Acceptance	***68%***	***67%***
Little Acceptance	2%	NA[2]
Anti Discrimination Laws		
Source of income	17%	76%
Source of income and Section 8	13%	62%
Neither	***47%***	***69%***
Don't Know/missing	22%	64%
2-BR FMR		
Less than $600	31%	71%
$600 to $749	31%	69%
$750 or higher	***37%***	***66%***
Payment Standard Relative to FMR		
PS below FMR	9%	62%
PS equal to FMR	***67%***	***70%***
PS greater than FMR, le 110% FMR	17%	66%
PS greater than 110% of FMR	7%	68%

Exhibit 3-5 (continued)
Role of Market Factors in Success

	Percent of all Households	Success Rate
Adequacy of Payment Standard		
Too Low	36%	62%**
About Right	***62%***	***71%***
Too High	2%	NA[2]
PHA Size		
Fewer than 2500 vouchers	26%	70%
2500-6000 vouchers	***37%***	***70%***
More than 6000 vouchers	38%	66%
Percent of Units that Pass Initial Inspection		
50% or fewer	***31%***	***67%***
51 – 75%	49%	70%
over 75%	20%	74%

[1] Categories correspond to following estimated vacancy rates: Very tight, less than 2%; tight, 2-3.9%; moderate, 4-6.9%; loose, 7-9.9%; and very loose, 10% or above.

[2] Category includes only one site, so success rate not provided

Source: PHA Survey, Successful Lease-Up and Unsuccessful Data modules from Tracking System, and Census 1999 Homeownership and Rental Vacancy Report.

Sample Size: 2,609. Weighted to reflect national totals

* Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the10% significance level.

** Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the 5% significance level.

Vacancy Estimates. Two vacancy measures are presented in Exhibit 3-5. First, senior researchers from Abt Associates estimated vacancy rates in the portion of the market available to voucher holders. This was done by querying experts in each local market to arrive at a consensus vacancy range: very tight (less than 2 percent), tight (2 to 4 percent), moderate (4 to 7 percent), loose (7 to 10 percent), or very loose (more than 10 percent). Experts contacted included PHA staff, HUD area economists, local realtors, city community planning professionals, housing advocates, and real estate associations.[39] The second measure used was the Census vacancy measure for large metropolitan areas. For this measure, a three year weighted average of the rental vacancy rate was used to smooth out the data, which often vary substantially from year to year.[40] Although it is subjective, the

[39] The information for this measure was collected in the fall of 2000, during the same time period voucher holders in the study sample were searching for housing. By deriving the vacancy estimates before final outcomes were known, we eliminated the possibility of biasing the results based on known success rates.

[40] The rental vacancy rate was from the U.S. Census 1999 Homeownership and Rental Vacancy Report, Annual Statistics, Table 5, Rental Vacancy Rates for the 75 Largest Metropolitan Areas 1986 – 1999. Because the vacancy rates in some jurisdictions are unstable from year to year and have a relatively large standard error, a weighted average vacancy rate from 1997 to 1999 was used. The 1999 rate was given a

measure developed by Abt Associates staff is preferable for two reasons. First, it focuses on units in the rent range relevant to Section 8 voucher holders and the geographic area where the PHA operates its program. In contrast, the Census data cover the full price range of rental units across entire metropolitan areas. Second, Abt Associates researchers obtained estimates for all of the study sites, while the census covers only 87 percent of the households in the study.

As expected, the success rate increased with vacancies. This is more prominent when the composite measure, specific to the relevant part of the market is used, but it is also evident from the Census data. The average success rate was 61 percent for households in very tight markets, 66 percent in tight markets, 73 percent in moderate markets, and 80 percent in loose markets. The difference in success rate between the reference category—tight housing market—and the other categories was not statistically significant. However, the differences between the success rate in very tight markets and the rates in moderate markets and loose markets were statistically significant (results not shown in Exhibit). A similar, but weaker pattern emerged using the Census variable, for which rates ranged from 64 percent in tight markets to 71 percent in very loose markets.

Even after controlling for other factors, the regression model shows that vacancy rates continued to play the expected role in success rates. Relative to the reference category (tight market), having a voucher in a very tight market did not have a statistically significant effect on the likelihood of success. However having a voucher in a moderate market increased the likelihood by about 9 percentage points, and having a voucher in a loose market increased the probability by about 14 percentage points.[41]

Not surprisingly, in addition to lower success rates, search times were longer in tight markets. The average search time was 93 to 94 days in very tight and tight markets, compared with 69 days in moderate markets and 59 days in loose markets. More than half of successful households in moderate or loose markets succeeded within 60 days, and only 13 percent took more than 120 days. In tight and very tight markets, only about one third of successful households found their units within the first 60 days, and for more than thirty percent of successful households it took more than 120 days to find units. Exhibit 3-6 provides details on search time by market tightness for successful households.

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weight of 0.5, the 1998 rate a weight of 0.3, and the 1997 rate a weight of 0.2. The 1999 rates were also used alone, but the results did not vary materially. At the time these data were collected, 2000 vacancy rates were not available.

[41] A regression was also run using the Census Bureau vacancy measure but the coefficients were not statistically significant.

Exhibit 3-6
Time to Lease for Successful Households by Market Tightness

Time to Lease	Very Tight Market	Tight Market	Moderate Market	Loose Market
Less than 30 days	14%	15%	20%	25%
30 to 59 days	26%	20%	31%	35%
60 to 119 days	28%	35%	35%	31%
120 to 179 days	21%	19%	12%	6%
180+ days	11%	11%	3%	3%
Average Search Time	94 days	93 days	69 days	59 days
Median Search Time	76 days	82 days	57 days	50 days

Source: Abt Associates composite vacancy measure, and Successful Lease-Up and Unsuccessful Data modules from Tracking System.

Sample Size: 1,780. Weighted to reflect national totals

Landlord Acceptance. Most voucher holders were in local market areas in which PHA staff thought there was a moderate degree of landlord acceptance of the program. Not surprisingly, the success rate for these voucher holders (67 percent) was lower than in PHAs where staff thought there was a high degree of acceptance of the program (74 percent). The difference was not statistically significant.

Anti Discrimination Laws. Some jurisdictions have laws that prohibit discrimination in renting units based on source of income and/or receipt of Section 8. About 22 percent of voucher holders were in PHAs where staff interviewed for this study did not know about local laws. The success rate was 76 percent among voucher holders in jurisdictions with protection based on source of income, 62 percent when both source of income and receipt of Section 8 were protected, and 69 percent when neither was. Although the raw differences shown in the table were not statistically significant, the regression shows that, all else equal, enrollees in programs that are in jurisdictions with laws that bar discrimination based on source of income (with or without Section 8) had a statistically significantly higher probability of success of over 12 percentage points.

Fair Market Rents. The success rate did not vary by the absolute level of the FMR. In high FMR areas the success rate was 66 percent, and in low FMR areas the success rate was 71 percent.[42]

Adequacy of Payment Standard. Most voucher holders (67 percent) were in PHAs which set the payment standard at the FMR. At 70 percent, the success rates in these PHAs were slightly higher than in PHAs with payment standards either below or above the FMR, (62 and

[42] Based on the results of the crosstabulations, this variable was not included in the regression model.

66 percent). These differences were not statistically significant in the crosstabulations. However, once other factors were controlled for, having a voucher from a PHA with a payment standard either below the FMR or between 101 and 110 percent of the FMR was associated with a statistically significantly lower likelihood of success.

Another potential indicator of market condition is the PHA's perception of the adequacy of the payment standard. Most voucher holders (62 percent) were in jurisdictions in which PHA staff thought the payment standard was about right. Not surprisingly, the success rate for voucher holders in jurisdictions where PHA staff thought the payment standard was too low (62 percent) was statistically significantly lower than for voucher holders in jurisdictions where the PHA thought the payment standard was about right (71 percent). The result was not statistically significant in the regression analysis, though it still shows a negative effect of the perceived low payment standard on success.

PHA Size. Both the crosstabulations and the regression model show that there appears to be no correlation between PHA size and probability of success.

Percent of Units that Pass Initial Inspection. As part of the PHA questionnaire, PHAs were asked to estimate the proportion of units presented for inspection that passed their first housing quality standards (HQS) inspection (without needing to be reinspected). This variable is used as a proxy for housing quality in the local jurisdiction, on the assumption that the higher the proportion of units that pass initial inspection, the better the local stock. (It could also indicate leniency on the part of the PHA.) About one third (31 percent) of voucher holders were in PHAs where no more than half of all units passed on the first inspection. The success rate for these voucher holders was 67 percent. Voucher holders in PHAs where the majority of units passed HQS on the first inspection had a higher success rate (70 to 74 percent), though this difference was not statistically significant. However, once other factors were controlled for in the regression, the difference was significant.

3.3 Success Rate by PHA Practices and Procedures

As part of the data collection effort we interviewed Section 8 staff in each sampled PHA to obtain information about practices and procedures that might affect success. Exhibit 3-7 presents the success rates for enrollees based on the practices and procedures reported by their PHAs.

Exhibit 3-7
PHA Practices and Procedures That May Affect Success

	Percent of all Households	Success Rate
Briefing size		
Individual Briefing	12%	80%
Individual and Group Briefings	22%	68%
Group Briefings of <30 people	33%	67%
Group Briefings of 30 or more people	***33%***	***66%***
Who gets Extension?		
Anyone who requests	37%	74%
Only People who document effort	***43%***	***66%***
Only Special Categories	20%	63%
Assistance Denied based on drug or violent criminal arrests or other criminal convictions?[1]		
No	***18%***	***66%***
Yes	82%	69%
Assistance denied based on poor landlord reference, poor housekeeping or bad credit history?		
No	***91%***	***68%***
Yes	9%	74%
Housing Search Counseling		
Available to all Enrollees	38%	67%
Available only to Special Programs	***32%***	***74%***
Not Available	30%	64%
Vacant Unit Lists or Landlord lists		
List Updated Daily	34%	70%
List Updated Weekly	***47%***	***65%***
List Updated Monthly or less or not available	18%	73%
Outreach to New Landlords		
At Least Monthly	***34%***	***66%***
Every few Months	33%	74%*
At least Annually	11%	67%
Less than once per year or never	21%	65%

[1] PHA staff were asked whether they deny assistance based drug or violent convictions (which almost all do, so there is too little variation to do a cross-tabulation), then they were asked other questions on whether they deny assistance based on: arrests (not convictions) for drug or violent crimes; and for and for arrests or convictions for other (non-violent and non-drug) crimes. Their responses to these questions was the basis for this variable.

Source: PHA Survey Successful Lease-Up and Unsuccessful Data modules of Tracking System.

Sample Size: 2,609. Weighted to reflect national totals

* Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the10% significance level.

** Signifies difference in success rate between category and reference category (in bold and italics) statistically significant at the 5% significance level.

Briefings. Large group briefings were the most common way voucher holders were introduced to the program and told what they would need to do to find suitable housing and begin receiving assistance. About one third of program participants (33 percent) were from PHAs that held briefings for groups of 30 or more people. Individual briefings were least common. Only 12 percent of participants were in PHAs that held individual briefings. At 80 percent, the success rate for voucher holders in PHAs with individual briefings was higher than for other types of PHAs. Although this difference is not statistically significant in comparing the raw numbers, the regression shows that once other factors are controlled for, having a voucher in a PHA that conducts individual briefings increases the probability of success by about 15 percentage points relative to holding a voucher issued by a PHA that conducts larger group briefings.

Although the raw numbers are nearly identical, having a voucher in a PHA that conducts smaller group briefings of under 30 people, is associated with a lower probability of success of about 10 percentage points. Thus it appears, that individual briefings that provide individual attention, or large group briefings that offer the opportunity to have many questions answered are optimal.[43]

Extensions. Voucher holders served by PHAs that offer an extension to anyone who requests one had a higher success rate (74 percent) than holders of vouchers from either PHAs that require documentation of search (66 percent) or give extensions only to special groups (63 percent). The difference is not statistically significant in the simple comparisons or in the regression analysis.

Tenant Screening. A large majority (82 percent) of all the households received their voucher from PHAs that screened out applicants based on drug or violent criminal arrests or other criminal convictions. (Almost all PHAs reported screening based on violent or drug-related convictions, so there is no variation across PHAs to explore.) The success rate in these PHAs was slightly higher (69 percent) than in PHAs that did not screen on these types of arrests or convictions (66 percent), though the difference is not statistically significant. Few voucher holders were served by PHAs that screened out applicants based on other characteristics, such as poor landlord references, poor housekeeping or poor credit history (9 percent). While the more rigorous screening was associated with a higher success rates (74 compared with 68 percent), these differences are not statistically significant. In the regression analysis none of these tenant screening practices were found to play a significant role in the probability of success.

[43] The length and size of the briefings are highly correlated. Individual briefings are much shorter than group briefings, thus briefing length was excluded from the analysis.

Search Assistance. Several types of search assistance are offered to voucher holders, including search counseling and lists of vacant units and of willing landlords.[44] We would expect that, all else equal, the more the PHA does to facilitate housing search, the higher the expected success rate. However, PHAs may provide extensive search assistance in response to low success rates, so it is not clear a priori what the relationship is between search assistance and success.

Housing search counseling was available in 70 percent of sites. In some sites (38 percent) counseling was available to all voucher holders, and in other sites (32 percent) search counseling was available only to voucher holders in special programs. At 74 percent, the success rates were highest when search counseling was available only to participants in special programs, though the difference is not statistically significant. The success rate was 67 percent when PHAs offered search counseling to all voucher holders and 64 percent when counseling was not available. No significant differences were found in the regression model.

All PHAs report either offering lists of units known to be available (vacant unit lists), or lists of landlords that who had expressed willingness to rent to voucher holders. The frequency of update of these lists ranged from daily (34 percent) to weekly (47 percent) to monthly or less (18 percent). The relationship between frequency of updates of lists and success rates is not as expected. The success rate was highest in sites that updated lists monthly or less and lowest in sites that updated lists weekly. These differences are not statistically significant, and the regression also shows no significant effect of frequency of list update on the probability of success.

Outreach to Landlords. About 80 percent of voucher holders had PHAs that conducted some sort of outreach to local landlords. There was no consistent pattern between more frequent landlord outreach and success rates. This may be because intensity and quality of the landlord outreach were not measured, just the frequency with which the PHA reported conducting it. The success rate was similar when there was no or infrequent outreach (65 percent), when it was conducted at least monthly (66 percent), or annually (67 percent). The success rate was slightly higher when outreach to landlords was conducted every few months (74 percent). Once other factors were controlled for, outreach every few months continued to be associated with a higher likelihood of success.

[44] Search assistance provided is reported by PHA staff. It only captures whether or not these services are offered, not the intensity or quality of these services or whether or not the voucher holders in the sample took advantage of the service. One measure of overall quality of the PHA's Section 8 Program (although not necessarily of a particular service) is the SEMAP Score, but these scores were not available in time for this study.

3.4 Summary of Findings Regarding Factors Affecting Success Rates

This chapter looked at the relationship between various enrollee, market and PHA characteristics on the probability of voucher holder success in leasing a qualifying unit. Raw success rates were presented for various groups of enrollees, as were the results of a regression model that separated the effects of each characteristic on the likelihood of success.

Household Demographics

The study found that once other factors are controlled for success rates do not differ by race, ethnicity, gender of the head of household or by disability status of household members.

Success rates did vary by household age, size and composition. Elderly households had lower success rates, perhaps due to the difficulty these households face when searching for units. Households with non-elderly, non-disabled persons and no children also had lower success rates than other household types. These households are generally extremely low-income households. Compared to other voucher holders, they are more likely to be male-headed, to be age 45 to 61 and have zero income. They are also much more likely to have moved up the waiting list based on a preference for homelessness or to be from New York City. The regression analysis also showed that, once other factors are controlled for, households with five or more members have a lower probability of success.

Consistent with their higher expected subsidy, households with incomes greater than zero but less than or equal to 30 percent of local median were more likely to succeed than were households with incomes above 30 percent of the local median. In spite of their large expected subsidy, households with no income also had lower success rates, perhaps as a result of their unattractiveness as potential tenants. Success rates did not vary by source of income.

The raw data show that households with Welfare-to-Work vouchers had higher success rates compared with voucher holders from the general waiting list. However, once other factors were controlled for, this difference while still positive, was no longer statistically significant. Time on the waiting list does not appear to be correlated with ultimate success.

Market Factors

As expected, success rates were lower in tight markets compared with looser markets. The average success rate was 61 percent in very tight markets, 66 percent in tight markets, 73 percent in moderate markets, and 80 percent in loose markets. In addition, search time was longer in tight markets, averaging 93 to 94 days in both tight and very tight markets, 69 days in moderate markets and 59 days in loose markets.

Success rates were higher in markets where PHA staff thought landlord acceptance of the program was high and in markets where PHA staff thought the payment standard was adequate, although these results are not statistically significant in the regression. Having a voucher in a market with some sort of protection against discrimination based on source of income also improves the chances of success. Voucher holders from PHAs where the payment standard equals the FMR had a higher probability of success than voucher holders in PHAs with payment standards below the FMR or between 101 and 110 percent of the FMR.

PHA size does not appear to be related to the probability of success.

Having a voucher from a PHA where a large fraction of units pass the HQS inspection on the first try is associated with a higher probability of success. The percent of units that passed the initial inspection was considered an indicator of housing quality in the area, thus the higher the quality of the housing stock, the higher the success rate.

PHA Practices and Procedures

Success rates were compared based on a range of PHA practices and procedures that were thought to play a role in success, including briefings, extension policies, screening policies, search assistance, and landlord outreach. When comparing raw success rates, the only practice that had a statistically significant association with success was landlord outreach, where being in a PHA that conducted outreach every few months was associated with a higher probability of success.

In the regression analysis in addition to landlord outreach briefing policies were also found to be associated with the probability of success. Individual briefings were associated with a higher probability, and small group briefings with a lower probability compared with large group briefings. It is not always clear how to interpret the role PHA actions play in success because we do not know whether they are a result of prevailing conditions or whether they are a cause. For example, we do not know whether infrequent landlord outreach is related to higher success rates because somehow infrequent outreach contributes to a higher success rate, or whether it is because these PHAs already have a relatively high success rate and, therefore, do not believe they need to do more frequent outreach. Similarly, regarding other policies (such as search assistance and lists of vacant units or accepting landlords), we do not know if the enrollees in our sample used these tools.

Chapter Four
Development of a System for Tracking Voucher Success Rates

Previous studies of Section 8 success rates have required PHA staff to enter data onto paper forms. These forms were submitted to the research staff for data entry. This was a labor intensive process for PHAs and researchers, involving redundant rounds of data entry (the PHA on paper and the researchers into an electronic database) and manual reviews for completeness and consistency.

Furthermore, such a data collection system did not provide a simple method for PHA staff to get feedback on the success of their voucher holders. They still had to hand-calculate success rates for any groups they were interested in tracking. If they wanted to know where individual voucher holders or targeted-groups of voucher holders were in the search process (i.e., still searching, waiting for inspection results, leased-up, voucher expired), they had to manually look up each voucher holders' record.

To address these issues, this study developed tracking software that was provided to the sites for entry of characteristics of households and details of their housing search process. The software made it easier for PHAs to participate in the study and also provided them with immediate feedback on the success rates or current status of the voucher holders in the sample. Thus, the study's tracking software served as a preliminary demonstration of a potential ongoing data collection system that would allow PHAs to monitor success rates on a continual basis. Monitoring success rates at the PHA level is useful for several reasons. Section 8 staff need accurate predictions of the share of voucher holders that will lease up, so they can issue an appropriate number of vouchers to maintain high utilization rates and earn full administrative fees.[45] PHA staff also need to know differences in success rates across different types of voucher holders, so they understand how well their program is serving these different groups. Tracking success rates will also allow the PHA to evaluate the effectiveness of various policies and procedures to identify areas for improvement as well as the strengths of their program. Since PHAs earn administrative fees based on the number of subsidized households, not the number of households to whom they issue vouchers, they can save money by increasing their success rates. By increasing their success rate, a PHA can reduce the number of households that need to go through the intake, eligibility determination, and briefing process.

[45] At the start of data collection in the spring of 2000, PHA Section 8 staff were asked to estimate their success rate. Over half (26) of the 48 PHA estimates were more than 10 percentage points higher or lower than the actual success rate of their voucher holders tracked for the study. Twice as many PHAs overestimated than underestimated their success rate by more than 10 percentage points (17 overestimates versus 9 underestimates). This suggests PHAs need more accurate information on the success rates of their voucher holders.

In this chapter, we describe the design of the study's tracking system and challenges faced in implementing the system. In the final section, we provide recommendations for further development of tracking systems for use by PHAs or in future studies.

4.1 Design of the Study's Tracking System

The tracking system software was provided to PHAs on a CD-ROM.[46] PHA staff ran the setup program from the CD on a desktop computer, and it automatically installed all the files needed for operating the tracking system.[47] Then, when PHA staff clicked on the tracking system icon, the tracking form appeared on the screen. The first screen allowed a user to choose which voucher holder's record to update or to add a record for a new voucher holder. On the next screen, the user indicated the type of data to be entered: enrollment, extension, inspection, or contract information. The data entered was automatically saved in an ACCESS database. PHA staff were asked to e-mail (or copy to a diskette and mail) the updated ACCESS database to Abt staff once a month.

Trainers from the research team walked PHA staff through the installation process as part of the data collection training. PHA staff were also provided with a detailed training manual, with step-by-step instructions on how to install the software and how to enter the requested data in the system.[48] In addition, each PHA was assigned an Abt Associates technical assistance provider to whom users could call or e-mail if they had any problems using the software.

Technical Guidelines for Developing the Tracking System

One of the challenges in developing an electronic tracking system is that it needed to be technically compatible with hardware and software at all participating PHAs. Therefore, the system had to:

- require only minimum hardware and operating system technology to work;
- be a stand-alone system that would not require PHAs to have or purchase special software;

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[46] The tracking software was designed and specified by Abt Associates researchers with input from Quadel Consulting Corporation staff. Once specified, the source code was written in Visual Basic 6.0 by programmers from the QED Group, LLC.

[47] Installation of the software on a local area network was a little more complicated and required computer savvy PHA staff or someone from the PHA's information technology department.

[48] Climaco, Carissa, Larry Buron, Neelima Grover and Max Shestopalov. 2000. *Training/User's Guide for the Section 8 Housing Choice Voucher Program Tracking System: Version 1.1.* Prepared by Abt Associates and QED Group, LLC for the U.S. Department of Housing and Urban Development.

- work on both individual desktop computers and on local area networks; and
- be simple enough for computer novices to install and use.

The final tracking system met these requirements, and all participating PHAs were able to successfully install and use the software. All their computer systems met the minimum requirements of a Pentium processor, Windows 95 or a more recent operating system, 32 megabytes of Ram, and 20 megabytes of hard disk space. The study benefited from concern about Y2K problems, which had motivated several PHAs to update their computer systems in 1999. We also developed a paper version of the tracking system in the event that software did not work on a PHA's computer system, or PHA staff preferred paper forms. None of the PHAs chose the paper version.

Guidelines for Making The Tracking System Easy to Use

To obtain high quality data and minimize the data collection burden for PHA staff, the design of the software had to do the following.

- Accept data in the same format that PHAs collect as part of their normal operating procedures.
- Label all variables with familiar terms and provide the sufficient guidance on the computer screen that users would rarely need to reference the training manual.
- Minimize mistakes by building in automated checks that would query the data entry person before he or she moved to another screen.
- Require a few key pieces of information needed to identify the voucher holder before the record could be saved. This information automatically appeared on every screen for the record to make sure data was being entered for the correct voucher holder.
- Allow PHAs to search the database by name, social security number, or an assigned PHA ID so a user could look up a specific record with whatever identifying information he or she had available for a voucher holder.
- Produce success rate and status reports that PHAs would find useful in their own management of participant flow.
- Be thoroughly tested to find and remove bugs before going live.

All of the data items requested from PHAs were already collected as part of the normal procedures for intake, eligibility determination, extension, inspection, and leasing. To make it easier for PHAs to provide the information, we used the same terminology and categories

required for various HUD forms (e.g., HUD's 50058 form) or otherwise common terminology in administering the program.

Automated checks were built into the software to catch mistakes as they were entered. For example, if the user entered an invalid date or inconsistent information (for example, the sum of the income from various sources did not equal the total income entered), then an error message popped up. The user had to reconcile the information before he or she could move to the next screen. Following the monthly submission of data, research staff did more extensive checks for inconsistencies and brought problems to the PHA's attention so they could be fixed.

To make the tracking system more useful to PHAs, we also built in automated reports. By clicking on the appropriate button, PHA staff could find out how many of their voucher holders were successful, unsuccessful, or still searching for housing. Other reports produced the same information broken down by demographic group or date of voucher issuance. For those still searching, a report could be produced to show whether they had requested a lease approval and, if so, where they were in the process (pending inspection, inspection complete, etc.).

A key step in the development of the tracking system was testing and retesting preliminary versions of the system before providing it to all participating PHAs. The objectives of testing the tracking system were to remove bugs that would result in a loss of data, inaccurate data, or frustration on the part of PHA staff who entered the data. There were four stages of testing. In the first stage, the staff who designed the software ran the tracking system through a series of pre-designed tests. This testing was done multiple times until the software met all of the pre-designed tests for functionality. In the second testing stage, colleagues with various levels of computer literacy were recruited and asked to test the software on an ad hoc basis. In the third stage, the Quadel Consulting and Abt Associates staff who would be responsible for training PHAs on the use of the tracking system, were trained on its use and asked to test all possible situations they might encounter. After completing the debugging from the first three stages, we asked four PHAs to pilot test the system. These four PHAs were trained and started using the software several weeks before we scheduled training times with the other participating PHAs. The software functioned near perfectly in the pilot test. Only a few minor revisions were made before starting data collection in the other sites.

4.2 Challenges in Implementation of the System

We faced many challenges in actually implementing the tracking system. As expected, the computer literacy levels of users from extremely knowledgeable to new user. A technical assistance person was assigned to each PHA in order to work through the computer literacy issues and software problems that arose. Most inexperienced computer users welcomed the opportunity to become more proficient.

Other challenges included the following.

- Turnover of PHA staff resulted in a need to train new staff to use the tracking system and in lags in receiving data as the remaining PHA staff had to fill multiple roles.

- Installing the Tracking System on local area networks was difficult at some sites. Our PHA contact person usually did not have authority to install programs on the network drive. Getting PHA information technology staff involved added logistic complexity and, in a few cases, required multiple installation attempts before the software worked correctly.

- At some PHAs, the data we collected was kept in separate paper or electronic files in different departments (e.g., intake and inspection departments) that did not normally coordinate their information systems. This added an additional step, as our contact person had to work with someone in another department to obtain data on the sample voucher holders experiences. Also, the PHAs internal electronic databases were often not updated frequently, which resulted in lags in data collection for the study.

4.3 Recommendations for a System for Tracking Success Rates

Two keys for making a successful tracking system for Section 8 success rates are to avoid redundancy and to make the tracking system a useful management tool for the PHAs.

The first key to the design of a successful tracking system is to avoid redundancy by ensuring that the data entered by the PHA only needs to be entered once. For instance, if the data are needed for other purposes, then tracking system data should be in a format that meets the requirements for the other purpose as well. For example, HUD has started implementation of a system that will allow HUD to track success rates at the national level. Up to now, PHAs submitted HUD's 50058 Form, containing demographic and income information, on all new Section 8 recipients. Under HUD's new reporting requirements, which will take effect in June 2001,[49] PHAs will be required to submit HUD's 50058 form for every household to which the PHA issued a voucher. The PHA must update the information if the voucher holder successfully leases a unit in the Section 8 program or the voucher expires. The success rate can then be calculated by dividing the number of voucher holders who lease a unit by the total number of households issued vouchers. This will allow calculation of the success rate for all voucher holders in the nation at any time period of interest, rather than for a sample of voucher holders at a specific time. As long as PHAs submit accurate information

[49] HUD Notice PIH 2001-11 (HA) reports the revised Form HUD-50058 will be implemented by June 1, 2001. See Form HUD-50058 Instruction Booklet (U.S. Department of Housing and Urban Development, Office of Public and Indian Housing, March 19, 2001) for information on reporting requirements.

and the calculations are for vouchers issued at least one year earlier (to allow the full search time PHAs give voucher holders and to allow for lags in entering the data), this method will be an efficient way to track the overall national success rates and success rates for various demographic groups over time.

A second key to the design of a tracking system for success rates is to make it a useful management tool. For example, it would be useful for PHAs if HUD's Multifamily Tenant Characteristics System (MTCS) easily allowed PHAs to generate success rates for their voucher holders, in total and for subgroups that they specify. This would help PHAs understand how well their program is serving various clients and identify areas where they need to provide more assistance or at least investigate the reasons for lack of success. By providing useful feedback to PHAs, this would increase the motivation for PHAs to enter accurate and timely information.

PHAs may want to implement their own more comprehensive tracking system in addition to submitting data on voucher holders to the MTCS. If they do so, the tracking system should be able to provide the data needed for MTCS in order to avoid redundancy.

A more comprehensive tracking system could track each step in the Section 8 process and trigger the appropriate action steps. For example, a comprehensive system could include intake data (as does the 50058 Form) as well as extension information, request for lease approval and inspection data, information on search assistance provided, and contract information.[50] Inspection requests could be generated by the system and then the inspector could enter the results of the inspection in the same system. This would allow PHAs to know the status of each of their voucher holders at any given time. In addition to success rates, they would know the number of voucher holders who were still eligible to search for housing or waiting for inspections, and how many units failed inspection or rent reasonableness. It would also allow the PHA to analyze the length of various processes such as the length of time from an RFLA to a completed inspection or time between a completed inspection and a signed contract with the landlord. This in-depth information would allow them to identify the difficult areas in their programs. Are voucher holders not even finding units to inspect? Are they finding units, but they are not passing inspection? Are the units failing rent reasonableness? Is their a long wait for inspections? Is there a long lag time between completed inspections and signing a contract with the landlord? Are people receiving search assistance having more success? All this information could be compared across subgroups to identify particular groups having problems. This information can be used to serve the PHAs clients better, identify lengthy processes that frustrate potential landlords, and cut administrative costs by removing barriers to leasing up, thus reducing the number of households that need to go through the intake, eligibility determination, and briefing process.

[50] The system would need to be on shared network drive so that each PHA staff member who works with a client could view and enter data into the same system.

Appendix A

Sampling and Weighting Design for Quantitative Analysis of Success Rates in Urban PHAs

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Sampling and Weighting Design for Quantitative Analysis of Success Rates in Urban PHAs

The primary objectives of the quantitative study were to estimate the current success rates of voucher holders, compare success rates according to the demographic characteristics of voucher holders, and examine the relationship between market tightness and success rates in metropolitan. In this section, we describe the sampling and weighting procedures for the PHAs and the voucher holders that participated in the study.

We used a two-stage sampling design to select our sample of voucher holders. In the first stage we selected a representative sample of 50 large, urban PHAs in the continental United States that expected to issue at least 50 vouchers during the study's four month intake data collection period. From each of these 50 PHAs, we selected the second stage sample of about 50 voucher holders for inclusion in the data collection, for a total sample of about 2,500 voucher holders.

This appendix includes sections on development of the sampling frame (A-1), procedures for selecting the sample of PHAs and voucher holders for the study (A-2), and imputation of success status for voucher holders with unknown final status (A-3).

A.1 Sampling Frame

The study estimated success rates for eligible PHAs included in the sampling frame. The sampling frame included larger, non-rural PHAs in the continental U.S. It consisted of 406 of the 2,534 PHAs in the U.S., accounting for 62 percent of the total reserved Section 8 Vouchers and Certificates.

This section first describes the sampling universe (i.e., target population) and then the sampling frame (i.e., list from which sample was chosen) for this study.

Sampling Universe

The statement of work defined the target population for this study as all voucher holders in non-rural areas in the lower 48 states in the U.S. In order to meet the study's time and analytic constraints other restrictions were placed on the target population. First, the statement of work specified a maximum 10 month data collection period. This translated into an intake period of four months for the sample. Once a voucher is issued, up to six months may be needed to track voucher holders through either lease-up or expiration of the voucher. It was assumed that voucher holders would typically be given up to 120 days of

search time. In addition, the PHAs stop the clock when a unit is submitted for lease approval (this is called tolling). Time also must be allowed for PHAs to collect and submit the data. Hence, we decided to include in the sample only vouchers issued in the first four months of the data collection period to ensure that there would be enough time to track the eventual success of the voucher holder in leasing a unit that meets the program standards or the eventual expiration of the voucher. Since we wanted each PHA in the study to track at least 50 voucher holders, only sites that had programs large enough for us to expect 50 issuances from turnover during a four month period were included in the sampling universe.

Based on earlier studies we assumed that annual turnover rates were about 14 percent and success rates were about 75 percent. Thus, any PHA with at least 804 slots was expected to issue at least 50 new vouchers in a four month period. The derivation of the minimum PHA size of 804 slots to be included in the study is shown below.

If X is the number of slots and turnover is 14 percent per year, then

$0.14 * X$ = turnover per year.

If the success rate is 75 percent, then

$(0.14 * X) / 0.75$ = number of annual issuances needed to fill those slots.

Under these assumptions, in a four month period (1/3 of a year) a PHA will have

$[(0.14 * X) / 0.75] / 3$ issuances.

Solving for X (number of slots), any PHA with at least 804 slots was expected to issue at least 50 vouchers in four months because

$[(0.14 * 804) / 0.75] / 3 = 50$.

We rounded the 804 to 800 and thus required a PHA to have at least 800 slots to be included in the sampling universe.

A second restriction to the sampling universe results from analytic constraints. Important questions to be addressed by the study are the roles market conditions and PHA practices and procedures play in success rates. Thus, we restricted the sample to PHAs that serve one market area and PHAs that have a single set of practices and procedures for all voucher holders within each particular program (i.e., they can vary by type of voucher).[1] As a result, we excluded most statewide PHAs and other PHAs that operate from multiple offices.

In summary, the sampling universe or target population for the non-rural part of the study was voucher holders in PHAs that had a single set of practices and procedures for all voucher holders within each particular program and had at least 800 Section 8 slots in one non-rural

[1] A priori, a few Moving to Work Demonstration sites were the only PHAs we thought might fail the single set of practices and procedures criteria.

market area. This universe included portions of statewide PHAs serving at least 800 households in a particular non-rural location.

Sampling Frame

The sampling frame for the first stage selection (selection of PHAs) was constructed using a list of all PHAs located in urban areas along with information on the size of the PHA's tenant-based Section 8 program. The list was based on a file provided by HUD in mid-November, 1999. The file contained the number of reserved vouchers and certificates in each PHA as of the end of the PHA's most recent fiscal year. In total, 1,662,163 certificates and vouchers in 2,534 PHAs were included in the file.[2]

We excluded the following PHAs from our sampling frame:

- All 921 non-metro PHAs, with a total of 168,828 certificates and vouchers. (Some were added back later, as described below).
- All 1,183 remaining small PHAs with fewer than 800 certificates and vouchers, with a total of 314,933 certificates and vouchers.
- The remaining 42 PHAs in Alaska, Hawaii, Guam, Puerto Rico, the U.S. Virgin Islands (not in the lower 48 states) and statewide PHAs, with a total of 179,473 certificates and vouchers.

We then added back in:

- Eighteen metro area components of state-wide PHAs that met the study's size requirements, with a total of 35,827 certificates and vouchers.[3]

Our final sampling frame thus consisted of 406 PHAs with 1,034,756 certificates and vouchers. This is the universe to which our estimates apply and the list from which the PHAs were selected for the study. The list of these PHAs is included as Exhibit A-1.

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[2] The file was provided by HUD on November 16, 1999 and is based on HUDCAPS data. It identified PHAs that operate in metropolitan areas, non-metropolitan areas, and both. PHAs that operate in metropolitan areas or both metropolitan and non-metropolitan areas were kept in the sampling frame if they met the other eligibility criteria listed. The file does not include any Welfare to Work Vouchers awarded to the PHAs.

[3] Information on the number of certificate and voucher holders in each metropolitan area that a state PHA operates was provided by HUD's Office of Policy Development and Research on October 15, 1999. It is based on MTCS records from the prior 18 months. Certificate and voucher holders whose address could not be geocoded were excluded by HUD. The file included 65,507 vouchers and certificate holders.

Exhibit A-1
Sampling Frame

PHA Number	PHA Name	Certs & Vouchers
PA031	Altoona Housing Authority	802
WA049	HA of Thurston County	804
MA024	Brockton Housing Authority	806
WI195	Kenosha Housing Authority	808
CA120	Baldwin Park Hsg Authority	808
VA901-6760		810
CT007	Stamford Housing Authority	813
OH008	Trumbull MHA	814
KS001	Kansas City Housing Authority	814
LA023	Alexandria Housing Authority	816
NM067	Region V Housing Authority	824
IN021	Housing Authority of the City	826
VA901-5720		827
PA017	Washington County Hsg Auth.	830
NC166	Northwest Piedmont Co of Gov	832
IL006	Champaign County Hsg Auth.	834
MA020	Quincy Housing Authority	837
TX018	Lubbock	840
CA084	Mendocino County	840
MI006	Saginaw Housing Commission	841
WI214	Dane County Hsg Authority	841
CO052	Aurora	842
UT009	Davis County	842
MA010	Lawrence Housing Authority	847
TX008	Corpus Christi Hsg Authority	847
ID016	SW Idaho Cooperative HA	852
TX456	Tyler	852
PA057	Luzerne County Hsg Authority	853
WA025	Bellingham HA	853
FL011	City of Lakeland H/A	863
IA050	Waterloo Housing Authority	864
MO003	St Joseph Housing Authority	864
PA036	Lancaster Housing Authority	866
NY903-5660		867
IL116	McHenry County Hsg Authority	867
TX455	Odessa	876
TX028	Mc Allen Housing Authority	879
NY443	City of Utica	883
CA123	Pomona Housing Authority	886
PA010	Butler County Hsg Authority	886
PA015	Fayette County Hsg Authority	886
AR002	North Little Rock Hsg Authority	892
OR028	NW Oregon Housing Assn	896
IL012	Decatur HA	896
SD045	Pennington County	898
AZ035	City of Yuma Housing Authority	899
ND021	Burleigh County	899
OH044	Allen MHA 160001003 A/C #	899
MO205	Franklin Cty Public Hsg Age	900
NC159	Western Piedmont Council of GO	911
PA003	Scranton Housing Authority	912
IA087	Dubuque Dept of Human Rights	915
IL015	Madison HA	916
FL075	Clearwater H/A	921
AZ031	Tempe Housing Authority	926
MI009	Flint Housing Commission	928
PA004	Allentown Housing Authority	930
PA013	Erie City Housing Authority	931
OH025	Lake MHA	936
PA075	Cumberland County Hsg Auth.	937
TX440	Pasadena (City of)	940
IA018	Sioux City Housing Authority	941
AR131	Jonesboro Urban Renewal & HA	941
CO072	Jefferson County	942
WA003	HA City of Bremerton	943
ND012	Grand Forks	944
OH062	Miami Metropolitan Hsg Auth.	944
KS002	City of Topeka City Hall	946
IA117	Southern Iowa Reg Hsg Auth.	948
ID013	Boise City HA	951
UT011	Utah County	952
WV036	Kanawha County HA	959
OH015	Butler Met.HA	960
MA005	Holyoke Housing Authority	962
SC056	Charleston County Hsg Redvel	967
PA035	Dauphin County Hsg Authority	968
CA088	City of Santa Rosa	975
MI045	Plymouth Housing Commission	978
WI003	Madison CDA	983
TX017	Galveston Housing Authority	993
GA010	HA Marietta	993
IL004	Springfield Housing Authority	994
NJ091	Paterson Housing Authority	996
GA901-120		997
TX472	Amarillo	998
MA001	Lowell Housing Authority	999
NY449	City of Buffalo BMHA	1,000
OH021	Springfield Met.HA	1,002
CA082	Inglewood Housing Authority	1,002
OH028	Erie MHA	1,003
TX011	Laredo Housing Authority	1,005
TX512	Det Cog	1,007
IN011	Gary HA	1,008
CT029	West Haven Housing Authority	1,009
NY113	City of New Rochelle	1,014
CA105	Burbank Housing Authority	1,014
NY077	Town of Islip HA	1,015
FL088	Gainesville H/A	1,016

Exhibit A-1 *(Continued)*
Sampling Frame

PHA Number	PHA Name	Certs & Vouchers	PHA Number	PHA Name	Certs & Vouchers
VA012	Chesapeake Redevelopment & H/A	1,018	DE001	Wilmington Housing Authority	1,167
ND014	Fargo	1,019	VT001	Burlington Housing Authority	1,167
SC003	City of Spartanburg H/A	1,024	OH022	Greene Metro Housing Authority	1,171
OR014	Marion County HA	1,026	CA705	Los Angeles County Hsg Auth.	1,175
WV004	Huntington WV Hsg Authority	1,029	MN003	Duluth HRA	1,188
CA132	Oceanside Housing Authority	1,031	FL010	HA Fort Lauderdale City	1,191
MA031	Somerville Housing Authority	1,034	TX436	Mesquite	1,200
VA902-8840		1,036	NM063	Region Vi Regional Hsg Auth.	1,215
NJ003	Elizabeth Housing Authority	1,043	NY028	HA of Schenectady	1,216
CA116	National City Housing Authority	1,044	OH018	Stark Metropolitan Housing Aut	1,226
AZ005	Mesa Housing Authority	1,044	IN022	Bloomington Housing Authority	1,227
FL093	Orange Co Section 8	1,048	OR001	Clackamas County HA	1,228
TX435	Garland	1,062	GA004	HA Columbus GA Gen Fund Acct C	1,232
MO197	St. Clair Co. Housing Authority	1,063	KS162	Johnson County Hsg Authority	1,232
FL073	HA Tallahassee	1,064	PA007	Chester Housing Authority	1,234
NV007	North Las Vegas Hsg Authority	1,066	NJ013	Passaic Housing Authority	1,238
FL032	HA Ocala	1,068	CO058	Adams County	1,248
NC057	Gastonia H/A	1,073	CA106	City of Redding Hsg Authority	1,251
KY133	Covington Housing Authority	1,073	PA081	Lehigh County Housing Authority	1,256
AL086	HA Jefferson County	1,076	CT006	Waterbury Housing Authority	1,256
AR003	Fort Smith	1,077	CA111	Santa Monica Hsg Authority	1,259
IA022	City of Iowa City	1,086	SC057	HA North Charleston	1,261
FL020	HA Brevard County	1,087	WA006	HA City of Everett	1,265
CA035	San Buenaventura Hsg Auth.	1,089	CA114	Glendale Housing Authority	1,267
WI183	Racine County HA	1,093	WV001	Charleston Housing Authority	1,268
VA028	Arlington Co Dept of Human Ser	1,097	OR015	HA of Jackson County	1,276
NM057	Bernalillo County Housing Dept	1,098	MD018	Anne Arundel Cty Hsg Auth.	1,276
NY003	The Muni HA City of Yonkers	1,103	CA044	Yolo County Housing Authority	1,278
FL104	HA Pasco County	1,104	NJ095	Monmouth County HA	1,288
NJ912-5015		1,107	KY130	Lexington-Fayette County HA	1,301
CA073	Housing Authority City of Napa	1,108	IL022	HA Rockford	1,302
TX392	Denton	1,108	FL091	City of Fort Myers	1,304
SC001	H/A of Charleston	1,109	NC011	HA Greensboro	1,304
IN006	Anderson HA	1,118	PA046	Housing Authority of the County of Chester	1,309
MA023	Lynn Housing Authority	1,119	NC007	HA Asheville	1,324
AL006	H/A City of Montgomery	1,120	TX452	Bexar County Hsg Authority	1,328
WV005	Parkersburg Housing Authority	1,123	TX434	Grand Prairie	1,332
VA011	Roanoke Redevelopment & H/A	1,125	WV037	HA of Mingo County	1,335
AL169	HA Prichard	1,131	CA079	Pasadena Housing Authority	1,336
IA024	City of Cedar Rapids	1,134	UT004	Salt Lake City	1,337
OR016	HA of Yamhill County	1,141	PA022	York City Housing Authority	1,337
LA006	Monroe Housing Authority	1,146	CO002	Pueblo	1,350
VA001	Portsmouth Redevelopment & H/A	1,156	GA002	HA Savannah	1,362
NY009	Albany Housing Authority	1,161	NH001	Manchester Housing Authority	1,362
NJ912-3640		1,161	TN004	Chattanooga H/A	1,363
NY902-6840		1,165	CA143	Imperial Valley Hsg Authority	1,364

Exhibit A-1 *(Continued)*
Sampling Frame

PHA Number	PHA Name	Certs & Vouchers	PHA Number	PHA Name	Certs & Vouchers
CA043	County of Butte Hsg Authority	1,374	FL068	H/A City of Homestead	1,618
GA228	HA Jonesboro	1,375	VA004	Alexandria Redevelopment & H/A	1,619
IL003	Peoria HA	1,387	TX023	Beaumont	1,629
FL009	HA West Palm Beach General Fun	1,388	PA012	Montgomery County Housing Authority	1,631
OH016	Mansfield MHA	1,394	GA007	HA Macon	1,631
AZ009	Maricopa County Hsg Authority	1,399	WA039	HA of Snohomish County	1,655
WA008	HA City of Vancouver	1,402	PA018	Westmoreland County Housing Authority	1,681
TX441	Harris County Hsg Authority	1,405	NV002	City of Las Vegas Hsg Auth,	1,697
CA023	County of Merced Hsg Auth.	1,420	CA102	Garden Grove Hsg Authority	1,699
CA055	City of Vallejo	1,427	FL080	HA Palm Beach County	1,714
CO028	Colorado Springs Housing Authority	1,431	NC002	Raleigh HA	1,717
SD016	Sioux Falls	1,438	NJ912-6160		1,719
TX007	Brownsville Housing Authority	1,454	MA901-8000		1,750
CA062	City of Alameda Hsg Authority	1,457	MA003	Cambridge Housing Authority	1,755
AR004	HA of The City of Little Rock	1,466	FL092	City of Pensacola Section 8	1,760
CA064	San Luis Obispo Hsg Authority	1,467	TX526	Brazos Valley Development Coun	1,774
NC145	Economic Improv Council, Inc	1,470	KS004	Wichita Housing Authority	1,796
TX499	Ark-Tex Cog	1,475	TX481	Panhandle Community Services	1,824
CA031	Oxnard Housing Authority	1,478	NJ912-5190		1,830
NC001	HA Wilmington	1,491	MS019	Miss Reg Housing Authority Iv	1,830
CA076	Santa Barbara Hsg Authority	1,492	FL089	Hillsborough County-Bocc	1,838
NC009	Fayetteville Metropolitan H/A	1,507	MO199	Lincoln County Pub Housing Agency	1,839
TX010	Waco	1,519	CA058	City of Berkeley Housing Authority	1,841
OH002	Youngstown MHA	1,526	NV001	City of Reno Housing Authority	1,851
LA004	Lake Charles Hsg Authority	1,526	CA052	County of Marin Hsg Authority	1,860
NJ204	Gloucester Housing Authority	1,537	RI001	Providence H A	1,861
TX431	Tarrant County	1,544	GA001	HA Augusta	1,863
ME003	Portland Housing Authority	1,548	OH048	Hamilton County Public Hsg	1,879
CT003	Hartford Housing Authority	1,565	VA017	Hampton Redevelopment & Housing Authority	1,885
UT003	Salt Lake County	1,569	LA013	Jefferson PH HA, Sec.8 Program	1,892
IN015	South Bend HA	1,573	TN003	Knoxville Community Devel Corp	1,899
MI073	Grand Rapids Housing Comm.	1,575	SC002	HA Columbia	1,924
OR022	HA Washington County	1,578	CA093	Santa Ana Housing Authority	1,933
IN016	HA City of Evansville	1,586	WI218	Milwaukee Co HA	1,942
MA007	New Bedford Housing Authority	1,591	IL030	St Clair County HA	1,967
NC013	HA Durham	1,607	SC004	HA Greenville	1,973
IN003	Fort Wayne HA-City of Fort Way	1,607	MA035	Springfield Housing Authority	1,974
DE005	New Castle County	1,613	LA002	Shreveport Housing Authority	1,984
TX034	Port Arthur	1,614	WA054	Pierce County HA	1,993
MA012	Worcester Housing Authority	1,614	MN147	Dakota County HRA	1,994
CA010	City of Richmond Hsg Authority	1,616	IL101	Dupage County Illinois	2,007
LA003	East Baton Rouge Parish HA	1,616	FL002	St. Petersburg H/A	2,016

Exhibit A-1 *(Continued)*
Sampling Frame

PHA Number	PHA Name	Certs & Vouchers	PHA Number	PHA Name	Certs & Vouchers
CA085	County of Sonoma	2,067	GA237	H/A Dekalb County	2,723
IL056	Lake County HA	2,121	NJ002	Newark Housing Authority	2,728
VA007	Richmond Redevelopment & H/A	2,121	VA019	Fairfax Co Red and Housing Authority	2,739
PA023	Delaware County Hsg Authority	2,126	FL066	Hialeah H/A	2,766
TX433	Arlington	2,130	NM001	Albuquerque Housing Authority	2,767
PA051	Bucks County Hsg Authority	2,151	NJ912-5640		2,843
NV013	County of Clark Hsg Authority	2,157	KY131	City of Louisville HA	2,846
MA006	Fall River Housing Authority	2,181	OK901-5880		2,846
VA003	Newport News Redevelopment & H	2,196	NE002	Housing Authority of Lincoln	2,855
TX482	Central Texas Cog	2,197	CA101	Los Angeles County Hsg Authority	2,861
TX001	Austin Housing Authority	2,203	NY001	HA of Syracuse	2,881
TX559	Dallas County	2,229	CA033	County of Monterey Housing Authority	2,886
IA020	Des Moines Municipal Housing A	2,289	WI186	Brown County HA	2,889
FL004	Orlando H/A	2,293	AZ004	Tucson Housing Management Div	2,921
CA030	Tulare County Hsg Authority	2,325	CA028	County of Fresno Housing Authority	3,006
GA901-520		2,327	CA024	County of San Joaquin Housing	3,015
CA072	Santa Cruz County Housing Authority	2,339	OK002	Oklahoma City	3,120
OR006	HA & Comm Svcs Agency Lane Co	2,341	FL079	Broward County Housing Authority	3,148
AL002	Mobile Housing Board	2,410	TX004	Fort Worth	3,161
WA005	HA City of Tacoma	2,422	CA006	City of Fresno Hsg Authority	3,211
CA092	Area Housing Authority of Ventura County	2,432	MI901-2160		3,211
OR011	HA City of Salem	2,435	FL003	HA Tampa	3,222
NJ067	Bergen County HA	2,465	MD015	Hsg Auth. Prince Georges Co	3,230
VA006	Norfolk Redevelopment & H/A	2,468	AL001	Hsg Auth. of Birmingham Dis	3,241
CT001	Bridgeport Housing Authority	2,473	KY105	Jefferson County HA	3,347
CA021	Santa Barbara County Housing Authority	2,473	WA002	HA County of King	3,364
FL017	HA Miami Beach	2,508	CT004	Housing Authority of City of New Haven	3,402
OH005	Dayton Metropolitan HA	2,516	CA007	County of Sacramento	3,404
NY903-5380		2,524	CA026	County of Stanislaus Hsg Auth.	3,443
WA055	HA City of Spokane	2,570	NY409	City of Buffalo	3,459
CA008	Kern County Housing Authority	2,571	TX003	El Paso	3,487
OH012	Lorain MHA	2,613	CT051	City of Hartford	3,553
NJ009	Jersey City Housing Authority	2,620	MN001	St Paul PHA	3,580
NC012	HA Winston-Salem	2,654	TN005	Metropolitan Development & Housing	3,588
FL062	Pinellas County H/A	2,687	CA014	County of San Mateo Housing Authority	3,594
OH006	Lucas MHA	2,700	OH007	Akron MHA	3,613
NC003	HA Charlotte	2,710	NE001	Omaha Housing Authority	3,651

Exhibit A-1 *(Continued)*
Sampling Frame

PHA Number	PHA Name	Certs & Vouchers
OK073	Tulsa	3,712
NY091	Town of Amherst	3,714
MS058	Miss Regional H/A Vi	3,730
CA005	City of Sacramento	3,767
NY041	HA of Rochester	3,782
MS040	Miss Regional H/A Viii	3,861
CA104	Anaheim Housing Authority	3,886
WA001	HA City of Seattle	3,992
MD004	Montgomery Co Hsg Authority	3,997
AZ001	City of Phoenix	4,046
CO001	Denver	4,076
MI001	Detroit Housing Commission	4,163
CA056	San Jose Housing Authority	4,264
PA006	Allegheny County Hsg Auth.	4,329
MN002	Minneapolis PHA	4,332
NY903-5600		4,353
MA901-1120		4,454
MD033	Baltimore Co. Housing Office	4,515
TN001	HA Memphis	4,523
MO004	St. Louis County Hsg Authority	4,589
CA001	San Francisco Hsg Authority	4,997
PA001	Hsg Authority City of Pittsburg	5,012
MO001	St. Louis Housing Authority	5,080
CA067	Alameda County Hsg Authority	5,165
OH004	Cincinnati Metropolitan Housing Authority	5,224
MO002	H.A.K.C.	5,234
OR002	HA of Portland	5,338
CA068	Long Beach Housing Authority	5,370
MN163	Metropolitan Council HRA	5,381
FL001	Hsg Authority of Jacksonville	5,438
CA019	San Bernardino County Housing Authority	5,601
CA011	County of Contra Costa Housing Authority	5,618
WI002	HA of The City of Milwaukee	5,640
IN017	City of Indianapolis	5,700
DC001	D.C Housing Authority	6,211
CA059	County of Santa Clara Housing	6,415
CA027	Riverside County Hsg Authority	6,429
OH001	Columbus Metro. HA	6,478
LA001	New Orleans Housing Authority	6,985
CA094	Orange County Hsg Authority	7,408
CA108	San Diego County Hsg Auth.	7,982
CA063	San Diego Hsg Commission	8,399
OH003	Cuyahoga MHA	8,696
MA002	Boston Housing Authority	9,018
CA003	Oakland Housing Authority	9,422
TX006	San Antonio Housing Authority	9,585
GA006	HA Atlanta GA	9,658
MD002	Housing Authority of Baltimore	9,715
IL025	HA of Cook County	10,117
FL005	Miami Dade Housing Authority	10,249
TX005	Houston Housing Authority	10,286
PA002	Philadelphia Housing Authority	11,319
TX009	Dallas	11,340
CA002	Los Angeles County Hsg Auth.	14,947
NY110	City of New York	15,934
IL002	Chicago Housing Authority	25,233
CA004	City of Los Angeles Hsg Auth.	37,251
NY005	New York City Hsg Authority	76,980
TOTAL		1034756

A.2 Sample Selection

This section discusses the process for the actual selection of PHAs and voucher holders from among the 406 sites in the sampling frame.

Stratification

We did not stratify the population of PHAs by geography or other possible variables of stratification. Reasons for stratifying at the PHA level for sampling might be: (a) to get a larger sample of a certain type of PHA to get more precise subgroup estimates for that type of PHA; (b) to increase the precision of estimates (for a given sample size) by assuring proportionate sampling of groups of PHAs with different expected average outcomes; or (c) to over-sample groups of PHAs with higher variances of the outcome measures of interest. Given the information available prior to data collection, we did not believe there were any compelling stratifying characteristics.

There was no reason to believe that success rates varied greatly by geographic regions such as Census regions, so there was no reason to stratify by geographic region. Also, since we selected the sample with probability proportional to size, we wanted to ensure that large and medium size agencies had the same probability of being included in the sample irrespective of location.

We also considered stratifying based on an estimate of market tightness. We did assume that there is a relationship between success rates and market tightness. Thus, it was important to include PHAs with a range of vacancy rates in our sample. Nevertheless, we did not stratify based on market tightness for the following reasons:

- Based on our experience with other studies, such as the 1994 study of success rates, we expected that a random sample of sites would naturally yield a range of market conditions, so that stratifying by market tightness was not necessary.

- It would be very difficult to obtain an appropriate measure of market tightness that could have been used for stratification. In order to be used for stratification, a variable must be available for all PHAs in the sampling frame. Potential measures of market tightness included vacancy rates or days units remain vacant until lease-up. There are no current, consistent, comprehensive sources of data on either of these measures. The Census Housing Vacancy and Homeownership Survey provides fairly current information on rental vacancies, but only for the 75 largest metropolitan areas in the country, and only one rate for the entire area. The 1990 Census provides vacancy rates for smaller areas, but is not current enough for this study. No consistent measures of time to lease are available.

While we did not stratify the sample based on market tightness, we obtained estimates of market tightness for the study sample of PHAs for both the market as a whole and for the

portion of the market affordable to voucher holders. These measures of market tightness were based on interviews with PHA staff and other knowledgeable experts in each market. These measures were used to investigate the relationship between success rates and market tightness.

First Stage Sampling: PHAs

The goal of the first stage sampling was to include 50 PHAs in the study. This represents almost one-eighth of the 406 PHAs in our sampling universe. A sample of 50 PHAs was expected to be large enough to ensure representativeness of the wide range of market conditions and voucher types currently being issued. In the 1994 study of success rates a smaller number of sites was required. At that time programs were more homogeneous in terms of the types of vouchers being issued because there were fewer special programs. With more special programs, more PHAs were needed in the sample to increase the representativeness of the types of vouchers that voucher holders in our sample received. A larger PHA-level sample was also necessitated by the research objectives for this study. Almost all of the research objectives are investigations of the relationship between success rates and factors that vary across PHAs (e.g., market conditions, demographic characteristics of voucher recipients, and PHA policies and procedures). Thus the more PHAs in the sample the better for these investigations. In deciding on a sample of 50 PHAs we balanced the study's analytic goals with budget constraints. Including additional PHAs would have required more resources for all the data collection activities associated with each site: interviewing staff on PHA policies and procedures, training and providing technical assistance for using the automated tracking software, maintaining biweekly contact with each site, collecting and reviewing data from each PHA, and interviewing other local experts on market conditions in the PHA's jurisdiction. In balancing analytic requirements and budget constraints we decided on a sample of 50 PHAs.

To be sure that we ended up with 50 PHAs that were eligible for the study (i.e., issuing at least 50 vouchers over first four months of the study) and willing to participate, we randomly selected 100 of the 406 PHAs using the probability proportionate to size (PPS) sampling method. The advantages of PPS sampling for this study are twofold. First, unless size is strongly associated with success rates, PPS sampling would be expected to produce more precise national estimates by increasing the probability that selected sites will cover a large portion of voucher holders. Second, PPS sampling can be used to create an approximately self-weighting sample of voucher holders with roughly equal numbers of observations in each sampled sites. This is very useful for analyses of success rates including both individual and PHA-level characteristics.

With PPS sampling, a PHA having a large number of voucher holders will have a larger probability of selection than a PHA with a small number of voucher holders. For example, a PHA with 4,000 vouchers will have twice the probability of being included in the sample as a PHA with 2,000 vouchers. This procedure ensures that the number of voucher holders associated with the sample of sites selected will account for large proportion of the voucher

holders in the population. If we had selected a simple random sample of sites, we might have selected only small sites and, therefore, not have represented a large proportion of voucher holders. For example, a simple random sample of sites could have excluded the New York City PHA representing almost 77,000 vouchers.

We used the number of current reserved vouchers and certificates as our measure of size rather than the number of expected issuances during the study period. This is because our experience from other studies was that PHAs often cannot accurately predict upcoming issuances. This was the case in the 1994 study of success rates, in which several PHAs that expected to issue a large number of vouchers and certificates during the study period in fact issued none. The ability to forecast issuances is further complicated by special allocations and set-asides. For example, from our recent work on case studies of conversion of properties from property-based to tenant-based assistance we know that PHAs cannot predict issuances associated with opt-outs and prepayments. Often the final decision on whether an owner will opt out is not made until close to the actual expiration of the contract. Although Welfare to Work vouchers were expected to be issued within one year of award at each site, it was not clear how well the timing of the study's data collection would coincide with these issuances. As a result, we decided *not to* include the Welfare to Work Vouchers in our measure of size for sampling.

All 100 of the selected PHAs were contacted as part of the screening and recruitment effort.

PHAs in Initial Sample of 100. The 100 PHAs selected for the initial sample are shown in Exhibit A-2 along with their measure of size and initial first-stage sampling weights. The initial first-stage sampling weights are equal to the inverse probability of selection (discussed below). The 15 largest PHAs, with a total of 271,054 certificates and vouchers, were selected with certainty because each accounted for more than 1/100th of the total sample. Certainty sites were identified iteratively. Below, we describe the PPS procedure that selected the initial 100 sites.

In the PPS procedure each site is associated with the number of vouchers in the site.

Let X_i be the number of vouchers in the ith PHA. Let there be N PHAs in the sampling frame. Calculate the total number of vouchers in the sampling frame:

$$X = \sum_{i=1}^{N} X_i$$

Exhibit A-2
Sample of 100 PHAs Selected with Probability Proportional to Size
(Measure of Size is Certificates and Vouchers Reserved as of PHA's end of FY 1999)

Site. No.	HA_NUM	Site Name	Measure of Size	Initial First-Stage Sampling Weight
1	NY005	NYC HA	76,980	1.0
2	CA004	City of LA	37,251	1.0
3	IL002	Chicago HA	25,233	1.0
4	NY110	City of New York	15,934	1.0
5	CA002	LA County	14,947	1.0
6	TX009	Dallas	11,340	1.0
7	PA002	Philadelphia HA	11,319	1.0
8	TX005	Houston HA	10,286	1.0
9	FL005	Miami Dade HA	10,249	1.0
10	IL025	HA of Cook Cty	10,117	1.0
11	MD002	HA of Baltimore	9,715	1.0
12	GA006	HA Atlanta	9,658	1.0
13	TX006	San Antonio	9,585	1.0
14	CA003	Oakland	9,422	1.0
15	MA002	Boston HA	9,018	1.0
16	OH003	Cuyahoga MHA	8,696	1.03
17	CA063	San Diego HSG Commission	8,399	1.07
18	CA108	San Diego CTY HA	7,982	1.13
19	LA001	New Orleans HA	6,985	1.29
20	OH001	Columbus MHA	6,478	1.39
21	CA027	Riverside CTY HA	6,429	1.40
22	DC001	DC HA	6,211	1.45
23	IN017	City of Indianapolis	5,700	1.58
24	CA011	CTY of Contra Costa HA	5,618	1.60
25	CA019	San Bernardino CTY HA	5,601	1.61
26	MN163	Metro Council	5,381	1.67
27	OR002	HA of Portland	5,338	1.69
28	OH004	Cincinnati MHA	5,224	1.72
29	CA067	Alameda CTY HA	5,165	1.74
30	PA001	HA of City of Pittsburgh	5,012	1.80
31	MO004	St. Louis CTY HA	4,589	1.96
32	MD033	Baltimore CTY HSG Office	4,515	1.99
33	NY905	NY903-5600	4,353	2.07
34	PA006	Allegheny CTY HA	4,329	2.08
35	MI001	Detroit Hsg Comm	4,163	2.16
36	AZ001	City of Phoenix	4,046	2.22
37	MD004	Montgomery CTY HA	3,997	2.40
38	MS040	Miss Regional HA VIII	3,861	2.33

Exhibit A-2 *(Continued)*
Sample of 100 PHAs Selected with Probability Proportional to Size
(Measure of Size is Certificates and Vouchers Reserved as of PHA's end of FY 1999)

Site. No.	HA_NUM	Site Name	Measure of Size	Initial First-Stage Sampling Weight
39	CA005	City of Sacramento	3,767	2.39
40	OK073	Tulsa	3,712	2.42
41	OH007	Akron MHA	3,613	2.49
42	MN001	St Paul PHA	3,580	2.51
43	TX003	El Paso	3,487	2.58
44	CA007	CTY of Sacramento	3,404	2.64
45	WA002	HA CTY of King	3,364	2.68
46	MD015	HA Prince Georges CTY	3,230	2.79
47	CA006	City of Fresno HA	3,211	2.80
48	OK002	Oklahoma City	3,120	2.89
49	AZ004	Tucson Hsg Mgmt Div	2,921	3.08
50	NY001	HA of Syracuse	2,881	3.12
51	OK905	OK901-5880	2,846	3.16
52	NM001	Albuquerque HA	2,767	3.25
53	NJ002	Newark HA	2,728	3.30
54	FL062	Pinellas CTY HA	2,687	3.35
55	OH012	Lorain MHA	2,613	3.45
56	OH005	Dayton Metro HA	2,516	3.58
57	CT001	Bridgeport HA	2,473	3.64
58	CA092	Area HA of Ventura CTY	2,432	3.70
59	CA072	Santa Cruz CTY HA	2,339	3.85
60	IA020	Des Moines Municipal HA	2,289	3.93
61	VA003	Newport News Redevelopment & HSG	2,196	4.10
62	TX433	Arlington	2,130	4.23
63	CA085	Cty of Sonoma	2,067	4.36
64	LA002	Shreveport	1,984	4.54
65	WI218	Milwaukee CTY HA	1,942	4.64
66	VA017	Hampton Redevel & HSG	1,885	4.78
67	NV001	City of Reno HA	1,851	4.86
68	NJ915	NJ912-5190	1,830	4.92
69	MA003	Cambridge HA	1,755	5.13
70	CA102	Garden Grove HA	1,699	5.30
71	PA012	Montgomery CTY HA	1,631	5.52
72	MA012	Worcester HA	1,614	5.58
73	MA007	New Bedford HA	1,591	5.66
74	CT003	Hartford HA	1,565	5.75
75	TX010	Waco	1,519	5.93
76	NC145	Economic Improvement Council	1,470	6.13

Exhibit A-2 *(Continued)*
Sample of 100 PHAs Selected with Probability Proportional to Size
(Measure of Size is Certificates and Vouchers Reserved as of PHA's end of FY 1999)

Site. No.	HA_NUM	Site Name	Measure of Size	Initial First-Stage Sampling Weight
77	CO028	Colorado Springs HA	1,431	6.30
78	FL009	HA West Palm Beach General Fund	1,388	6.49
79	GA002	HA Savannah	1,362	6.61
80	TX434	Grand Prairie	1,332	6.76
81	KY130	Lexington-Fayette CTY HA	1,301	6.92
82	WA006	HA City of Everett	1,265	7.12
83	NJ013	Passaic HA	1,238	7.27
84	NY028	HA Schenectady	1,216	7.40
85	DE001	Wilmington HA	1,167	7.72
86	AL169	HA Prichard	1,131	7.96
87	TX392	Denton	1,108	8.13
88	CA035	San Buenaventura HA	1,089	8.27
89	NV007	North Las Vegas HA	1,066	8.45
90	MA031	Somerville HA	1,034	8.71
91	CA105	Burbank HA	1,014	8.88
92	NY449	City of Buffalo HA	1,000	9.00
93	MI045	Plymouth HA	978	9.21
94	IA117	Southern Iowa Reg HA	948	9.50
95	MI009	Flint HA	928	9.70
96	AZ035	City of Yuma HA	899	10.01
97	TX455	Odessa	876	10.28
98	TX008	Corpus Christi HA	847	10.63
99	NC166	Northwest Piedmont CTY HA	832	10.82
100	WI195	Kenosha HA	808	11.14

Associate the numbers 1 to X_1 with PHA 1, the numbers X_1+1 to X_2 with PHA 2, the numbers X_1+X_2+1 to X_3 with PHA 3. Do this for all N PHAs in the sampling universe. Assume we want a sample of n sites.

Compute $K = \frac{X}{n}$. Generate a random number between 1 and K.

Let this be "r" . Form the numbers $r, r+K, r+2K, r+3K.....r+(n-1)K.$

Select those sites for the which the range of numbers associated with the site, contain the numbers formed above starting with the random number. According to this procedure the probability of including the i th site in the sample is

$$\pi_i = n\frac{X_i}{X}.$$

(The inverse of the sampling probability is the initial sampling weight.) For some sites in which X_i is large, it may happen that $n\,X_i \succ X$. This means that the probability of selection is greater than one. All such sites are included in the sample with certainty. The new sample size to be selected is the original sample size minus the certainty units. This sample of this size is now selected with probability proportional to the remaining sizes. In all, the 15 largest sites were selected with certainty.

The remaining 85 PHAs were chosen with probability proportionate to size, but none were selected with certainty. That means, if a different random number happened to be generated (the number "r" above), a different sample of 85 PHAs would be selected. This sample of 85 non-certainty sites is only one of many possible samples that could have been chosen (the 15 certainty sites would have been selected no matter what random number was generated), and thus the final sample of 50 PHAs was only one of many samples that could have been chosen. All estimates from the sample have standard errors associated with them to reflect the range of estimates that could be expected if a different sample had been selected. The only way to avoid this sampling error is to select all sites in the sampling universe (i.e., do a census).

Results of Initial Screening Calls with the 100 PHAs

The initial screening calls with the 100 sampled PHAs yielded the following results:

	Certainty Sites	Non-Certainty Sites	Total
Willing and Eligible	13	57	70
Not Eligible	0	16[A]	16
Not Willing, but eligible	2	7	9
Not Willing, eligibility unknown	0	5	5
Total	15	85	100

[A] Sixteen of the selected sample were ineligible because they either did not expect to have enough issuances ***in metropolitan*** areas during the study period (14 sites); or they were not operating a standard program (2 sites with numerous waivers associated with their Moving to Work programs).

Adjustments to Initial First Stage Sampling Weights to Account for Ineligible and Unwilling PHAs

As a result of the information on ineligible and unwilling PHAs obtained during the screening calls, several adjustments needed to be made to the first stage sampling weights and to estimates of the eligible universe represented by the sample. Separate adjustments were made to the weights for certainty and non-certainty sites.

Certainty Sites. None of the certainty sites were found to be ineligible during the initial screening calls. Thus, our estimate of the eligible universe in these sites remained 271,054 vouchers. However, two of the 15 certainty sites were not willing to participate in the study. We treated these refusals as if they were a random sub-sample of the set of certainty sites and assigned their weights to the other certainty sites so that the total weight for this group of PHAs remained at 15. The initial first-stage sampling weight for each certainty site was 1, so the adjustment for each site's weight was 15/13 * 1 = 1.154.

A total of 16 non-certainty sites were found to be ineligible based on the screening calls. These 16 sites, with a total weight of 87.39 (45,519 units) represent 144,095 units in the universe. No adjustments were made to the initial first-stage sampling weights to account for these ineligible PHAs, because they represent other ineligible PHAs in the universe. Instead the impact of these 16 sites was to reduce our estimate of the eligible universe by 144,095 units. Of the 16 ineligible PHAs, two sites had numerous waivers connected with the Moving to Work (MTW) program and were not operating standard programs, while 14 sites, were ineligible because they did not expect to have enough issuances in metropolitan areas within the study period. These 14 sites had a total weight of 80.57 (38,426 units) representing 126,071 units in the universe.

Seven non-certainty sites were unwilling to participate in the study, but were assumed eligible based on their responses to the initial contact. These seven sites, with a total weight of 38.83 (16,292 units) represent 63,613 units in the universe. We treated these seven refusals as if they were a random subsample of the eligible non-certainty sites and allocated their weight to the remaining 57 willing and eligible non-certainty sites to preserve the total weight of this group of PHAs.

Five non-certainty sites were unwilling to participate in the study, but we could not determine their eligibility based on their responses to the initial contact. These five sites, with a total weight of 26.21 (11,501 units) represent 45,013 units in the universe. Based on what was known about the eligibility status of all ineligible and refusals we allocated a portion of the weight of this group of PHAs to the ineligible and to the eligible but unwilling categories. As noted above the total weight of the standard program (non-MTW) ineligibles was 80.57 and the total weight for refusals was 38.83. We allocated 80.57/ (80.57+38.83) of

the weight of the unknowns to the ineligible category (17.69), and 38.83/(80.57+38.83) of the weight of the unknowns to the refusal category (8.52). The table below summarizes the revised initial first-stage sampling weights and universe estimates:

	Certainty Sites	Non-Certainty Sites	Total
Initial Sample Size	15	85	100
Sum of Weights	15	391	406
Units in the PHAs	271,054	249,039	520,893
Total Initial Universe Estimate	271,054	765,744	1,036,798
Final Sample Size	13	57	70
Sum of Weights (Excludes Ineligibles)	15	287	302
Units in the PHAs	243,801	175,727	419,528
Final Universe Estimate (Excludes Ineligibles)	271,054	614,334	895,643

One concern that is raised by the number of unwilling sites is the degree of representativeness of the sample. To that end, separately for certainty and non-certainty sites, we compared some characteristics of the willing/eligible and unwilling/eligible sites along some key dimensions such as PHA size, tenant characteristics (income, race, household composition), area vacancy rates, and census tract characteristics (percent poverty and percent minority). Along all dimensions the unwilling sites were within the range of the minimum/maximum for the willing sites.

Selection of 50 PHAs

We selected a subsample of 50 PHAs from the 70 PHAs that were both willing and eligible based on the initial screening and recruitment effort. At this stage, the largest five sites were selected with certainty, and the remaining 45 sites were selected using systematic sampling after ordering all PHAs by size. Systematic sampling is selecting every nth site where n is the inverse of the fraction of sites to be selected. For example, since there were 70 sites remaining after eligibility and willingness to participation were determined and 5 sites were selected with certainty, then we needed to select 45 of the remaining 65 sites. Thus, the remaining 65 PHAs were ordered by size and every $65/45^{th}$ site was selected (65/45 = the inverse of 45/65). Thus, all non-certainty sites had an equal selection probability at this stage and we maintained a similar distribution of PHAs by size as in the initial selection.

Once data collection began, two additional sites were dropped from the study. The City of Buffalo Housing Authority was selected to be in the study. However, we mistakenly recruited the Buffalo Municipal Housing Authority to participate. The Buffalo Municipal Housing Authority was not in our sampling frame because they did not have a Section 8 Program until 2000 (or possibly late 1999). They received some vouchers as part of a public housing litigation settlement and then applied for, and received, some vouchers for persons with a disability. Because of staff limitations, they only provided records on 20 (rather than 50) families searching for S8 housing. All were vouchers for persons with a disability. Also their sample was picked retrospectively (i.e., after some people had found housing and others

had a chance to look already). At the other study sites, the sample was picked when the voucher was issued rather than after the families had some time to search. Thus the weights for the 44 remaining non-certainty sites were multiplied by 45/44 to account for the loss of this site.

The second site, San Antonio was dropped because it turned out that no vouchers were to be issued during the study's data collection period making it ineligible for the study. The site provided a sample of 50 voucher holders who were issued vouchers during January of 2000, which was prior to the study's data collection window. As a result, the observations were not included in the study analysis. No changes in weights result from dropping San Antonio, as it was ineligible and represents other ineligible sites. However, our estimate of the eligible universe is affected. The units represented by the observations in San Antonio totaled 16,388 (1.7 was the PHA weight multiplied by 9585 units). Thus our final universe estimate for certainty sites and overall decrease by that number. Our revised final universe estimates are:

Revised Final Universe Estimate (Excludes San Antonio)	254,666	614,334	879,255

Exhibit A-3 shows the final sample of 48 PHAs used in the analysis along with their final weights. The final weight is the product of the initial first stage sampling weight multiplied by the adjustment for selecting a sample of willing and eligible properties (1 for the second stage certainty sites, and 65/45 for the remaining sites), multiplied by the adjustment for the dropping Buffalo (1 for the second stage certainty sites, and 45/44 for the remaining sites).

Exhibit A-3
Sample of 48 PHAs

HA_NUM	Site Name	MOS	Initial First-Stage Sampling Weight Stage WT	Rvsd WT\Control for Non-Response	Control for Selection of 50	Final PHA Wt
NY005	NYC HA	76,980	1.00	1.15	1.00	1.15
CA004	City of LA	37,251	1.00	1.15	1.00	1.15
IL002	Chicago HA	25,233	1.00	1.15	1.00	1.15
CA002	LA County	14,947	1.00	1.15	1.00	1.15
TX009	Dallas	11,340	1.00	1.15	1.00	1.15
FL005	Miami Dade HA	10,249	1.00	1.15	1.48	1.70
IL025	HA of Cook County	10,117	1.00	1.15	1.48	1.70
GA006	HA Atlanta	9,658	1.00	1.15	1.48	1.70
MA002	Boston HA	9,018	1.00	1.15	1.48	1.70
OH003	Cuyahoga MHA	8,696	1.03	1.23	1.48	1.82
CA063	San Diego HSG Commission	8,399	1.07	1.28	1.48	1.89
LA001	New Orleans HA	6,985	1.29	1.54	1.48	2.28
DC001	DC HA	6,211	1.45	1.74	1.48	2.57
IN017	City of Indianapolis	5,700	1.58	1.89	1.48	2.80
MN163	Metro Council	5,381	1.67	2.00	1.48	2.95
CA067	Alameda CTY HA	5,165	1.74	2.08	1.48	3.08
MO004	St. Louis CTY HA	4,589	1.96	2.35	1.48	3.47
MD033	Baltimore CTY HSG Office	4,515	1.99	2.38	1.48	3.52
PA006	Allegheny CTY HA	4,329	2.08	2.49	1.48	3.68
MI001	Detroit Hsg Comm	4,163	2.16	2.59	1.48	3.82
AZ001	City of Phoenix	4,046	2.22	2.66	1.48	3.93
CA005	City of Sacramento	3,767	2.39	2.86	1.48	4.23
OK073	Tulsa	3,712	2.42	2.90	1.48	4.28
OH007	Akron MHA	3,613	2.49	2.98	1.48	4.40
TX003	El Paso	3,487	2.58	3.09	1.48	4.56
MD015	HA Prince Georges CTY	3,230	2.79	3.34	1.48	4.94
CA006	City of Fresno HA	3,211	2.80	3.35	1.48	4.95
OK002	Oklahoma City	3,120	2.89	3.46	1.48	5.11
AZ004	Tucson Hsg Mgmt Div	2,921	3.08	3.69	1.48	5.45
NY001	HA of Syracuse	2,881	3.12	3.74	1.48	5.52
NM001	Albuquerque HA	2,767	3.25	3.89	1.48	5.75
NJ002	Newark HA	2,728	3.30	3.95	1.48	5.84
FL062	Pinellas CTY HA	2,687	3.35	4.01	1.48	5.93
OH005	Dayton Metro HA	2,516	3.58	4.29	1.48	6.33
CT001	Bridgeport HA	2,473	3.64	4.36	1.48	6.44
IA020	Des Moines Municipal HA	2,289	3.93	4.71	1.48	6.95

Exhibit A-3 *(Continued)*
Sample of 48 PHAs

HA_NUM	Site Name	MOS	Initial First-Stage Sampling Weight Stage WT	Rvsd WT\Control for Non-Response	Control for Selection of 50	Final PHA Wt
VA003	Newport News Redevelopment & HSG	2,196	4.10	4.91	1.48	7.25
WI218	Milwaukee CTY HA	1,942	4.64	5.56	1.48	8.21
NJ915	NJ912-5190	1,830	4.92	5.89	1.48	8.70
PA012	Montgomery CTY HA	1,631	5.52	6.61	1.48	9.76
CT003	Hartford HA	1,565	5.75	6.89	1.48	10.17
TX434	Grand Prairie	1,332	6.76	8.09	1.48	11.96
KY130	Lexington-Fayette CTY HA	1,301	6.92	8.29	1.48	12.24
WA006	HA City of Everett	1,265	7.12	8.53	1.48	12.60
CA035	San Buenaventura HA	1,089	8.27	9.90	1.48	14.63
MI045	Plymouth HA	978	9.21	11.03	1.48	16.29
TX008	Corpus Christi HA	847	10.63	12.73	1.48	18.80
WI195	Kenosha HA	808	11.14	13.34	1.48	19.71

Second Stage Sampling: Voucher Holders

The second stage sampling involved selecting specific voucher holders in each of the selected sites. Our goal was to sample the first 50 voucher holders following training in each non-certainty site. In the certainty sites more than 50 voucher holders were sampled in order to preserve a self-weighting sample. As with the other sites, the sample consisted of the first cases in the site following the training. Thus, the initial second stage sampling weight equals the measure of size (MOS) divided by the target sample size of voucher holders.

In fact, the number of voucher holders in several sites was different from the target. Thus, the final second stage weights of the sampled voucher holders reflect the actual sample sizes. (MOS/actual sample size of voucher holders). In sites where data were provided on more than 50 voucher holders, the final second stage weight for each voucher holders is less than the initial second stage weight, and in sites where data were provided on fewer than 50 voucher holders, the final second stage weight for each voucher holder is greater than the initial second stage weight. The final analytic weight for each voucher holders is the product of the final first stage weight (PHA weight) times the final second stage weight (voucher holder weight). Exhibit A-4 shows the target and actual number of voucher holders sampled in each site, the initial and final second stage weights for voucher holders in each site, and the final analytic weight for voucher holders in each site.

Exhibit A-4
Final Weights for Voucher Holders

HA_NUM	Site Name	MOS	Target Response	Initial Voucher Holder Weight (MOS/Target)	Actual Response	Final Second Stage Weight (MOS/Actual)	Final First Stage Weight (PHA Weight)	Final Weight (1st Stage Wt* 2nd Stage Wt)
NY005	NYC HA	76,980	257	299.53	239	444.97	1.15	513.43
CA004	City of LA	37,251	125	298.01	125	298.01	1.15	343.86
IL002	Chicago HA	25,233	85	296.86	85	296.86	1.15	342.53
CA002	LA County	14,947	50	298.94	51	293.08	1.15	338.17
TX009	Dallas	11,340	50	226.80	50	226.80	1.15	261.69
FL005	Miami Dade HA	10,249	50	204.98	54	189.80	1.70	323.52
IL025	HA of Cook Cty	10,117	50	202.34	50	202.34	1.70	344.90
GA006	HA Atlanta	9,658	50	193.16	50	193.16	1.70	329.25
MA002	Boston HA	9,018	50	180.36	50	180.36	1.70	307.43
OH003	Cuyahoga MHA	8,696	50	173.92	58	149.93	1.82	273.19
CA063	San Diego HSG Commission	8,399	50	167.98	50	167.98	1.89	317.96
LA001	New Orleans HA	6,985	50	139.70	50	139.70	2.28	318.80
DC001	DC HA	6,211	50	124.22	42	147.88	2.57	379.32
IN017	City of Indianapolis	5,700	50	114.00	49	116.33	2.80	325.14
MN163	Metro Council	5,381	50	107.62	50	107.62	2.95	317.94
CA067	Alameda CTY HA	5,165	50	103.30	49	105.41	3.08	324.45
MO004	St. Louis CTY HA	4,589	50	91.78	50	91.78	3.47	318.22
MD033	Baltimore CTY HSG Office	4,515	50	90.30	50	90.30	3.52	317.89
PA006	Allegheny CTY HA	4,329	50	86.58	33	131.18	3.68	482.69
MI001	Detroit Hsg Comm	4,163	50	83.26	28	148.68	3.82	568.11
AZ001	City of Phoenix	4,046	50	80.92	50	80.92	3.93	317.79
CA005	City of Sacramento	3,767	50	75.34	50	75.34	4.23	318.53
OK073	Tulsa	3,712	50	74.24	49	75.76	4.28	324.31
OH007	Akron MHA	3,613	50	72.26	50	72.26	4.40	318.29

Exhibit A-4 *(Continued)*
Final Weights for Voucher Holders

HA_NUM	Site Name	MOS	Target Response	Initial Voucher Holder Weight (MOS/Target)	Actual Response	Final Second Stage Weight (MOS/Actual)	Final First Stage Weight (PHA Weight)	Final Weight (1st Stage Wt* 2nd Stage Wt)
TX003	El Paso	3,487	50	69.74	50	69.74	4.56	318.30
MD015	HA Prince Georges CTY	3,230	50	64.60	50	64.60	4.94	318.84
CA006	City of Fresno HA	3,211	50	64.22	47	68.32	4.95	338.40
OK002	Oklahoma City	3,120	50	62.40	51	61.18	5.11	312.76
AZ004	Tucson Hsg Mgmt Div	2,921	50	58.42	50	58.42	5.45	318.30
NY001	HA of Syracuse	2,881	50	57.62	36	80.03	5.52	441.70
NM001	Albuquerque HA	2,767	50	55.34	49	56.47	5.75	324.66
NJ002	Newark HA	2,728	50	54.56	50	54.56	5.84	318.51
FL062	Pinellas CTY HA	2,687	50	53.74	50	53.74	5.93	318.47
OH005	Dayton Metro HA	2,516	50	50.32	50	50.32	6.33	318.68
CT001	Bridgeport HA	2,473	50	49.46	51	48.49	6.44	312.24
IA020	Des Moines Municipal HA	2,289	50	45.78	50	45.78	6.95	318.27
VA003	Newport News Redev.& HSG	2,196	50	43.92	54	40.67	7.25	294.95
WI218	Milwaukee CTY HA	1,942	50	38.84	58	33.48	8.21	274.83
NJ915	NJ912-5190	1,830	50	36.60	50	36.60	8.70	318.55
PA012	Montgomery CTY HA	1,631	50	32.62	50	32.62	9.76	318.53
CT003	Hartford HA	1,565	50	31.30	50	31.30	10.17	318.38
TX434	Grand Prairie	1,332	50	26.64	50	26.64	11.96	318.57
KY130	Lexington-Fayette CTY HA	1,301	50	26.02	52	25.02	12.24	306.27
WA006	HA City of Everett	1,265	50	25.30	50	25.30	12.60	318.66
CA035	San Buenaventura HA	1,089	50	21.78	50	21.78	14.63	318.63
MI045	Plymouth HA	978	50	19.56	56	17.46	16.29	284.54
TX008	Corpus Christi HA	847	50	16.94	51	16.61	18.80	312.30
WI195	Kenosha HA	808	50	16.16	51	15.84	19.71	312.22

As indicated, these weights are based on the number of vouchers and certificates reserved in each PHA. Accordingly, for example, national estimates of success rates based on these weights estimate the expected success rate for a random sample of program slots. This will underestimate the success rate for the issuances needed to fill a random sample of slots, because slots in PHAs with lower success rates will require more issuances. We could adjust for this by estimating the average number of issuances per slot and then estimating the inverse of this to estimate the success rate per issuance. (This is the weighted harmonic mean of the PHA success rate). The difference between the two estimates is often small.

In addition, the actual number of issuances by a PHA in any particular time period may be quite different from its long-term average and even this long-term average may be different from average national turnover. Turnover rates may differ from month to month. PHAs may receive new allocations. PHAs may issue in anticipation of expected turnover and then reduce or increase issuances to compensate for deviation from expected turnover. It seemed to us more useful to calculate rates based on the more stable, size-based basis.

A.3 Imputation of Success Status for Voucher Holders with Unknown Final Status

A total of 65 voucher holders across 16 sites had unknown outcomes at the end of the study's data collection period. Some outcomes were unknown because the voucher holder had attempted to port out of the jurisdiction, but the sending PHA did not receive a final status from the receiving PHA (14 voucher holders).[4] Others were households that still had valid vouchers at the study's end (51 voucher holders). These were households that had extensions beyond beyond 7 months, and usually longer, since they were initially issued their vouchers. In order to calculate the national success rate, the percent successful was imputed for these households. These households are not included in the tables describing the characteristics of successful and unsuccessful households, because we cannot determine which particular not final households would have been successful or not. All we can do is impute a percentage successful to this group to be used in the national rate.

Three approaches were considered for imputation. The first approach was to assume that the success rate for households with known outcomes in each site would apply also to the households with unknown outcomes. However, this approach would likely overestimate the national success rate because it is likely that households searching for such a long period would have a lower probability of success than the overall population of voucher holders. The second approach was to assume that since these voucher holders had not succeeded at this point, they would ultimately not succeed. However, this approach would likely underestimate the national success rate because some voucher holders were succeeding after extremely long search times. The third approach, which was used, was to assume that the

[4] In addition to these 14 voucher holders, 86 voucher holders in the study sample ported to another jurisdiction and successfully leased up in the receiving jurisdiction.

percent successful among those who had not succeeded within the first 120 days applied to the households with unknown outcomes. This was calculated for each site as:

$$\frac{\text{Number of people who succeeded in more than 120 days}}{\text{Number of people who succeeded in more than 120 days + unsuccessful households}}$$

Two sites that had households with unknown outcomes had no successful households that searched for more than 120 days. For these two sites (Syracuse, Hartford), the rate of successful households among all those who had not been successful in the first 120 days across the 14 other sites that had any searchers for over 120 days was used. This rate was 46.8 percent. Note that this imputation procedure barely changed the estimated national success rate: the success rate for only those with known outcomes was 68.3 percent, compared with a 68.1 percent imputation after success status was imputed for those with unknown final outcomes.

Appendix B

Data Collection Forms

Exhibit B-1

Section 8 Success Study: PHA Data Coding Sheet

PHA Name:_____

PHA ID Number:_____

PHA contact person:_____

Abt/Quadel caller: _____ Date of call: _____

Section 8 Program

1. Jurisdiction of PHA (*We are interested in metropolitan area jurisdiction covered by study, so do not need to be concerned with rural areas that may be in their jurisdiction, but outside the scope of the study.)*

1a. Primarily urban=1 Primarily suburban=2 Even mix of urban and Suburban=3
1b. One city=1 More than one city=2
1c. One county=1 More than one county=2

2. Estimated Annual Turnover Rate:_____% *[Notes: Turnover is the number of voucher that are returned per year (not movers) divided by average number under lease per year -- then multiplied by 100 to convert to percentage. May need to estimate from number of monthly turnovers or convert monthly turnover rate into annual rate by multiplying by 12.]*

Section 8 Briefing

3a. Initial Section 8 briefing conducted: Individual=1 Group=2 Both=3
3b. Typical size in group briefing: _____
3c. Typical length of briefing: _____ hours _____ minutes

4. Who conducts S8 Briefing:
Staff take turns=1
One-or two staff specialize=2
Outside contractor=3
Multiple staff do each briefing=4
Other =5

5. Do you primarily use a video or other presentation device to ensure the S8 Briefing is the same each time?
No=1 Video=2 Other visual device=3 Script/formal outline=4 Other=5

6. When did you update your Section 8 briefing packet?
within last few months=1 within last year=2 more than a year ago=3

7. Any other mandatory training sessions for voucher holders? Y=1 N=0

Success Rates *(Success rate is the percentage of Section 8 households **issued** vouchers that are able to lease-up in the Program in the allotted search time.)*

8. Estimate of current success rate _____%

9. Monitor success rate ? No=1 Monthly=2 Quarterly=3 Yearly=4 Less often=5

10. Success rates receive a...
High degree of emphasis=1 Moderate degree of emphasis=2 Low degree of emphasis=3

PHA Policies and Procedures

11a. Is waiting list currently.....
Completely closed =1
Open for some groups=2 (**11b**. If so, what groups? _____)
Completely open=3

11c. If not completely open, most recent time completely open: ____ / _____
mm yyyy

12. How often is the waiting list completely open?

All or most months=1 Every few months=2 Once a year=3 Every few years=4

13. Initial search time granted:_____
(Number of days)

14. Do you grant extensions for search time? Y=1 N=0

15a. *(If no extensions granted, skip to next question)* Who can get extensions?

Anyone who requests an extension=1
Only people who document search effort=2
Only special categories of people/types of vouchers=3

15b. How many days extended? _____ days

15c. *(If not filled out above),* any additional search time for special categories of people/types of vouchers? Y=1 N=0

15d. Describe program/participants that get extra search time:

16. Do you suspend the clock (i.e., toll) if family is not able to lease a unit for which they submit Request for Lease Approval *(RFLA or RLA)* ?

Yes, in most or all cases =1 Yes, only in special circumstances=2 No, never =3

17. Selection Preferences in standard program? Y=1 N=0 *(if no, skip next question)*

18a. Preferences for regular S8 program. *(Note we're interested in actual preferences used. Explain if too complicated to fit in box.)*	Y=1	N =0	**18b.** Priority if sequential preferences	**18c.** Points if cumulative preferences
a. Displaced (disaster or Gov. action)				
b. Domestic Violence				
c. Elderly/Handicapped				
d. Homelessness				
e. Income < 30% of Area Median				
f. High Rent Burden				
g. Resident				
h. In School or Training Program				
i. Substandard Housing				
j. Veteran				
k. Working				
l. Other (explain)				

19. In addition to preferences, do you deny assistance to *(otherwise eligible)* prospective tenants for...

a.	Drug or violent criminal convictions?	Y=1	N=0
b.	Drug or violent criminal arrests?	Y=1	N=0
c.	Other criminal convictions?	Y=1	N=0
d.	Other criminal arrests?	Y=1	N=0
e.	Debt to the housing authority?	Y=1	N=0
f.	Poor landlord references?	Y=1	N=0
g.	Poor housekeeping?	Y=1	N=0
h.	Bad credit history?	Y=1	N=0

Search Assistance Provided by PHA	**20.** Is this type of search assistance ...			**21**. *(If only available to special groups)* What groups?
	available to all enrollees? (=1)	available only in special programs or for special enrollees? (=2)	Not available. (=3)	
a. Provide list of vacant units				
b. Specific unit referrals				
c. Provide landlord list				
d. Housing search counseling				
e. Counseling for housing barriers *(e.g., credit repair)*				
f. Social service referrals				
g. Transportation assistance to search				
h. Child care assistance				
i. Relocation cash grants or loans *(e.g., Security Deposit, moving expenses...)*				
j. Help moving furniture/belongings...				

22. If PHA maintains list of vacancies (see above), frequency of updating:

Daily=1 Weekly=2 Monthly=3 Less than monthly=4

23. Perception of landlord acceptance of Section 8?

High acceptance=1 Moderate acceptance=2 Little or no acceptance=3

24. If PHA maintains list of landlords (see above), frequency of updating:

Daily=1 Weekly=2 Monthly=3 Less than monthly=4

25. PHA active outreach to new or existing landlords.

Yes, at least once a month =1
Yes, every few months =2
Yes, at least once a year =3
Less than once a year or never =4

26. PHA role in rent negotiation:

Always involved =1
Sometimes involved =2
Occasionally involved =3
Never or almost never involved =4

Housing Market *(If have hard copy of payment standards, can fax rather than give over phone)*

# of BR	**27.** Fair Market Rent (in dollars)	**28.** Payment Standard *(BE CLEAR IF $ OR % of FMR)* (*base or typical PS if multiple PS)*	**29.** Any areas where you pay higher than typical PS? Y=1 N=0 **30.** Rent in those areas *(BE CLEAR IF $ or % of FMR)* (*range if necessary, but put most common amount if possible)*
a) 0BR			
b) 1BR			
c) 2BR			
d) 3BR			
e) 4BR			
f) 5BR			

31. Estimated percent of jurisdiction where you have higher PS/Exception rents? _____ %

32a. Adequacy of PS: Too low=1 About right=2 Too high=3

32b. (If too low), is it inadequate primarily because FMR is too low? Y=1 N=0

33. PHA Perceptions of ***Overall*** Housing Market Tightness: *(This is vital to the study. Know what was said in recruiting call, but here we want more detail.)*

Extremely tight	(<=2% vacancy rate) =1
Tight	(2.1 to 4% vacancy rate)=2
Moderate	(4.1 to 7% vacancy rate)=3
Loose	(7.1 to 10% vacancy rate)=4
Extremely loose	(>10% vacancy rate) =5

34. ***Affordable*** Housing Market Tightness:

Extremely tight	(<=2% vacancy rate)=1
Tight	(2.1 to 4% vacancy rate)=2
Moderate	(4.1 to 7% vacancy rate)=3
Loose	(7.1 to 10% vacancy rate)=4
Extremely loose	(>10% vacancy rate)=5

35. Is ***overall*** housing market...

Getting tighter=1 Staying about the same=2 Getting looser=3

36. Is ***affordable*** housing market ...

Getting tighter=1 Staying about the same=2 Getting looser=3

37. In the last year, did ***overall*** housing rental rates...

Increase rapidly=1 Increase moderately=2 Stay about the same=3 Decrease=4

38. In the last year, did ***Affordable*** housing rental rates...

Increase rapidly=1 Increase moderately=2 Stay about the same=3 Decrease=4

39. We want to get several perspectives on the housing market. Any recommendations on other knowledgeable people we can call to discuss housing market conditions in this area *(e.g., a large realtor, someone at Community Development Dept., a Community Builder.... Record name, phone #, and affiliation if known)*?

40. Initial Move-in Inspections *(We do not want re-certification inspections, but just new inspections. Pass means pass HQS.)(We are looking for recent experiences-- e.g., last 100 or so units that were inspected.)*	Percent
a. Pass initial inspection	
b. Fail initial inspection, but eventually pass for that tenant	
c. Never pass inspection	
Total *(should equal 100%)*	

41. Percent of new units that **fail** rent reasonableness so unit is not leased up in Section 8 Program?

_____%

Characteristics of Section 8 Recipients *(Callers fill in with MTCS data and confirm with PHA that they are reasonably accurate.)*

42. Race of HH head/recipient	%
a. White	
b. Black/African-American	
c. American Indian/Alaska native	
d. Asian/Pacific Islander	
e. Other	
f. Unknown	
Total (Note: should equal 100%)	

43. Ethnicity of HH head/recipient	%
a. Hispanic	
b. Non-Hispanic	
c. Unknown	
Total (Note: should equal 100%)	

44. Gender of HH head/recipient	%
a. Male	
b. Female	
Total (Note: should be 100%)	

45. Household composition	%
a. Family	
b. Elderly	
c. Handicapped (not family or elderly)	
d. Other/unknown	
Total (should be 100%)	

Anti-Discrimination Laws

46. Type of state or local anti-discrimination laws.

source of income=1 source of rental payment=2 Neither=3

47. Anti-discrimination law coverage: entire jurisdiction=1 part of jurisdiction=2

Submarkets

48. Do S8 enrollees tend to search in areas where other Section 8 recipients are already located?

Y=1 N=0

49. Do enrollees who look in traditional S8 areas have more success than other enrollees?

Y=1 N=0

50. What types of enrollees tend to have more success when they look outside traditional S8 areas (race, age, family size, income, ... counseled)?

51. Why do these groups have more success?

Information Collected Earlier

The remaining information may have been gathered in the recruiting call (R) or from another source (O), but should be recorded here. If information not gathered in recruiting call, it needs to be collected at this time.

Section 8 Program

(Note that vouchers means all tenant-based certificates and vouchers.)

52a. (R) Total number of tenant-based vouchers under lease: _____
52b. (R) Total number of unused (but available) tenant-based vouchers: _____
52c. (R) Total number of vouchers (1a + 1b): _____

53. (R) Type of S8 Voucher *(Check yes or no. If yes, enter # of vouchers)*	YES=1	NO=0	**54.** # of Vouchers
a) Regular			
b) Family Unification			
c) Welfare-to-Work			
d) Section 8 opt out/Preservation			
e) Elderly Independence			
f) Mainstream Housing for Persons with Disabilities			
g) Mainstream Housing-Elderly Designation			
h) VASH (Veteran's Admin. Supportive Housing)			
i) HOPWA (Housing Opportunities People w/Aids) (Note, do not include these type in study sample)			
j) Shelter Plus Care (Note: do not include these type in study sample)			
k) Public Housing Relocation/demolition/disposition			
l) Litigation			
m) Other (explain_____)			
n) Total # of Vouchers *(Note: total here match #1c)*			

Exhibit B-2

Section 8
Housing Choice Voucher Program
Tracking System

Study on Section 8 Voucher Success Rates

Household Characteristics and Housing Search Process Data

Data Forms

These data are being collected under HUD contract C-OPC-18571 by Abt Associates Inc. and its subcontractors, Quadel Consulting Corporation and the QED Group, LLC. These forms can be used in conjunction with the *Section 8 Housing Choice Voucher Program Tracking System*, a computerized tracking system developed under this contract to facilitate data collection on the household characteristics and housing search process of Section 8 voucher recipients. Depending on PHA procedures, tracking system users may want to develop an alternate system of record logs to assist with data entry.

For information on the installation and operation of the *Section 8 Housing Choice Voucher Program Tracking System*, please refer to the ***Training/User's Guide***.

Each set of forms is designed to collect and organize data on one Section 8 program household. In case these pages become separated, to help identify enrollee data, please first enter the PHA/Agency name or number and the Section 8 Program enrollee's name and/or identifier at the top of each page.

Introduction

The U.S. Department of Housing and Urban Development is conducting research to calculate success rates of Section 8 voucher holders in large urban areas. The success rate is defined as the percentage of families that are provided vouchers who are able to lease a housing unit meeting program requirements within the allotted amount of time. This study will examine the factors associated with success rates in urban areas.

To facilitate data collection for this study, a computerized tracking system, the *Section 8 Housing Choice Voucher Program Tracking System*, has been developed for PHAs to install on a computer to record the household characteristics and housing search process of Section 8 voucher recipients. Data to be collected for this study include basic demographic information about the enrollee and household and the dates of key events in the Section 8 search and lease-up process. These data are already being recorded by PHAs for HUD and the Section 8 program. Although the primary purpose for the tracking software is for data collection for this study, it is also a prototype for a possible tracking system to be used regularly by PHAs who wish to track the housing search process of Section 8 enrollees and calculate success rates. In addition to collecting data on Section 8 enrollees, the tracking system can also produce output summarizing participant status and outcome. Because it is a prototype tracking system, we welcome feedback on its design and use.

Figure 1 shows a flowchart describing the process of participation in the Section 8 program. It begins with application to the Section 8 program, through the time allowed for the housing search, to the requests for lease approval (RFLA) and inspections, to whether or not a Section 8 contract is signed. The areas labeled A-E show the key events at which data are typically available for these forms and entry into the tracking system:

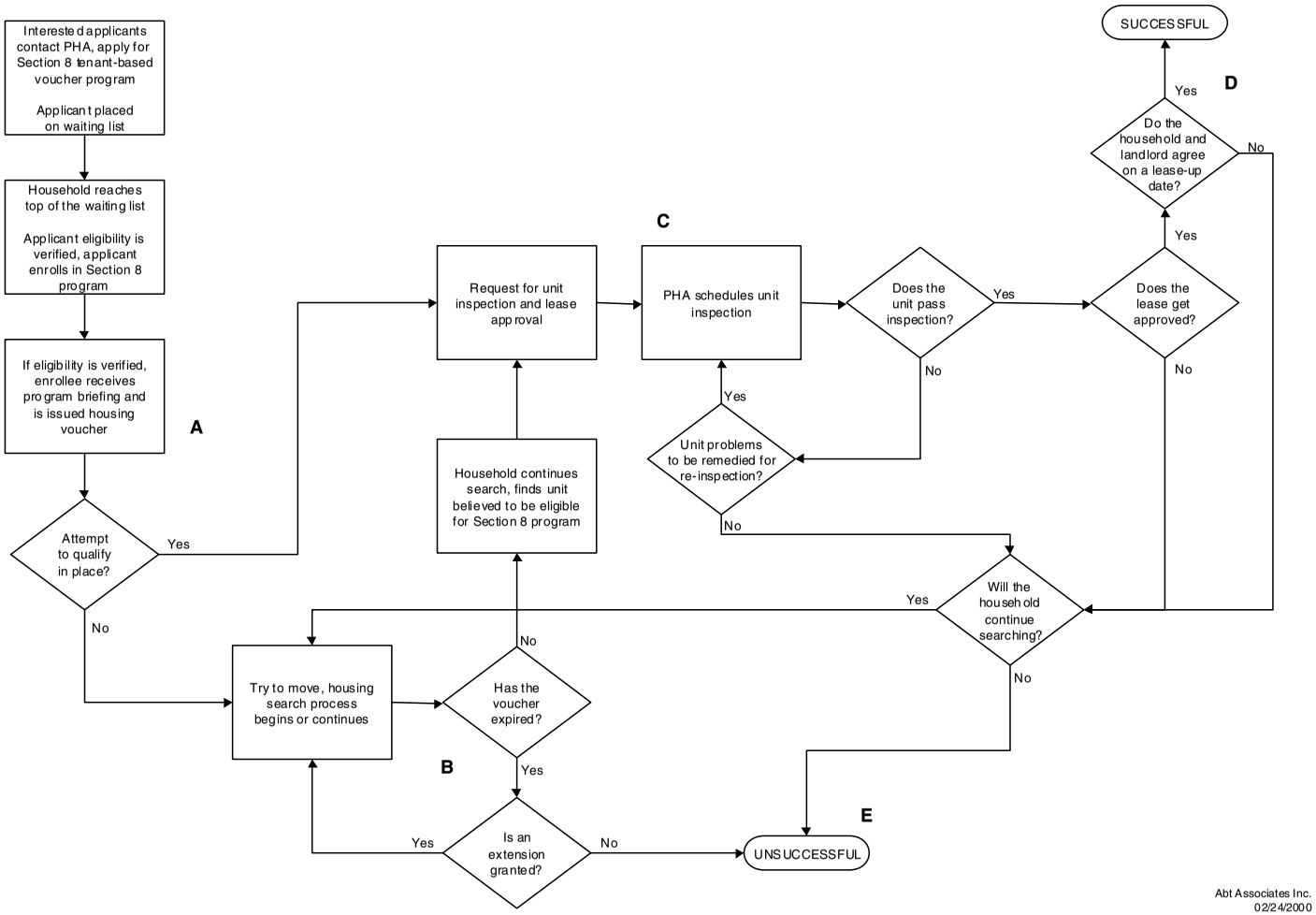
- **(A)** Enrollment Data – Information available at enrollment and issuance of the Section 8 voucher.
- **(B)** Extension Information – Time extensions to the search process requested and granted.
- **(C)** Inspection Data – Information on units for which enrollees submit an RFLA, including inspection outcomes.
- **(D)** Successful Lease-Up Data – Data on units successfully leased by enrollees in the Section 8 program.
- **(E)** Unsuccessful Enrollee Data – Information regarding enrollees unable to lease a unit through the Section 8 program.

Thank you participating in this very important study of the Section 8 Housing Choice Voucher Program.

If you have any questions regarding the use of these forms and the Section 8 Housing Choice Voucher Program Tracking System, please contact your designated contact at Abt Associates Inc. or Carissa Climaco of Abt Associates Inc. by phone at 617-349-2386 or by email at carissa_climaco@abtassoc.com. Questions may also be sent to Abt Associates Inc. at Success_Study@abtassoc.com.

Figure 1

Process of Household Participation in the Section 8 Program



(A) Enrollment Data

This section collects information typically available once a household is enrolled in the Section 8 Program. When entering data into the tracking system, the following data must be provided:

- Enrollee last name
- Enrollee first name
- Either the recipient ID (PHA-defined enrollee identifier) or the enrollee Social Security Number (SSN)
- Voucher issuance date
- Voucher initial expiration date

Enrollee Identifiers

Enrollee Name – Please enter the enrollee's (head of household's) last name, first name, and if available, middle name or initial.

Recipient ID – This is an identifier for the enrollee and household defined and specified by the housing authority. Depending on PHA procedures, this may be the enrollee's SSN, voucher number, or some other ID code used by the housing authority.

SSN – Please enter the Social Security Number for the enrollee.

Intake/Case Manager **–** When entering data under *Intake/Case Manager*, the size limit is 1-3 digits or characters. For example, you may use initials, a 3-letter name, or a 3-digit staff ID number. Please be consistent in identifying individual intake/case managers.

Program Information

Application Date – Date the enrollee applied for the Section 8 program or was placed on the Section 8 program waiting list.

Preference Categories – Please indicate any local preferences or special admission circumstances by which the enrollee was able to move up on the Section 8 program waiting list.

Type of Voucher Program – Please indicate whether the enrollee was receiving a Section 8 voucher through the regular or general waiting list or through enrollment in a special program.

Enrollment/Voucher Information

Issuance Date – Date the enrollee was issued a Section 8 voucher.

Initial Expiration Date – Date the Section 8 voucher was first set to expire.[1] Expiration dates that were the result of extensions should be recorded in the **Extension Information** section.

Voucher Number – Identification number for the Section 8 voucher. Depending on PHA procedures, this may be the same as the *Recipient ID*.

Unit Size Needed – Please indicate the unit size needed by the household.

Payment Standard – Please indicate the Payment Standard for the *Unit Size Needed* in the PHA's jurisdiction.

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[1] If the initial expiration date changes as a result of a PHA's policy of **tolling** or the **suspension of terms**, please edit the initial expiration date to reflect the revised initial expiration date. For more information about how to record dates that have been affected by a tolling policy, please see section on **Extension Information**.

PHA Name/PHA Number
Enrollee Name/ID

(A) Enrollment Data

Enrollee:

Last Name*: _____ First Name*:_____ Middle Name/ Initial: _____

Recipient ID*: _____ SSN*: __ __ __ - __ __ - __ __ __ __ Intake/Case Manager: _____

Program Information:

Application Date: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Preference Categories: *(check all that apply)*

- ☐ Substandard
- ☐ Displaced
- ☐ Rent Burden
- ☐ Veteran
- ☐ Resident
- ☐ Working
- ☐ Homeless
- ☐ Domestic Violence
- ☐ Other _____

Type of Voucher Program: *(check one)*

- ☐ General Waiting List (Regular)
- ☐ Disaster
- ☐ Elderly Independence
- ☐ Family Unification
- ☐ Litigation
- ☐ Mainstream Housing for the Disabled (Disabled-Mainstream Housing)
- ☐ Mainstream Housing for the Elderly (Elderly-Mainstream Housing)
- ☐ Public Housing Relocation/Demolition/Disposition
- ☐ Section 8 Opt Out/Preservation
- ☐ Vacancy Consolidation
- ☐ Veteran's Administration Supportive Housing (VASH)
- ☐ Welfare-to-Work
- ☐ Other _____

Enrollment/Voucher Information:

Issuance Date*: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Unit Size Needed: ☐ 0BR ☐ 1BR ☐ 2BR ☐ 3BR ☐ 4BR ☐ 5BR

Initial Expiration Date*: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Voucher Number: _____

Payment Standard: $ _____

An asterisk (*) indicates data that must be entered into the tracking system for inclusion in the study. Either Recipient ID or SSN must be entered, and either may be left blank if the other is filled-in.

(A) Enrollment Data (continued)

Enrollee Information

Pre-Program Unit Address – Please indicate the full address of the unit where the enrollee lived at the time of voucher issuance. Because data are being entered for new enrollees, this would be the current address of the enrollee.

Birthdate – Please indicate the birth date of the enrollee.

Pre-Program Unit Size – Please indicate the pre-program unit size.

Current unit in public housing – Please whether the pre-program unit is in public housing.

Gender, Race, Ethnicity – Please indicate the *Gender*, *Race*, and *Ethnicity* of the Section 8 enrollee or head of household.

Elderly – Please indicate whether the enrollee is considered elderly and eligible for elderly housing or allowances.

Household Information

Spouse present? – Please indicate whether or not the enrollee's spouse is present in the household.

Any member of the household disabled? – Please indicate whether the enrollee's household includes disabled members who may require an accessible housing unit.

Household size – Total household members, including the enrollee.

Number of Dependents – Total number of dependents, including youths under 18 years of age, full-time students 18 years of age or older, and other adults, but excluding the head of household, spouse, co-head, foster child/adult, or live-in aides.

Number of Children – Number of children under 18 years of age in the household.

Annual Income Information

When entering household income by source, please make sure to provide annual US dollar ($) amounts. For example, if the enrollee provides weekly wage information, first multiply that amount by 52 (weekly wage amount x 52), and if the enrollees provide monthly wage information, please first multiply that amount by 12 (weekly wage amount x 12). The income can be categorized according to income codes used in Form HUD-50058, **Family Report**.

Wages – Wage and salary income, including own business (B), military pay (M), Federal wage (F), HA wage (HA), and other wage (W).

Social Security, Pensions – Income from social security and pensions, pension (P), social security (SS), and child support (C).

Public Assistance – Public assistance income, including TANF (formerly AFDC) (T), general assistance (G), and SSI (S).

Asset Income – Final asset income, which is the anticipated asset income if the total cash value of assets is less than $5,000, or the larger of anticipated asset income or imputed asset income if the total cash value of assets is greater than $5,000.

Other Income – Income from other sources including unemployment benefits (U), Indian trust/per capita (I), and other nonwage sources (N).

Annual Income – Sum of all annual income amounts, i.e., *Wages* + *Social Security, Pensions* + *Public Assistance* + *Asset Income* + *Other Income*.

Income Adjustment – Amount of adjustments or allowable deductions to annual income.

Adjusted Income – Total annual family income minus adjustments, i.e., *Annual Income – Income Adjustment*.

Request for Portability – Please indicate whether the enrollee has made a request for portability.

(A) Enrollment Data (continued)

Enrollee Information:

Pre-Program Unit Address:

Street: _____

City: _____

State/Zip _____

Birthdate: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Pre-Program unit size: ☐ 0BR ☐ 1BR ☐ 2BR ☐ 3BR ☐ 4BR ☐ 5BR

Current unit in Public Housing: ☐ Yes ☐ No

Gender: ☐ Male ☐ Female

Race: ☐ White ☐ Black ☐ American Indian/Alaska Native ☐ Asian/Pacific Islander

Ethnicity: ☐ Hispanic ☐ Other Non-Hispanic

Elderly: ☐ Yes ☐ No

Household Information:

Spouse present?: ☐ Yes ☐ No

Any member of the household disabled?: ☐ Yes ☐ No

Household size: _____

Number of Dependents: _____

Number of Children: _____

Annual Income Information:

Wages: $ _____

+Social Security, Pensions: $ _____

+Public Assistance: $ _____

+Asset Income: $ _____

+Other Income: $ _____

=Annual Income: $ _____

-Income Adjustment: $ _____

=Adjusted Income: $ _____

Request for Portability ☐ Yes ☐ No

(B) Extension Information

If the PHA allows for extensions to the initial Section 8 voucher, please indicate the key dates regarding the extension. Depending on PHA procedures, dates when extensions are requested and granted may not be available.

If the PHA has a **tolling** or **suspension of terms** policy, the PHA "stops the clock" on the search time allowed when a Request for Lease Approval (RFLA) has been submitted, then restarts the search time remaining if the unit does not get leased-up in the Section 8 program. If this happens to an enrollee, please do not consider the revised expiration date as a separate extension. However, please adjust the initial expiration date if tolling affects an enrollee's initial Section 8 search process. Similarly, please adjust an existing extension's expiration date if tolling affects an enrollee's extension to the Section 8 search process.

In other words, if the enrollee's expiration date is now later due to tolling, that is not considered an extension. However, the new expiration date does change either the initial expiration date or the expiration date of one of the enrollee's three extensions of the Section 8 voucher.

Extensions

The system includes room for recording up to three extension requests (Extension 1, Extension 2, Extension 3).

Date extension requested – Date the enrollee contacted the PHA to request an extension to the expiration date of the Section 8 voucher.

Date extension granted – Date the PHA approved an extension of the Section 8 voucher. Depending on PHA procedures, the *Date extension granted* may be the same as the *Date extension requested*.

Extension expiration date – Date Section 8 voucher expires given the extension.

PHA Name/PHA Number
Enrollee Name/ID

(B) Extension Information

Extension 1:

Date extension 1 requested: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date extension 1 granted: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Extension 1 expiration date: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Extension 2:

Date extension 2 requested: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date extension 2 granted: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Extension 2 expiration date: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Extension 3:

Date extension 3 requested: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date extension 3 granted: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Extension 3 expiration date: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

(C) Inspection Data

This section allows for information on the initial inspection and up to three re-inspections for up to three units associated with Requests for Lease Approval (RFLA).

Initial Inspection Information

Date RFLA submitted – Date the enrollee contacted the PHA with an RFLA and a request for a unit inspection.

Date of scheduled inspection – The initial date the inspection was scheduled to be completed.

Date inspection completed – Date the unit inspection was conducted.

Type of inspection – Please indicate whether the inspection being recorded was an **in-place** inspection of the pre-program unit (i.e., the unit in which the enrollee is living prior to receiving Section 8 assistance). If not, it is a **move-in** inspection (i.e., an inspection of a unit the household is looking to move to).

Street, City, State/Zip – Please indicate the unit address.

Unit Size – Please indicate the unit size.

Inspection result – Please indicate whether the unit passed or failed the initial inspection. Select **None** if no inspection was conducted.

Re-inspection Information

If the unit does not pass the initial inspection, the results of up to three re-inspections may be entered into the tracking system. For each completed re-inspection, please indicate the date the re-inspection was completed and whether the unit passed or failed the re-inspection. Select **None** if no scheduled re-inspection was conducted.

Unit Leased Up

Once the initial and all scheduled re-inspections have been completed, if the unit can pass HQS in either inspection or re-inspection, please indicate whether or not the unit was leased up. A leased up unit indicates that the enrollee and household will be residing in this unit and receiving Section 8 assistance. In the tracking system, checking that the unit has been leased up signals that successful lease-up information needs to be entered. The tracking system will offer to transfer the user to the enrollee's *Successful Lease Data* screen.

Reason Why Unit Was Not Leased Up

If the unit was not leased up, this section allows the user to indicate the reason.

Notes Regarding Landlord Negotiations

If there are special notes to record about the lease-up process including anything regarding negotiations with the landlord to participate in the Section 8 program, please enter them in the space provided.

(C) Inspection Data

Unit 1:

Date RLA submitted: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date of scheduled inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date inspection completed: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Type of inspection:
- ☐ In-place
- ☐ Move-in

Street: _____

City: _____

State/Zip: _____

Unit Size:
- ☐ 0BR ☐ 1BR ☐ 2BR
- ☐ 3BR ☐ 4BR ☐ 5BR

Inspection result:
- ☐ Pass
- ☐ Fail
- ☐ None

First re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

First re-inspection result:
- ☐ Pass
- ☐ Fail

Second re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Second re-inspection result:
- ☐ Pass
- ☐ Fail

Third re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Third re-inspection result:
- ☐ Pass
- ☐ Fail

Unit leased up:
- ☐ Yes
- ☐ No

If no, reason why unit was not leased-up:
- ☐ Unit failed inspection
- ☐ Didn't pass rent reasonableness
- ☐ Recipient couldn't pay security deposit
- ☐ Recipient refused
- ☐ Landlord refused
- ☐ TTP would be above 40 percent cap
- ☐ Other _____

Notes regarding landlord negotiations:

(C) Inspection Data (continued)

For the RFLA of a second unit, follow the same instructions and descriptions on page vi for the first unit inspected.

(C) Inspection Data (continued)

Unit 2:

Date RLA submitted: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date of scheduled inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date inspection completed: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Type of inspection:
- ☐ In-place
- ☐ Move-in

Street: _____

City: _____

State/Zip: _____

Unit Size:
- ☐ 0BR ☐ 1BR ☐ 2BR
- ☐ 3BR ☐ 4BR ☐ 5BR

Inspection result:
- ☐ Pass
- ☐ Fail
- ☐ None

First re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

First re-inspection result:
- ☐ Pass
- ☐ Fail

Second re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Second re-inspection result:
- ☐ Pass
- ☐ Fail

Third re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Third re-inspection result:
- ☐ Pass
- ☐ Fail

Unit leased up:
- ☐ Yes
- ☐ No

If no, reason why unit was not leased-up:
- ☐ Unit failed inspection
- ☐ Didn't pass rent reasonableness
- ☐ Recipient couldn't pay security deposit
- ☐ Recipient refused
- ☐ Landlord refused
- ☐ TTP would be above 40 percent cap
- ☐ Other _____

Notes regarding landlord negotiations:

(C) Inspection Data (continued)

For the RFLA of a second unit, follow the same instructions and descriptions on page vi for the first unit inspected.

(C) Inspection Data (continued)

Unit 3:

Date RLA submitted: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date of scheduled inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Date inspection completed: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Type of inspection:
- ☐ In-place
- ☐ Move-in

Street: _____

City: _____

State/Zip: _____

Unit Size:
- ☐ 0BR ☐ 1BR ☐ 2BR
- ☐ 3BR ☐ 4BR ☐ 5BR

Inspection result:
- ☐ Pass
- ☐ Fail
- ☐ None

First re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

First re-inspection result:
- ☐ Pass
- ☐ Fail

Second re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Second re-inspection result:
- ☐ Pass
- ☐ Fail

Third re-inspection: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Third re-inspection result:
- ☐ Pass
- ☐ Fail

Unit leased up:
- ☐ Yes
- ☐ No

If no, reason why unit was not leased-up:
- ☐ Unit failed inspection
- ☐ Didn't pass rent reasonableness
- ☐ Recipient couldn't pay security deposit
- ☐ Recipient refused
- ☐ Landlord refused
- ☐ TTP would be above 40 percent cap
- ☐ Other _____

Notes regarding landlord negotiations:

(D) Successful Lease-Up Data

Once a unit has been inspected and the lease has been approved, this section collects data regarding the Section 8 or Housing Assistance Payments (HAP) Contract, including the monthly rent in US dollars ($). While the HAP contract indicates the enrollee is successfully leasing up in the Section 8 program, components of monthly rent to be entered in the tracking system may be more readily found under question 12 of Form HUD-50058, **Family Report**.

Section 8 Contract Data

Program Unit Address and Unit Size – Please indicate the contract unit address and number of bedrooms. This information should be the same as was entered for the unit in the **Inspection Data** section.

Effective date of lease-up – Effective start date of the lease, or the move-in date for the enrollee and household.

Monthly rent

Rent to owner – Please indicate the monthly rent to the owner for the contract unit. This includes both the Section 8 payment to the owner and the tenant paid rent.

Utility allowance – Please indicate the monthly utility allowance. If any utilities are already included in the *Rent to owner*, please subtract that amount from the utility allowance.

Gross rent – Please indicate the monthly gross rent. It is the sum of the *Rent to owner* and the *Utility allowance*.

TTP – Please indicate the monthly total tenant payment (TTP). This is *Rent to Owner* minus the Section 8 subsidy.

Successful outcome category

Please indicate whether the enrollee leased in place, moved within the jurisdiction, or used the Section 8 voucher to move outside of the PHA's jurisdiction (i.e., ported out).

PHA Name/PHA Number
Enrollee Name/ID

(D) Successful Lease-Up Data

Section 8 Contract Data:

Program Unit Address:

Street: _____

City: _____

State/Zip: _____

Unit Size: ☐ 0BR ☐ 1BR ☐ 2BR ☐ 3BR ☐ 4BR ☐ 5BR

Effective date of lease-up: __ __ / __ __ / __ __ __ __ *(mm/dd/yyyy)*

Monthly Rent:

Rent to owner: $ _____

Utility allowance: $ _____

Gross rent: $ _____

Total Tenant Payment (TTP): $ _____

Successful outcome category:

- ☐ Leased in place
- ☐ Leased by moving within jurisdiction
- ☐ Leased by porting out of jurisdiction

(E) Unsuccessful Enrollee Data

This section records data regarding enrollees that were unsuccessful in leasing-up in the Section 8 program. With their vouchers expired or returned, unsuccessful enrollees are no longer searching for a unit in which they would receive Section 8 assistance.

Unsuccessful status – Please indicate whether the enrollee's voucher expired or was returned prior to expiring. If the voucher neither expired nor was returned, please check "Other" and briefly describe.

Reason for unsuccessful outcome – Please indicate one reason that best describes why the enrollee was unable to lease-up under the Section 8 program.

PHA Name/PHA Number
Enrollee Name/ID

(E) Unsuccessful Enrollee Data

Unsuccessful status:

- ☐ Voucher expired
- ☐ Voucher returned
- ☐ Other _____

Reason for unsuccessful outcome: *(check one)*

- ☐ Unable to qualify in place, unable to search for unit
- ☐ Unable to find unit for inspection
- ☐ Turned down by landlord(s)
- ☐ Unable to complete inspection(s)
- ☐ Unit(s) found unable to pass inspection
- ☐ Unable to successfully negotiate lease
- ☐ Other _____

Appendix C

Success Status of Section 8 Voucher Holders in Sample, by PHA

Appendix C

Success Status of Section 8 Voucher Holders in Sample, by PHA

Exhibit C-1 presents information on the percent of voucher holders that succeeded in leasing a unit for each PHA in the study. These site-specific results should be used with caution, because of the small sample sizes at each PHA (usually 50 voucher holders[1]). In most cases, these voucher holders represent a small share of the vouchers issued at each PHA during the course of the year, hence there are large standard errors associated with PHA-level estimates. For each estimate, we present the 95 percent confidence interval so that the reader can appreciate the uncertainty surrounding the PHA-level estimates. We also provide information on the type of vouchers issued to households in the study sample. At individual PHAs, the study sample may or may not represent the types of vouchers they issued during the course of the year or the types of households that are normally issued vouchers. A PHA success rate based on the entire population of voucher holders at a PHA could be much higher or lower than the success rate estimated from the PHA sample of voucher holders included in the study. At the national level, the success rate estimates are much more reliable (as reflected in the much smaller sampling error) because they are based on a large sample of over 2,600 voucher holders from 48 different PHAs. Random differences between the PHAs' sample success rate and population success rate offset each other in the national sample. That is, some PHA samples will have a higher success rate and some will have a lower success rate than would be found if they tracked all of their voucher holders, but these differences tend to average out across PHAs.

Exhibit C-2 compares success rate and vacancy for the study PHAs. Exhibit C-3 contains a map showing geographic patterns of above average success rates.

[1] The three largest sites had larger samples to ensure that the final sample represented the national population of voucher holders: NYC (239), the City of Los Angeles (125), and Chicago (85). See Appendix A for an explanation of the process used to determine the size of the voucher holder sample in these sites.

Exhibit C-1
Success Status of Section 8 Enrollees in Sample, by PHA

Housing Authority	Number of Section 8 Vouchers at PHA[A]	Sample Size	Successful	Unsuccessful	Port-out: Unknown Final Status[B]	Still Searching: Unknown Final Status[C]	Percent of Sample Successful	Post-Imputed Percent of Sample Successful[D]	95 Percent Confidence Interval	Type of Vouchers	Housing Market Conditions[E]
Phoenix, AZ	4,046	50	41	9	0	0	82%	82%	71-93%	All regular	moderate
Tucson, AZ	2,921	50	36	14	0	0	72%	72%	59-85%	All regular	moderate
LA County, CA	14,947	51	38	11	2	0	75%	77%	65-88%	Most regular	tight
Los Angeles, CA	37,251	125	58	65	2	0	46%	47%	38-56%	All regular	tight
Sacramento[F], CA	7,171	50	40	10	0	0	80%	80%	69-91%	All regular	tight
Fresno[F], CA	6,200	47	30	17	0	0	64%	64%	50-78%	All WtW	moderate
San Buenaventura, CA	1,089	50	24	26	0	0	48%	48%	34-62%	All regular	extremely tight
San Diego, CA	8,399	50	44	6	0	0	88%	88%	78-96%	Most regular	extremely tight
Alameda, CA	5,165	49	18	31	0	0	37%	37%	23-51%	All regular	extremely tight
Bridgeport, CT	2,473	51	24	27	0	0	47%	47%	33-61%	All regular	tight
Hartford, CT	1,565	50	44	5	0	1	88%	89%	80-98%	All regular	moderate
Washington DC	6,211	50	29	21	0	0	58%	58%	44-72%	All regular	extremely tight
Miami-Dade Cnty, FL	10,249	54	38	15	0	1	70%	71%	59-84%	All WtW	tight to moderate
Pinellas Cnty, FL	2,687	50	19	31	0	0	38%	38%	24-52%	All regular	tight
Atlanta, GA	9,658	50	30	20	0	0	60%	60%	46-74%	Mixed, 39 Family Unification	moderate
Des Moines, IA	2,289	50	33	17	0	0	66%	66%	52-80%	All regular	tight
Chicago, IL	25,233	85	65	13	1	6	76%	82%	75-90%	Regular and WtW	tight
Cook County, IL	10,117	50	32	13	4	1	64%	68%	55-80%	Most regular	tight
Indianapolis, IN	5,700	49	37	11	0	1	76%	76%	64-88%	Regular and S8 Opt Out	tight to moderate
Lexington-Fayette County, KY	1,301	52	33	19	0	0	63%	63%	50-77%	All regular	moderate to loose
New Orleans, LA	6,985	50	34	16	0	0	68%	68%	54-81%	Most Public Housing Relocation	moderate
Boston, MA	9,018	50	25	20	1	4	50%	53%	39-67%	Mixed	extremely tight
PG County, MD	3,230	50	39	11	0	0	78%	78%	66-89%	Most regular	tight
Baltimore Cnty, MD	4,515	50	28	21	0	1	56%	57%	42-71%	Most regular	tight
Detroit, MI	4,163	28	28	0	0	0	100%	100%	na	Mixed	moderate
Plymouth, MI	978	56	38	18	0	0	68%	68%	55-80%	Regular and Family Unification	tight to moderate
Metro Council, MN	5,381	50	31	19	0	0	62%	62%	48-76%	All regular	extremely tight
St. Louis Cnty, MO	4,589	50	26	24	0	0	52%	52%	38-66%	All regular	tight
Newark, NJ	2,728	50	37	0	0	13	74%	100%	na	WtW and PH	tight

Housing Authority	Number of Section 8 Vouchers at PHA[A]	Sample Size	Successful	Unsuccessful	Port-out: Unknown Final Status[B]	Still Searching: Unknown Final Status[C]	Percent of Sample Successful	Post-Imputed Percent of Sample Successful[D]	95 Percent Confidence Interval	Type of Vouchers	Housing Market Conditions[E]
										Relocation	
Monmouth-Ocean Counties, NJ	1,830	50	46	3	0	1	92%	93%	87-100%	All regular	tight
Albuquerque, NM	2,767	49	49	0	0	0	100%	100%	na	Most WtW	moderate
Syracuse, NY	2,881	36	34	0	2	0	94%	97%	92-100%	Most regular	loose
New York City, NY	76,980	239	126	95	0	18	53%	56%	50-63%	Regular and WtW	extremely tight/tight[G]
Cuyahoga, OH	8,696	58	51	7	0	0	88%	88%	79-97%	WtW	moderate to loose
Dayton Metro, OH	2,516	50	30	20	0	0	60%	60%	46-74%	Most regular	loose
Akron, OH	3,613	50	29	21	0	0	60%	58%	44-72%	Most regular	moderate to loose
Oklahoma City, OK	3,120	51	29	22	0	0	57%	57%	43-71%	Most regular	moderate
Tulsa, OK	3,712	49	34	15	0	0	69%	69%	56-83%	Mixed	tight
Allegheny Cnty, PA	4,329	33	18	15	0	0	55%	55%	37-72%	All regular	moderate
Montgomery Cnty, PA	1,631	50	21	28	1	0	42%	42%	28-56%	Regular and WtW	tight
El Paso, TX	3,487	50	48	2	0	0	96%	96%	90-100%	Most regular	loose
Corpus Christi, TX	847	51	34	17	0	0	67%	67%	53-80%	All regular	loose to very loose
Dallas, TX	11,340	50	33	17	0	0	66%	66%	52-80%	Regular and PH relocation	tight to moderate
Grand Praire, TX	1,332	50	39	11	0	0	78%	78%	66-90%	Most regular	tight
Newport News, VA	2,196	54	37	16	1	0	69%	69%	57-82%	All regular	moderate
Everett, WA	1,265	48	42	6	0	0	88%	88%	78-97%	Most WtW	tight
Kenosha, WI	808	51	43	8	0	0	84%	84%	74-95%	Most WtW	extremely tight to tight
Milwaukee Cnty, WI	1,942	58	38	16	0	4	66%	69%	57-81%	All regular	moderate
Total		**2,674**	**1,780**	**829**	**14**	**51**	**67%**	68%	64-72%		

[A] The number of Section 8 Vouchers is the number of reserved vouchers and certificates in each PHA as of the end of their most recent fiscal year according to HUDCAPS data provided by HUD on November 16, 1999.

[B] PHAs were able to track down whether most port-outs were successful or not.

[C] These enrollees were not final after a minimum elapsed time of 7 months since the issuance of their voucher.

[D] Imputed success status to those with unknown final status. See Appendix A (section A.3) for a description of imputation procedures.

[E] Housing market conditions based on perceptions of housing market affordable to Section 8 recipients according to local experts called by Abt Associates staff in the fall of 2000.

[F] Represents the combined city and county housing authorities.

[G] Manhattan and Brooklyn have extremely tight market conditions: the Bronx has tight housing market conditions.

Exhibit C-2
PHAs by Housing Market Conditions and Percent of Voucher Holder Sample Successful

Percent of Sample Successful[1]	Market Tightness			
	Extremely Tight	**Tight**	**Moderate**	**Loose**
50% or less	Ventura Co. Alameda Co.	Los Angeles Bridgeport Pinellas Co. Montgomery Co. (PA)		
51-60%	Boston DC NYC (Manhattan and Brooklyn)	Baltimore Co. St. Louis Co.	Atlanta Akron Allegheny Co.	Dayton Oklahoma City
61-70%	Metro Council	Cook Co. Miami-Dade Des Moines Plymouth Tulsa Dallas NYC (Bronx)	Fresno Lexington New Orleans Newport News Milwaukee Co.	Corpus Christi
71-80%		Los Angeles Co. Sacramento Chicago Indianapolis Prince Georges Co. Grand Praire	Tucson	
81-90%	San Diego Kenosha	Everett	Phoenix Hartford Cuyahoga Co.	
91-100%		Monmouth-Ocean Co., NJ Newark	Detroit Albuquerque	Syracuse El Paso

[1] The percent of sample successful estimate is calculated as (number of known successful voucher holders) / (total number of voucher holders in sample).

Source: Abt Associates Composite Market Tightness Measure, Successful and Unsuccessful modules of Tracking System.

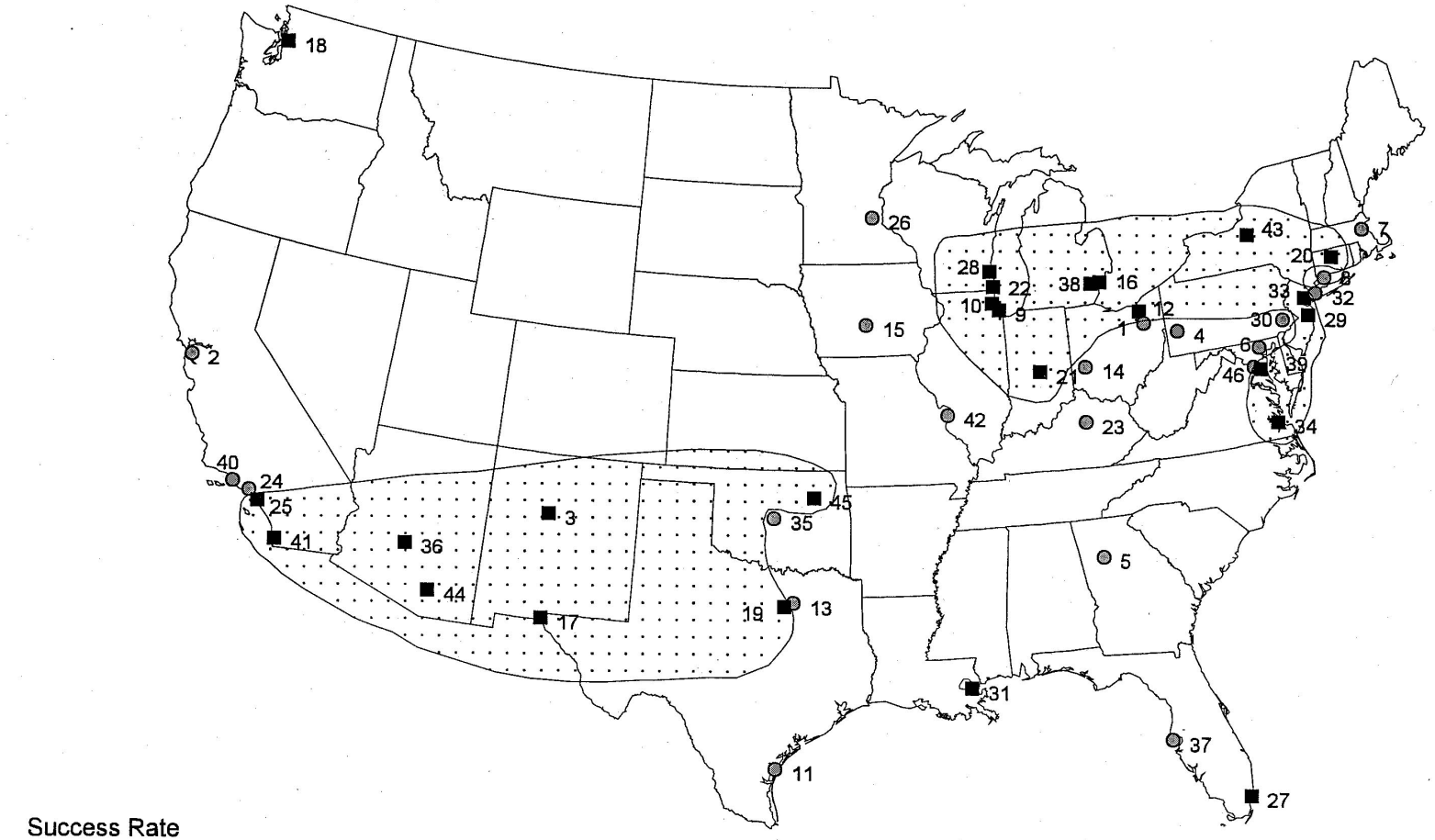
Sample Size: 48 PHAs (there are 49 observations because the Bronx was separated from the rest of NYC because of different market conditions). Most PHAs have about 50 voucher holders in their sample for a total of 2,674 voucher holders across all sites.

Exhibit C-3
Geographic Patterns of Above Average Success Rates

	Public Housing Agency	Success Rate
1	Akron	58
2	Alameda	37
3	Albuquerque	100
4	Allegheny County	55
5	Atlanta	60
6	Baltimore County	57
7	Boston	53
8	Bridgeport	47
9	Chicago	82
10	Cook County	68
11	Corpus Christi	67
12	Cuyahoga	88
13	Dallas	66
14	Dayton Metro	60
15	Des Moines	66
16	Detroit	100
17	El Paso	96
18	Everett	88
19	Grand Prairie	78
20	Hartford	89
21	Indianapolis	76
22	Kenosha	84
23	Lexington-Fayette County	63
24	Los Angeles City	47
25	Los Angeles County	77
26	Metro Council Minn/St Paul	62
27	Miami-Dade County	71
28	Milwaukee County	69
29	Monmouth-Ocean Counties	93
30	Montgomery County	42
31	New Orleans	68
32	New York City	56
33	Newark	100
34	Newport News	69
35	Oklahoma City	57
36	Phoenix	82
37	Pinellas County	38
38	Plymouth	68
39	Prince George's County	78
40	San Buenaventura	48
41	San Diego	88
42	St. Louis County	52
43	Syracuse	97
44	Tucson	72
45	Tulsa	69
46	Washington, DC	58

Exhibit C-3 *(Continued)*

Voucher Success Rates at Selected PHAs



Success Rate
- Below Average
- Average or Better
- Concentrations of high success rates

Note:The national success rate (including LA City) is 68%
identifies the PHA on the previous page (Example: 7 is Boston)

Prepared by Dan Reagle for Robert Leonard
HUD Policy Development and Research

Appendix D

Multivariate Analysis of Factors Relating to Enrollee Success

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Multivariate Analysis of Factors Relating to Enrollee Success

The regressions were run using the logistic specification. This model is used to fit a regression for binary (yes/no) responses. The coefficients produced by the regression fit a model that predicts the logit of the dependent variable. To translate the coefficients into explainers of the actual dependent variable (success or failure), they must be transformed back to non-logistic form.

The formula for translating the coefficients is given by:

$$Actual\ \Delta\bar{\pi} = Mean\left[\frac{\pi(1-\pi)\left(e^{\beta}-1\right)}{1+\pi\left(e^{\beta}-1\right)}\right]$$

For simplicity we evaluate the change at the mean success rate $\bar{\pi}$.

$$\frac{\bar{\pi}\left(1-\bar{\pi}\right)\left(e^{\beta}-1\right)}{1+\bar{\pi}\left(e^{\beta}-1\right)} > Mean\ \left(because\ concave\ \ from\ below\right).$$

This over-estimates the true effect because the function is concave from below.

Exhibit D-1 presents the regression results. The estimates of the coefficients were produced in STATA using the SYVLOGIT procedure that took into account the weights and the two-stage sampling design for this study. Exhibit D-2 provides the estimate of the effect of the variable on the probability of success, estimated at the mean success rate for variables that are statistically significant at the 10 percent confidence level. Exhibit D-3 presents the odds ratios, which provide an alternative method to estimating the impacts of the dependent variables. The odds ratio is an estimate of the ratio of the probability of success under alternative scenarios (such as with and without a particular characteristic).

Several variables discussed in the text are not included in the final regression model. These variables were not statistically significant in any model specification. To avoid problems of multi-collinearity they were excluded from the final model.

Exhibit D-1
Coefficients from Regression Model

Dependent Variable; Success (1=yes, 0=no)
Survey logistic regression

pweight: indweigh
Strata: stratas
PSU: clusters

Number of obs = 2605
Number of strata = 6
Number of PSUs = 563
Population size = 855219.02
F(40, 518) = .
Prob > F = .

S3	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
black	-.1718076	.1446187	-1.19	0.235	-.4558723	.1122571
hispanic	-.1660848	.1774359	-0.94	0.350	-.5146102	.1824405
othrace	.123814	.3164848	0.39	0.696	-.4978356	.7454636
unknown race	.4990443	.8197936	0.61	0.543	-1.11122	2.109309
age <25yr	.199726	.1434295	1.39	0.164	-.0820028	.4814548
age 4-<62	.1699558	.1585473	1.07	0.284	-.1414679	.4813794
age 62+	-.5857219	.2392093	-2.45	0.015	-1.055585	-.1158593
male	.0900561	.1305407	0.69	0.491	-.1663561	.3464682
neld, ndis, nkid	-.4848795	.1863205	-2.60	0.010	-.8508562	-.1189027
disabled, noeld	.0365853	.2493144	0.15	0.883	-.4531261	.5262967
hhsize ge5	-.3287423	.1308935	-2.51	0.012	-.5858474	-.0716372
inc=0	-.426607	.2475425	-1.72	0.085	-.9128379	.0596239
inc >30% median	-.6023511	.1311786	-4.59	0.000	-.8600163	-.344686
prim inc ss	-.1627876	.16789	-0.97	0.333	-.4925625	.1669874
prim inc welf	.0251765	.1282344	0.20	0.844	-.2267057	.2770586
prim inc othr	-.0406371	.2580314	-0.16	0.875	-.5474706	.4661963
pgm wtw	.3372989	.2319434	1.45	0.146	-.1182917	.7928895
pgm famunif	-.0985816	.248445	-0.40	0.692	-.5865854	.3894221
pgm reloc	.4618503	.3007669	1.54	0.125	-.1289256	1.052626
pgm othprog	.5201656	.2943131	1.77	0.078	-.0579336	1.098265
mkt = vtight	-.285946	.2309395	-1.24	0.216	-.7395646	.1676727
mkt = mod	.4301593	.243592	1.77	0.078	-.048312	.9086305
mkt = loose	.7877434	.405649	1.94	0.053	-.0090452	1.584532
ll accpt high	-.3213191	.2336459	-1.38	0.170	-.7802539	.1376157
ll accpt low	-2.359018	.3061853	-7.70	0.000	-2.960437	-1.757599
protect inc	1.02738	.4621167	2.22	0.027	.1196758	1.935085
protect both	.6730458	.4088256	1.65	0.100	-.1299826	1.476074
unknwn protect	.133019	.3557046	0.37	0.709	-.5656673	.8317053
PS too low	-.2786502	.1768232	-1.58	0.116	-.6259719	.0686716
PS <FMR	-1.008312	.2952337	-3.42	0.001	-1.588219	-.4284046
FMR<PS<11fmr	-.4228352	.2294663	-1.84	0.066	-.8735602	.0278898
PS>1.1FMR	-.3240732	.3303782	-0.98	0.327	-.9730127	.3248662
50-75% pass	.3286733	.2190769	1.50	0.134	-.1016445	.7589911
75%+ pass	.8613563	.2264913	3.80	0.000	.4164749	1.306238
unknown pass	-.1654823	.2172734	-0.76	0.447	-.5922576	.261293
ind brief	.8017013	.3558383	2.25	0.025	.1027523	1.50065
ind +grp brf	-.5042391	.2671546	-1.89	0.060	-1.028993	.0205147
group <30	-.4177755	.2589144	-1.61	0.107	-.9263434	.0907925

Exhibit D-1 *(Continued)*
Coefficients from Regression Model

S3	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
LL outrch mon	.7414784	.2467274	3.01	0.003	.2568486	1.226108
LL outrch ann	.186118	.3659346	0.51	0.611	-.5326624	.9048984
LL outrch<ann	.6099087	.3496059	1.74	0.082	-.0767984	1.296616
LL outrch unk	-.3435215	.3918318	-0.88	0.381	-1.11317	.4261272
_cons	.4694083	.3582978	1.31	0.191	-.2343717	1.173188

.tab compare 5 [iweight=indweigh];

compare5	Freq.	Percent	Cum.
True pTrue	531892.932	62.19	62.19
False pFalse	66478.5929	7.77	69.97
True pFalse	52801.0616	6.17	76.14
False pTrue	204046.431	23.86	100.00
Total	855219.017	100.00	

Note: For this comparison, a voucher holder with given characteristics was predicted to be successful if the model estimated the probability of success was 50 percent or higher. Similarly, a voucher holder was predicted to be unsuccessful if the model estimated the probability of success was less than 50 percent.

Note: Not all variables in the regression are discussed in the text because the number of cases in the category are very small.

Exhibit D-2
Estimates of Effects of Significant Variables on Probability of Success

Variable	Coefficient	Estimated Effect
Age 62+	-0.5857	-0.1381
Not elderly, non disable, no kids	-0.4849	-0.1132
HH size >=5	-0.3287	-0.0753
Income = 0	-0.4266	-0.0989
Income >30% of median	-0.6024	-0.1422
Moderate market	0.4302	0.0857
Loose market	0.7877	0.1437
Nondisc based on both inc+S8	0.6730	0.1264
Nondisc based on income	1.0270	0.1758
PS<FMR	-1.0080	-0.2432
110%FMR>Ps>FMR	-0.4228	-0.0980
75%+ units pass on 1st try	0.8614	0.1541
Individual briefing	0.8017	0.1457
Ind + Group briefings	-0.5040	-0.1179
Group <30	-0.4178	-0.0968
Landlord outreach every few mnths	0.7415	0.1369
Landlord outreach <annually	0.6100	0.1164

Exhibit D-3
Odds Ratios from Regression Model

Dependent Variable; Success (1=yes, 0=no)
Survey logistic regression

pweight:	indweigh	Number of obs	= 2605
Strata:	stratas	Number of strata	= 6
PSU:	clusters	Number of PSUs	= 563
		Population size	= 855219.02

S3	Odds Ratio	Std. Err.	t	P>|t|	[95% Conf. Interval]	
black	.8421412	.1217894	-1.19	0.235	.6338948	1.1188
hispanic	.8469744	.1502837	-0.94	0.350	.5977336	1.200143
othrace	1.131805	.3581992	0.39	0.696	.6078449	2.107418
unkrace	1.647146	1.35032	0.61	0.543	.329157	8.242544
age <25yr	1.221068	.1751372	1.39	0.164	.9212694	1.618427
age 44–61	1.185252	.1879185	1.07	0.284	.8680831	1.618305
age 62+	.5567038	.1331687	-2.45	0.015	.347989	.8906005
male	1.094236	.1428422	0.69	0.491	.8467447	1.414065
neld, ndis, nkid	.6157714	.1147309	-2.60	0.010	.4270491	.8878942
disabled, noeld	1.037263	.2586046	0.15	0.883	.635638	1.692652
hh size ge5	.7198285	.0942208	-2.51	0.012	.5566339	.9308685
inc = 0	.65272	.1615759	-1.72	0.085	.4013835	1.061437
inc >30%median	.5475228	.0718233	-4.59	0.000	.4231552	.7084428
prim inc. ss	.8497717	.1426682	-0.97	0.333	.6110585	1.181739
prim inc. welf	1.025496	.1315039	0.20	0.844	.7971554	1.319244
prim inc. other	.9601775	.2477559	-0.16	0.875	.578411	1.59392
pgm wtw	1.401158	.3249893	1.45	0.146	.8884368	2.209772
pgm famunif	.9061217	.2251214	-0.40	0.692	.5562233	1.476127
pgm reloc	1.587008	.4773193	1.54	0.125	.8790394	2.865166
pgm othprog	1.682306	.4951247	1.77	0.078	.9437126	2.998958
mkt = vtight	.7513032	.1735056	-1.24	0.216	.4773217	1.18255
mkt = mod.	1.537502	.3745233	1.77	0.078	.9528364	2.480923
mkt = loose	2.19843	.8917908	1.94	0.053	.9909955	4.877009
ll accept high	.7251918	.1694381	-1.38	0.170	.4582896	1.147535
ll accept low	.094513	.0289385	-7.70	0.000	.0517963	.1724584
protect inc.	2.793737	1.291033	2.22	0.027	1.127131	6.924631
protect both	1.960199	.8013794	1.65	0.100	.8781107	4.375733
unknwn protect	1.142272	.4063112	0.37	0.709	.567981	2.297233
PS too low	.7568046	.1338206	-1.58	0.116	.5347415	1.071084
PS < FMR	.3648343	.1077114	-3.42	0.001	.204289	.6515477
FMR<PS<=1.10fmr	.6551866	.1503432	-1.84	0.066	.4174627	1.028282
ps > 1.10 fmr	.7231973	.2389286	-0.98	0.327	.3779427	1.383846
50-75% pass	1.389124	.3043249	1.50	0.134	.9033506	2.13612
75%+ pass	2.366368	.5359616	3.80	0.000	1.516606	3.692256
unk pass	.8474849	.1841359	-0.76	0.447	.5530773	1.298608
ind brief	2.22933	.7932812	2.25	0.025	1.108217	4.484605
ind+ grp brf	.603965	.1613521	-1.89	0.060	.3573667	1.020727
group < 30	.6585101	.1704977	-1.61	0.107	.3959991	1.095042
LL out mon	2.099037	.5178898	3.01	0.003	1.292849	3.407941
LL out ann	1.204564	.4407917	0.51	0.611	.58704	2.471681
LL out < ann	1.840263	.643367	1.74	0.082	.9260766	3.6569
LL out unk	.7092683	.2779139	-0.88	0.381	.3285159	1.531315