Moving to Work Demonstration Expansion

Stepped and Tiered Rent Demonstration

Research Design, Data Collection, and Analysis Plan

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

Moving to Work Demonstration Expansion

Stepped and Tiered Rent Demonstration

Research Design, Data Collection, and Analysis Plan

First Draft: May 17, 2019
Revised: July 16, 2021
Revised: September 2, 2021

Contents

I. Introduction 1

II. Background: The Rent Reform Debate and Evidence 3

III. The Alternative Rent Policies for Tiered and Stepped Rent Demonstration and the Current Rent Policy (Counterfactual) 6

IV. Modeling the Possible Effects of the Alternative Rent Policies 13

V. The Evaluation 16

VI. Launching the Alternative Rent Policies and Enrolling the Study Sample 39

VII. Data Collection 52

VIII. Reports and Deliverables 62

References 65

I. Introduction

Rent reform, a long-standing public policy goal for public housing and Housing Choice Vouchers and central to the Moving to Work (MTW) Demonstration, has multiple objectives: policy simplification; reduction in the public housing agency (PHA) administrative burden and costs; stronger financial incentives for tenants to work and make progress toward self-sufficiency; protecting families from hardship; and cost-effectiveness. As part of the U.S. Department of Housing and Urban Development's (HUD) MTW expansion effort, one cohort of 10 newly selected MTW housing agencies will implement alternative rent policies designed to achieve these objectives as part of the Tiered and Stepped Rent Demonstration.

Each PHA in this demonstration will implement one alternative rent policy: four will implement the HUD-defined tiered rent model, five will implement the HUD-defined stepped rent model, and one will implement their own proposed tiered rent model that conforms with HUD's criteria for the demonstration. Tiered rent models are tied to income, and families move from one rent tier to the next based on their income bands at triennial recertifications. Stepped rents, on the other hand, are decoupled from income and increase annually, unless eligible hardship circumstances are present. Triennial recertifications are conducted under the stepped rent model only to determine families' continued eligibility for their HUD housing subsidy.

HUD has selected MDRC and its partners to conduct the first phase (Phase I) of the evaluation for this demonstration.[1] MDRC is working with HUD and the selected PHAs to design and implement the alternative rent policies and set the groundwork for a full-scale evaluation of the effects of the alternative rent polices. Phase I covers the period from 2018 to 2025.[2] Key elements of MDRC's Phase I role are listed in Exhibit 1 and summarized in this document.

Exhibit 1: Phase I Priorities for Evaluation Contractor

1. Inform site selection; develop a research design
2. Support PHA implementation of alternative rent policies in a set of MTW sites
3. Conduct/facilitate random assignment
4. Conduct baseline data collection
5. Monitor implementation
6. Begin data acquisition and analysis of early effects on housing-related outcomes
7. Prepare reports on early implementation and housing outcomes

In designing the Tiered and Stepped Rent study, MDRC will draw on its experience from the Rent Reform Demonstration (RRD)[3] to ensure that the research methodology and measurement of study outcomes are aligned across studies when feasible and appropriate. Although tiered and stepped rent policies differ in important ways from the RRD's rent model, the Tiered and

[1] The MDRC team includes the Bronner Group, LLC, Quadel Consulting, Professor Ingrid Gould-Ellen (NYU), and Barbara Fink, independent consultant.
[2] The original Phase I evaluation period spanned from 2018 to 2023. The evaluation timeframe was pushed out to accommodate site selection delays.
[3] U.S. Department of Housing and Urban Development (HUD) Solicitation # 205NC-12-R-0002 "Rent Reform Demonstration"; Riccio, Deitch, and Verma (2017).

Stepped Rent study requires anticipating and addressing many design and implementation issues similar to those encountered in the RRD. Many of these issues are discussed in this Research Design and Data Collection and Analysis Plan (RDDCAP) and MDRC will work with HUD and participating PHAs to refine design and implementation issues as we prepare for launch. This process includes thinking through the features of the rent policies; simulating the effects of the policies on tenant housing costs and PHA budgets; working with PHAs and vendors on software modifications to calculate tenants' rent contributions and housing subsidies accurately; incorporating random assignment into each PHA's distinctive recertification process in ways sensitive to PHA staff burden; and addressing potential stakeholder concerns about not allowing families to opt out of the new rent policy.

The Tiered and Stepped Rent Demonstration is also subject to a rigorous evaluation, using a randomized control trial and including implementation, impact, and cost study components. Approximately 25,000 households (based on the 10 PHAs that have now been selected for the demonstration) will be randomly allocated to two study groups: the alternative rent policy group, which will be subject to the new rent policy, and the control group, which will be subject to the existing rent rules. The demonstration focuses on working-age, non-disabled voucher holders and public housing residents, as these groups are defined in HUD regulations. HUD expects eligible households to include both current public housing residents and voucher recipients as well as new households that enter the subsidy programs during the enrollment period.

The Phase I study will set the groundwork for a longer-term evaluation, which HUD will commission at a later point. The longer-term evaluation, referred to as Phase II in this document, will assess the effects of the new rent policies on households' labor market outcomes, outcomes related to families' receipt of housing subsidies, and receipt of other transfer benefits. It will also determine the effects of the policies on PHAs' administrative burden, administrative costs, and housing assistance payments (HAP), and other outcomes.

In May 2021, HUD selected 10 PHAs for the demonstration, five of which will implement a tiered rent policy (with one of those five implementing a modified version of the tiered policy), and the remaining five will implement a stepped rent policy. The selected PHAs are listed in Exhibit 2 by rent type. There are approximately 29,000 work-able residents in the HCV and public housing programs across these 10 PHAs. At the end of June 2021, HUD and MDRC hosted a webinar to orient the PHAs on the evaluation. This Research Design and Data Collection and Analysis Plan (RDDCAP) outlines the proposed design and data collection and analysis approach for the full demonstration, including Phases I and II. It builds on MDRC's proposal for the study and early Research Design Memo, prepared for HUD, which outlined key design considerations for the evaluation. This RDDCAP also provides a brief policy context for the demonstration and outlines the scope of the evaluation. It then describes the types of data that will be collected, the data matching plan, data quality control procedures, and the data processing plan. In addition, it describes MDRC's technical assistance activities and how sites will be supported during various phases of work covered by the Phase I contract. Selected reference documents are included in appendices.

Exhibit 2: PHAs Participating in the Stepped and Tiered Rent Demonstration

Stepped Rent Policy

- Housing Authority of the City of Asheville (North Carolina)
- Fort Wayne Housing Authority (Indiana)
- Housing Authority of the County of Kern (California)
- Portsmouth Redevelopment and Housing Authority (Virginia)
- Housing Connect (Housing Authority of the County of Salt Lake) (Utah)

Tiered Rent Policy

- Akron Metropolitan Housing Authority (Ohio)
- Everett Housing Authority (Washington)
- Charleston-Kanawha Housing Authority (West Virginia)
- Housing Authority of Washington County (Oregon)
- Houston Housing Authority (Texas) – *a modified version*

II. Background: The Rent Reform Debate and Evidence

Most public housing residents and HCV recipients pay 30 percent of their income, adjusted for deductions, for rent and utilities. Their subsidies are limited by payment standards tied to local Fair Market Rents (FMRs). When voucher holders first receive a voucher or move, they are allowed to rent a unit costing up to 40 percent of their adjusted income, but they are responsible for any additional rent that exceeds the payment standard. Since enactment of the Quality Housing and Work Responsibility Act (QHWRA) in 1998, housing agencies can establish minimum rents of up to $50. For public housing, tenants pay a rent amount of 30 percent of their adjusted income. When their income increases, they have the option to pay a flat rent that the PHA sets at 80 percent (or higher) of FMR.

Protecting low-income and very-low income households from paying "excessive" proportions of their income for rent has been the primary rationale of HUD and Congress for the percent-of-income system. It has been staunchly defended on these grounds by low-income housing tenants and advocates. Previous efforts to modify the system, such as by allowing housing agencies to establish minimum rents, have required them also to establish policies exempting those for whom minimum rents would pose severe hardship.

The percent-of-income system has been criticized by public housing industry groups and others as allegedly having unintended negative consequences for: (a) tenant labor force participation, (b) tenant turnover which limits the number of similarly needy households that can be offered subsidies (raising questions of fairness or horizontal equity), (c) intrusiveness in tenants' lives, (d) accuracy of reported income, (e) inclusion on the lease of additional working adults, (f) housing agency finances, and (g) housing agency administrative complexities and costs. With respect to administrative issues, housing agencies have reported that the current system sometimes (a) confuses voucher applicants and recipients with respect to what rents they are expected to pay from year to year, and (b) has adverse effects on housing agency staff morale as a result of having to (invasively) collect and verify households' incomes. Many of these

criticisms are described in HUD's Study of *Rents and Rent Flexibility* and other papers.[4]

Numerous policymakers and stakeholders have advocated reform of the traditional rent system to reduce perverse economic incentives for assisted households, to simplify the administration of the system, or to improve the operational efficiency of housing agencies. Policy reform has been elusive, however, because moving to a new system involves some fundamental tradeoffs around which agreement has been hard to achieve, in part because of the lack of evidence about the administration and impacts of alternatives. For example, simplifying the rent structure may make it more difficult to ensure that tenants with the greatest need receive the most assistance. At the same time, offering deep subsidies for an unlimited term makes it difficult to serve equally needy families on waiting lists – given a fixed appropriation level and the non-entitlement status of HUD's housing programs. Also, the advantages of standards and protections built into a common or consistent federal approach must be weighed against the benefits of allowing local agencies to set rent rules based on local needs and conditions. And finding the right balance in the mission of housing assistance between a strict focus on providing decent affordable housing versus other objectives, such as promoting family self-sufficiency, is another source of tension among stakeholders. These have each been discussed and debated for years, with little in the way of definitive new evidence about the use and consequences of changing or improving upon current procedures.

Nearly all previous efforts to substantially reform HUD rent structures have been carried out within the context of the MTW demonstration. MTW agencies are required to "(establish) a reasonable rent policy, which shall be designed to encourage employment and self-sufficiency by participating families, consistent with the purpose of this demonstration, such as by excluding some or all of a family's earned income for purposes of determining rent." Most rent-related MTW reforms have been modest, such as simplifying income deductions, changing the process for calculating assets, or reducing the frequency of recertifications for fixed-income households.[5]

Prior to HUD's RRD, some MTW agencies initiated more substantial rent reform efforts, including:

- Keene Housing Authority has implemented a stepped rent that starts at 20 percent of gross income. In year 3 the subsidy is 65 percent of the payment standard. In years 4 and beyond the subsidy is 45 percent of the payment standard. The subsidy is paid to the tenant, who then pays the landlord.
- Housing Authority of the County of San Bernardino and one program in the Tacoma Housing Authority implemented a fixed subsidy at 50 percent of payment standard.
- The Housing Authority of Tulare County implemented a flat rent for public housing and flat subsidy for HCV households. The flat HCV subsidy was set equal to the average HAP payment under the income-based rent structure.
- Housing Authority of Santa Clara eliminated deductions and set the tenant total payment

[4] Abt Associates Inc. et al., 2010. See also: Government Accountability Office, 2012, and Public Housing Authorities Directors Association, 2005.

[5] For instance, more than 20 PHAs have changed treatment of assets, or changed or eliminated deductions. See *The Innovations in the Moving to Work Demonstration* report for an overview of rent reforms that have been pursued by existing MTW agencies and further details on these rent reforms listed (Khadduri et al., 2014).

(TTP) at 35 percent of gross income.

- A few PHAs have simplified rents. Cambridge Housing Authority set $2,500 income bands (tiered rents) and others have followed a similar model.

Exhibit 3: MTW PHAs Currently Implementing Tiered and Stepped Rents

Rent Structure	PHA	Income band (tiered rents)/step size (stepped rents)
Tiered rents		
	Cambridge Housing Authority	$2,500 income bands
	Housing Authority of Champaign County	Increments of 5% of AMI
	King County Housing Authority	$1,000-$5,000 income bands?
	San Diego Housing Commission	Minimum rents based on number of work-able members, then tiered rents for $25,000+ income bands are$1,000-$5,000
	Housing Authority of the County of San Mateo	Tiered subsidy schedule, $2,500 income bands
	Tacoma Housing Authority	$5,000 bands (smaller for <$20,000 income)
	Boulder Housing Partners	$1,500-$14,000 bands
Stepped rents		
	Keene Housing	Starts at 20% of gross income, year 3 subsidy is 65% of the payment standard, years 4-5 subsidy is 45% of the payment standard
	Housing Authority of Santa Clara County (*proposed pilot program*)	Stepped rents years 6-10: year 6 is 30% of AMI, year 7 is 40% of AMI, year 8 is 50% of AMI, year 9 is 60% of AMI, year 10 is 70% of AMI

To date, the strongest test of rent reform as a standalone intervention is the RRD being conducted by MDRC in collaboration with HUD and four PHAs.[6] The RRD uses a random assignment design to test an alternative rent policy that lengthens the recertification period and simplifies the rent calculation at four PHAs by eliminating income deductions and simplifying the method for estimating utility costs. Another important study is the evaluation of an alternative rent policy implemented for voucher holders by the Housing Authority of Santa Clara County, which MDRC conducted with a robust quasi-experimental research design. That policy reform increased the tenant contribution rate, eliminated deductions and allowances, and changed the voucher size policy rules.

[6] U.S. Department of Housing and Urban Development (HUD) Solicitation # 205NC-12-R-0002 "Rent Reform Demonstration"; Riccio, Deitch, and Verma (2017). The 4 sites include Louisville, Lexington, San Antonio, and Washington, D.C.

III. The Alternative Rent Policies for Tiered and Stepped Rent Demonstration and the Current Rent Policy (Counterfactual)

This section briefly outlines the alternative rent models as described in the request for Applications released by HUD on August 28, 2020.[7] Exhibit 4 contrasts distinguishing features of these models. Exhibit 5 provides a simple comparison of the key features of the RRD and HUD's proposed alternative rent policies for the Stepped and Tiered Rent Demonstration. It highlights similarities, differences, and possible gaps in the rent policies proposed for the demonstration.

Exhibit 4: Summary of the Tiered and Stepped Rent Policies

Test 1: Tiered Rent
• **Income-Based Tiers:** $2,500 increments. Within those tiers, rent is based on 30% of gross income at the midpoint of the tier. • **Initial Tier Placement:** The household's previous year's gross income is calculated and the household is placed in the corresponding tier. • **Future Tier Placement:** Upon each triennial recertification, the household's previous year's gross income is updated and the household is placed in the corresponding tier.[8] • **Minimum Rent:** The minimum rent is $50. • **Hardship Policy:** If a household's current/anticipated total annual gross income drops into a lower tier between triennial recerts, the household will receive a temporary (1 month -12 month) hardship exemption: the household will pay a hardship rent based on the tier that corresponds to their current/anticipated total annual gross income. Hardship rents can be renewed (upon household's request).[9]
Test 2: Stepped Rent
• **Steps:** Households will begin paying an initial rent that is equal to 30 percent of their gross income (or the $50 minimum rent, whichever is higher). PHAs will determine a fixed tenant rent share (total tenant payment, or TTP) increase (or "step") that is equal to 2% to 4% of the FMR for the household's bedroom size. (PHAs can choose a percentage within 2% to 4% and can modify the percentage each year or keep it fixed for the period of the demonstration.) The household's rent will increase by that fixed amount each year until the household's HAP reaches $0 in the HCV program or the household's tenant rent reaches the flat rent in public housing.[10] • **Initial Step Placement:** Each household pays 30% of their previous year's gross income as their initial TTP. • **Future Step Placement:** Each year, the household moves to the next step in the schedule

[7] On March 14, 2019 HUD published Notice PIH-2019-04, a Request for Letters of Interest (LOI). The LOI Notice presented a tiered rent policy and two stepped rent policies and invited feedback from PHAs considering applying for MTW. The tiered and stepped rent policies have evolved significantly since the LOI Notice. With few exceptions, this RDDCAP will not discuss the earlier (obsolete) policy options. HUD also provided operational guidance on the MTW Expansion on October 5, 2018 in Federal Register Notice, FR-5994-N-03, Operations Notice for the Expansion of the MTW Demonstration Program.

[8] The stepped and tiered rent policies will use previous year's income, or "retrospective income," which is the household's actual income for the prior twelve months.

[9] Current rent rules use current/anticipated income for calculating TTP. Current/anticipated income is an estimate of a household's income looking forward in time, basing the adjusted income estimate on the amount of income a household currently receives and anticipates receiving during the coming year.

[10] As of the writing of this RDDCAP, HUD is soliciting input from PHAs on defining the "last step" for public housing households – if the step increases should stop at flat/ceiling or continue to step up beyond flat/ceiling rent.

Exhibit 4: Summary of the Tiered and Stepped Rent Policies

regardless of actual income. • **Minimum Rent:** The minimum rent (the first step in the rent schedule) is $50. • **Hardship Policy:** A household will receive a hardship if their rent burden exceeds 40% of their current/anticipated total annual gross income or for other circumstances as determined by the PHA. The hardship rent will equal 30% of the household's current/anticipated total annual gross income. The hardship rent will last for 1 month to 12 months (at the PHA's discretion) and can be renewed as needed. If the household still needs the hardship exemption after 12 months, the PHA has the option to reset the step (or renew the temporary hardship rent).
Test 3: PHA Proposed Tiered Rent (Houston)
• **Income-Based Tiers:** $2,000 increments. Within those tiers, rent is based on 28% of gross retrospective income at the bottom of the tier. • **Initial Tier Placement:** The household's previous year's gross income is calculated and the household is placed in the corresponding tier. • **Future Tier Placement:** Upon each triennial recertification, the household's previous year's gross income is updated and the household placed in the corresponding tier. • **Minimum Rent:** The minimum rent is $50 ($50 is the TTP for the bottom two tiers). • **Hardship Policy:** If a household's income decreases between triennial recerts by 15% or more, the household may request their rent be recalculated based on the lower tier.

Source: Request for Applications under the Moving to Work Demonstration Program for Fiscal Year 2020: COHORT #2 – Rent Reform, NOTICE PIH-2020-21.

Tiered Rents

For PHAs implementing HUD's tiered rent model, households will be grouped by income into tiers. Within each tier, families' total tenant payments (TTPs) for rent and utilities will be fixed. Income increases within a tier will not affect the household's TTP. HUD has established tiers in $2,500 increments. Households with income between $0 and $2,499 will begin in the initial tier and pay a minimum $50 in rent. The number of tiers may vary by PHA, with the maximum tier going up to the PHA's area median income.

According to HUD's request for applications, households will be assigned to a tier based on their gross income in the prior year (referred to as "retrospective income"). The model will also substitute triennial recertifications for the traditional annual income reviews. Thus, once assigned to a tier, households will not need to report income increases to the housing agency and their TTP would remain unchanged until their next triennial recertification, when they would be placed in an income-appropriate tier.

If households lose income, they may qualify for a hardship exemption. If its current/anticipated annual gross income drops into a lower tier between triennial recertifications, the household will receive a temporary (1 month to 12 month) hardship exemption: the household will pay a hardship rent based on the tier that corresponds to their current/anticipated total annual gross income. Hardship rents can be renewed upon household's request if the qualifying conditions persist. There is currently no specified limit on the number of hardship exemptions that a household can be granted between triennial recertifications.

Stepped Rents

Under this model, TTPs are increased annually by a fixed amount that is equal to two percent to four percent of Fair Market Rent (FMR) for the household's bedroom size. PHAs will choose the size of the rent increase, within the two percent to four percent range, and can modify it each year or keep it fixed for the period of the demonstration.

After the household's initial rent is established, each household's income has no effect on their rent. Households' TTP automatically increases by the fixed rent increase on an *annual basis*. Their rent increases by that fixed amount each year until their HAP reaches $0 in the HCV program or the household's tenant rent reaches the flat rent in public housing.[11] Because the stepped rent model culminates in zero subsidy after the final step, it represents a time-limited subsidy policy. How long it takes for a family to reach the final step depends on its initial step and any hardship remedy it receives.

Unlike the tiered rent model, where the triennial recertification is conducted in order to assign a household to a new rent tier if their retrospective income has changed, under the stepped rent policy, triennial income reexaminations will be used to verify continued eligibility for a HUD subsidy, but not to calculate a households' TTPs. If a household's income at reexamination is high enough to affordably rent a unit at the FMR (based on HUD's current income eligibility criteria), they will no longer be eligible for assistance.

The only time that a household deviates from the fixed annual rent increases is if it requests, and is granted, a hardship exemption. A household will be granted a hardship if their rent burden exceeds 40 percent of their current/anticipated monthly gross income or for other circumstances as determined by the PHA. The hardship rent will equal 30 percent of the household's current/anticipated gross income. The hardship rent will last for 1 month to 12 months (at the PHA's discretion) and can be renewed as needed. If the household still needs the hardship exemption after 12 months, the PHA has the option to reset the step (or renew the temporary hardship rent).

PHA-Proposed Model

One of the selected sites, the Houston Housing Authority (HHA), will implement a modified version of the tiered rent that they proposed in their application. HHA's tiered rent policy deviates from the HUD-defined tiered rent policy that the other four tiered rent sites are implementing in four ways:

(1) The PHA will use $2,000 increments in place of $2,500 increments to define the tiers;
(2) Within those tiers, TTP is based on 28% of gross retrospective income at the bottom of the tier;
(3) The $50 minimum rent applies to the bottom two tiers (instead of just the bottom tier); and

[11] As mentioned above, HUD is currently soliciting input from PHAs on defining the "last step" for public housing households – if the step increases should stop at flat/ceiling or continue to step up beyond flat/ceiling rent. HUD's "over-income" policy pertaining to continued public housing residency for higher-income families established under the Housing Opportunity Through Modernization Act of 2016 (HOTMA) may also need to be considered.

(4) If a household's income decreases between triennial recertifications, in place of the household requesting a hardship exemption, if income decreases by 15% or more, the household may request their rent be calculated based on the lower tier (through an income recertification).[12]

The Counterfactual: Current Rent Policy

The evaluation will describe the rent policies that the existing rules group members (the control group) will be subject to, which will be critical for understanding what produces the differences in outcomes (or program "impacts" or effects) between the two study groups. Understanding the existing rent policy context is also critical because it will influence what the experiment tests. Since HUD can restrict waivers for MTW activities that might interfere with the test of the alternative rent policies, deviations from the traditional rent rules for the control group should be very limited.

For the 10 sites in the evaluation, MDRC will document for each site the relevant features of the existing rent policy. Over the course of the study, the evaluation will monitor any relevant policy changes that PHAs implement for everyone (including control group members), even if they fall under allowable waivers or exemptions. The evaluation will also track known information about local employment and housing contexts.

[12] It still needs to be clarified with HHA whether the income that will be used to determine whether the household is eligible for an interim recertification and the income used to determine which tier the household's new income would fall under is retrospective gross income or current/anticipated gross income.

Exhibit 5: Comparison of Rent Rules for the Rent Reform Demonstration and the Stepped and Tiered Rent Demonstration

Component	Rent Reform Demonstration	Stepped and Tiered Rent Demonstration	
		Tiered Rent	Stepped Rent
Total Tenant Payment (TTP)	28 percent of gross monthly retrospective income, with no deductions or allowances. Countable income estimate for setting a family's TTP and housing subsidy are based on 12-month retrospective income.	Tier is assigned based on 12-month retrospective gross income, with no deductions or allowances. Each tier's TTP amount is set at 30% of midpoint of the tier.[13]	Rent calculation based on 12-month retrospective gross income. Initial rent is 30% of gross monthly retrospective income. Then TTP steps up by a fixed amount set at 2% to 4% of FMR.
Minimum TTP	All families pay a minimum rent ($50 to $150 per month) directly to their landlords, to mirror the landlord-tenant relationship in the unsubsidized rental market.	$50 Payment of minimum rent to landlord unspecified in RFA	$50 Payment of minimum rent to landlord unspecified in RFA
Assets	Family income from assets is ignored when total asset value is less than $25,000, and families do not need to document those assets.	Unspecified in RFA	Unspecified in RFA
Recertification period	Triennial recertifications.	Triennial recertifications	Triennial recertifications for eligibility determination only
Interim recertifications when income changes	Earnings gains do not increase TTP for 3 years (until next triennial recertification). Interim recertifications are limited to a maximum of 1 per year, and only when a family's average gross income over the most recent 12 months drops by more than 10 percent from the retrospective estimate that was used to establish the TTP currently in effect.	Earnings gains do not increase TTP for 3 years (until next triennial recertification). If the household is granted a hardship exemption, the household will pay a temporary rent amount for the tier corresponds to their current gross income.	If a household is granted a hardship exemption, it will pay a temporary hardship rent that equals 30% of the household's current gross income. The hardship can be renewed as needed, and the PHA can choose to reset the household's step based on their current income if they still need a hardship after 12 months.

[13] For Houston's tiered rent policy, rent is set to 28% of the bottom of the tier.

Exhibit 5: Comparison of Rent Rules for the Rent Reform Demonstration and the Stepped and Tiered Rent Demonstration

Component	Rent Reform Demonstration	Stepped and Tiered Rent Demonstration	
		Tiered Rent	Stepped Rent
Utilities	A simplified utilities policy tailored to a standard base rate for utility costs that varies according to the voucher size, with additional payments for higher costs due to the type of heating.	In the RFA, HUD encourages PHAs to adopt the simplified utility allowance used in RRD	In the RFA, HUD encourages PHAs to adopt the simplified utility allowance used in RRD
Hardship policy	Families qualify for consideration of a hardship-based remedy if— • The family's monthly TTP exceeds 40 percent of its current or anticipated monthly gross income. • The hardship cannot be remedied by the one interim recertification permitted each year. • The family faces eviction for not paying rent or utilities. • The family meets other criteria determined by the PHA. Hardship remedy options include the following standardized list: • Allowing an additional interim recertification beyond the normal one per year. • Setting the family's TTP at the minimum level for up to 180 days. (This remedy can be renewed at	If a household's current/anticipated total annual gross income drops into a lower tier between triennial recerts, the household will receive a temporary (1 month to 12 month) hardship exemption: the household will pay a hardship rent based on the tier that corresponds to their current/anticipated total annual gross income.[14] Hardship rents can be renewed (upon household's request).	A household will receive a hardship if their rent burden exceeds 40% of their current/anticipated gross income or for other circumstances as determined by the PHA. The hardship rent will equal 30% of the household's current/anticipated gross income. The hardship rent will last for 1 month to 12 months (at the PHA's discretion) and can be renewed as needed. If the household still needs the hardship exemption after 12 months, the PHA has the option to reset the step (or renew the temporary hardship rent).

[14] Houston proposed a different hardship remedy that allows for interim recertifications between triennial recertifications. The evaluation team will learn more about the specifications of the hardship policy in upcoming discussion with the PHA.

Exhibit 5: Comparison of Rent Rules for the Rent Reform Demonstration and the Stepped and Tiered Rent Demonstration

Component	Rent Reform Demonstration	Stepped and Tiered Rent Demonstration	
		Tiered Rent	Stepped Rent
	the end of that period if the hardship persists.) • Setting the family's TTP at 28 percent of its current gross income (which may be less than the minimum TTP), for up to 180 days (except in Lexington). (This remedy can be renewed at the end of that period if the hardship persists.) • Offering a "transfer voucher" to support a move to a more affordable unit.		
Grace period	At the triennial, if a family's current gross income is > 10% lower than its average gross 12-month retrospective income, TTP is calculated based on current income. This TTP will remain in effect for 6 months. Families can qualify for a hardship-based remedy during the grace period.	Unspecified in RFA	Unspecified in RFA

IV. Modeling the Possible Effects of the Alternative Rent Policies

The Request for Letters of Interest (LOI) Notice published by HUD on March 14, 2019, presented one tiered rent and two stepped rents. After MDRC conducted the rent simulations for the study and presented the findings to HUD, HUD revised the rent policies and specified the new policies in HUD's Request for Applications (RFA), published in August 2020. The RFA reflects substantial changes to the rent policies (especially the stepped rent), including consolidating the two stepped rents into a single policy (presented in Section III of this document), specifying hardship policies that allow for unlimited hardship exemptions, and using gross income in place of adjusted income for both policies. This section describes the rent simulations that MDRC conducted after the LOI was published, how the findings informed HUD's revisions of the rent policies, and plans for leveraging the modeling data to inform discussions with PHAs in the summer and fall of 2021 to further refine the rent policy specifications.

In 2019, while HUD was finalizing the details of the alternative rent policies to test in the demonstration, MDRC conducted a statistical modeling exercise to assess the possible financial consequences of the alterative rent policies for households and for housing agencies. These simulations helped guide HUD in making further decisions about the models' precise specifications and aided in understanding implications of the different rent reform policies. After reviewing PHA letters of interest and MDRC's simulations, HUD revised the rent policies for the August 2020 Notice soliciting PHA applications (that Notice presented one tiered rent and one stepped rent, the policies described in Section III of this document). In RRD, a similar modeling exercise was conducted and aided HUD and the PHAs in identifying which rent reform to test, and then also aided in further specification of the rent reform policies (e.g. the percent of gross rent that TTP would be based on and the minimum rent).

To conduct the statistical modeling, MDRC obtained from HUD de-identified national snapshots of non-MTW PIC data for a six-year period, covering 2014 to 2019 for nonelderly, nondisabled households in the HCV program and in public housing. The files included a quasi-ID that allowed records for the same household in different years to be combined. MDRC used data from the same calendar month for each of the six years because it is envisioned that the tiered and stepped rents will be in place for six years. After combining the six household-level files into an analysis dataset, household-level FMR and AMI data from HUD were merged in and applied to all certifications in the 2014 to 2019 study period. After applying the eligibility criteria to the data at the start of the study period (2014), the eligible sample consisted of 1,297,422 households.[15]

The statistical modeling exercise examined total housing subsidy for the HCV program and total tenant rent for public housing under existing rules versus different rent reform rules for each year and over 6 years, average housing costs for families under existing rules vs. different rent reform

[15] The specific eligibility criteria applied include: (1) the household is nonelderly (the head of household, spouse or cohead is age 18 to 56 (so they remain non-elderly through the end of the study period), (2) the household is not disabled according to HUD's disability status definition, (3) the household is in the HCV program or public housing, and (4) is not in the Enhanced Voucher Program, Welfare-to-Work voucher program, or Certificate voucher program, and (5) the household does not have $0 HAP if in HCV and is not paying a flat rent if in public housing.

rules for each year, the distribution of changes in housing costs for families for each year, and an examination of characteristics of families who would pay more under the rent reform compared with existing rent rules. This approach follows the framework developed for the RRD analysis.[16,17]

The results of these simulations were shared with HUD to help inform the final specifications of the rent models that were outlined in the Request for Applications in August 2020. The key takeaway for the tiered rent simulations (based on the tiered rent policy in the 2019 LOI) was that a triennial recertification period that allows for interims during the recertification period to lower TTP for income *drops* but does not adjust TTP upward for income *increases* could increase a PHA's HAP expenditures during the triennial period (relative to existing rules). This effect could be partially offset by the triennial recertification if the tiered rent policy leads to increased earnings relative to the existing rent rules.

For the stepped rent policies defined in the 2019 LOI, the simulations found that with the 3% stepped rent policy, the average TTP increases in proportion with income increases in the first year, but then begins to increase more quickly than income increases in later years. With the 5% stepped rent policy, the TTP increases exceed income increases much more quickly and by larger amounts. Unsurprisingly, households' rent burden increased substantially over time in the stepped rent schedules. With the 3% stepped rent schedule, for example, in 2015 (Year 2), 28 percent of the households still receiving subsidies would have a TTP greater than 50 percent, compared with 12 percent under traditional rules. This finding highlighted the importance of hardship policies as safeguards to prevent evictions under the new policy. Hardship exemptions were not initially defined in the LOI and therefore not included in MDRC's simulations, but the revised policies specified in the 2020 RFA included a robust hardship policy intended to protect households from eviction and other material hardship. These findings also raise the possibility that hardships may be administratively burdensome to PHAs, given the potential volume of hardship requests. The revised stepped rent policy in the 2020 RFA allows for PHAs to set hardship exemptions in the range of 1 month to 12 months (and the duration could vary by household based on their circumstance) and allows PHAs the option to reset the step if the household still qualifies for the exemption after 12 months. These specifications provide the PHAs with tools to limit administrative burden. Examining the distribution of effects on households' TTP, the simulations found that increases in TTP caused by the stepped rent rules would not disproportionately affect households based on their household composition or race/ethnicity, but, unsurprisingly, households experiencing TTP increases under the new rules have lower income on average than those who did not.

As the evaluation team begins to engage with PHAs around refining the policies and planning for implementation (beginning in July 2021), the team will produce descriptive statistics of key characteristics of each site for the most recent year of PIC data (2019) that could help inform any

[16] MDRC (2015).

[17] MDRC and HUD determined that, unlike RRD, the simulations using varying assumptions for employment effects were less useful for the present demonstration because, (1) for the tiered rent, there is no evidence from prior studies that tiered rents (or an extended recertification period) lead to increased employment, so decisions around the tiered rent policy should not assume employment effects, and (2) for the stepped rent, rent is decoupled from earnings, so any increases in employment would not affect tenant rent or housing subsidy outcomes.

decisions related to refining the policies, including the percent participating in the Family Self-Sufficiency (FSS) program and the percent receiving a child care deduction. These measures will help inform discussions with PHAs around study households' participation in FSS, how child care expenses would be treated under the new policy in terms of families' eligibility for the demonstration and any support for families for child care costs after they are enrolled and begin needing paid child care, and hardship policies. MDRC is also using the modeling data to build site profiles that show the characteristics of the nonelderly, nondisabled populations in each of the 10 sites. These characteristics include demographics such as race and ethnic composition, household composition, average household income levels, the types (and prevalence) of income sources for households. MDRC and HUD will also consider including some key results from the modeling using the revised set of policy specifications from the RFA (for example, average TTP) to the site profile tables.

V. The Evaluation

This section describes a plan for a comprehensive evaluation of the demonstration's alternative rent policies—tiered rent and stepped rent—including short-term research objectives, covered under Phase I, and longer-term research, which HUD will commission in the future. The full evaluation will include a careful assessment of the implementation, impacts, and costs of the new policies. Exhibit 6 provides a high-level overview of the topics prioritized for Phase I analysis and those proposed for a longer-term evaluation that HUD may commission.

Exhibit 6: Overview of Topics and Study Components, by Study Phase

Study Component / Topic	Phase I (funded)	Full Evaluation
Implementation Analysis		
Implementation fidelity	x	x
Staff views on implementation—including the adaptations, challenges, and best practices encountered during implementation, and the administrative burden	x	x
Use of hardship remedies (hardship exemptions requested and granted)	x	x
Staff views on participants' understanding of and experiences under the new rent rules	x	x
PHA rationale for and goals of pursuing MTW status and selecting and designing alternative rent policies; perceptions of progress against goals	x	x
Impact Analysis		
Employment and earnings		x
Housing subsidy levels and continued receipt	x	x
Material hardship		x
Household composition		x
Frequency of recertifications/actions (regular recertifications, interims)	x	x
Receipt of government benefits (TANF, SNAP)		x
Homelessness		x
Cost Analysis		
Per-household administrative expenditure		x

The two rent structures targeted for this demonstration share the same policy goals, though the mechanisms through which these policy goals would be accomplished differ by rent type. Two

central research questions for both rent types are:

1. To what extent does the alternative rent policy increase household earnings?
2. In what ways, and to what extent, does the alternative rent policy reduce administrative burden?

Both the tiered rent structure and the stepped rent structure aim to increase residents' economic self-sufficiency: the tiered rent structure with a triennial recertification, and the stepped rent structure by decoupling tenant rent from tenant income. Both rent policies also aim to increase administrative efficiency through fewer certifications and streamlined rent calculations.

For both rent structures, HUD intends the new policy to be approximately budget-neutral, meaning that the PHA should be able to serve the same number of households over a period of years for about the same HAP and administrative cost as they would under the regular rent rules. Despite HUD's intention, the policies may cause an increase or decrease in PHAs' subsidy per household, and these effects may differ for the tiered and stepped rents. As noted in Section IV, the tiered rent might increase HAP expenditures and reduce public housing rents because it permits hardship rent reductions, but limits rent increases. On the other hand, the tiered rent may reduce HAP expenditures and increase public housing tenant rents if the policy increases household earnings. The stepped rent could reduce HAP expenditures and increase public housing rents if the step increases are larger than the rent increases that occur under the regular rent rules due to income gains. For both policies, a large number of hardship remedies might lead to increased HAP and reduced tenant rents in public housing.

If the tiered and stepped rents increase earnings, that may also lead to reduced material hardship among households – it may improve food security, households' ability to pay for medical care and cover other basic living expenses. However, if the hardship policies are not robust enough to protect families who experience significantly increased rent burdens (either due to loss of income or the inability to increase income to cover higher rents), the policies might increase material hardship. Therefore, two additional research questions important for this study are:

3. How does the alternative rent policy affect households' housing subsidies?
4. How does the alternative rent policy affect households' material hardship?

The study will also explore a number of other important research questions (including research questions on the effects of the policies on subgroups of households) that are described later in this section.

This remainder of this section begins by laying out the potential long-term research questions and framing the rationales separately for tiered and stepped rent structures. The same data sources and items will be collected for both types of rent structures and the impacts of the alternative rent policies will be estimated for the same set of outcomes; however, the rationales differ between policies. The short-term research questions, which are focused on the implementation of the new policies and early outcomes, are common to both types of rent structures and are described following the long-term research questions. This section then describes the analytic methods that will be used to address the study's research questions.

Long-Term Research Topics for Tiered Rents

Within a tiered rent structure, as described in Section III, households are grouped by income into tiers. Within each tier, tenant rent contributions are the same for all households. Any income increase within a tier does not affect the household's rent contribution. This section describes hypothesized effects on PHAs' administrative efficiency, tenants' employment and earnings, households' housing subsidies, other subsidies, and material hardship.

Effects on PHA Administrative Efficiency

A primary objective of tiered rents is to simplify the rent calculation and reduce PHA's administrative burden and costs.[18] In addition to creating a tiered rent structure, this rent policy will extend the recertification period from one year to three years. With a triennial recertification period, households are only required to recertify once every three years. Furthermore, increases in income during that three-year recertification period would not require an interim recertification to recalculate households' rent contribution. At a household's triennial recertification, if it has increased its income but the new income level remains *within* the original income tier, the household is required to report this increase, but the tiered rent will remain the same. The combination of the tiered rent structure and the extended recertification period can reduce the burden and costs of administering the HCV program by reducing the staff time and effort required for meeting with tenants, calculating household TTP, and operating other aspects of the rent policy. For RRD, based on 42 months of follow-up, it appears that the shift to triennial recertifications substantially reduced PHA interactions with families as their circumstances changed. The extent to which administrative burden is reduced for the Tiered and Stepped Rent sites will depend on specific decisions made with the PHAs and HUD about income calculations (e.g., how retrospective income will be operationalized), any restrictions on hardship exemptions, and what calculations are done by PHA staff at recertifications.

Effects on Tenants' Employment and Earnings

The tiered rent policy has the potential to increase tenants' employment and earnings primarily through the incentive created by the extended recertification period. When income recertifications are conducted triennially rather than annually, earnings gains will not increase the TTP that households pay for three years. In effect, this TTP cap encourages work by eliminating the implicit housing-subsidy-related "tax" on increased earnings for three years.

It is unclear whether the tiered rent structure would provide an additional work incentive beyond that created with the extended recertification period. For households at the bottom of an income tier, the tiered rent structure may add an incentive to increase their earnings within their tier, since their TTP would not increase, even at their triennial recertification. For households near the top of a tier, the tiered rent structure may act as a disincentive and discourage household members to increase their income enough to bump them into the next tier, which would result in a noteworthy jump in their TTP. It is uncertain whether these opposing forces would offset each other and not cause a change in *average* household earnings, or whether one may outweigh the other and cause a net increase or a net decrease in average household earnings.

[18] This assumption will be revised if sites who chose tiered rent policy choose it with a different primary objective.

Effects on Households' Housing Subsidies

If the extended recertification period does produce sustained increases in tenants' employment and earnings, the resulting increases in household income would eventually lead to reductions in the levels of housing subsidies that PHAs provides on behalf of households. However, this relationship between income and housing subsidies is not linear with a tiered rent structure as it is with a traditional percent-of-income rent structure. If the tiered rent structure only leads to income increases within tiers, then average housing subsidy levels would not change. Even if the tiered rent policy does cause a larger overall increase in average earnings that moves households into higher income tiers, the reduction in average housing subsidies would not occur during the three-year extended recertification period (unless tenants in the tiered rent policy group exit the subsidy system more quickly within that period, which is not anticipated). Because increases in tenants' earnings will not increase their TTPs, any reduction to PHA subsidy level is unlikely to occur until after the next triennial recertification (Year 4). At that point, tenants who have increased their earnings will have their TTPs reset at higher levels, providing a way for housing agencies to recoup some of the extra subsidy they are likely to provide during the prior period by not increasing TTPs in the face of income gains.

If the tiered rent policy with an extended recertification period does promote substantial earnings gains, families in the intervention group may be more likely to "earn their way off housing assistance" than families in the control group within the period of the study. However, any such effect would only be likely to occur after the triennial recertifications, since earnings increases do not lead to subsidy reductions within the three-year periods between triennial recertifications. The study will examine the effects of this tiered rent policy on continued subsidy receipt. This will show whether, and when, the new rent policy causes an increase or decrease in the percentage of households who exit the subsidy system during the follow-up period, and changes the amount of housing subsidy they receive.

In addition to reductions in housing subsidies, residents' increased earnings may also lead to reductions in other government benefits, including TANF and SNAP benefits, which the longer-term evaluation may measure.

Effects on Housing-Related Hardship and Other Material Hardship

The tiered rent structure – like the traditional percent-of-income rent structure – calculates rent based on household income. This policy minimizes the risk of households experiencing high rent burdens. If a household's income drops during the three-year period between recertifications, the households can complete an interim recertification where their rent contribution will be recalculated based on their reduced income. The availability of unrestricted hardship exemptions for both rent rules groups should minimize the likelihood that the new rules group experiences hardship at a higher rate. However, for some households, the new policy may increase rent burden, possibly leading to an increase in the experience of material hardship:

1) Households whose income is at the bottom of their income tier: If the TTP for an income tier is set at the midpoint of that tier, then households with incomes below the midpoint

would be paying more at the same income level than they were under the traditional rent policy.

2) Households who would begin paying the minimum rent of $50 under the new rent policy: If the PHA does not have a minimum rent under its current rent policy or its current minimum rent is less than $50, then households who would begin paying the $50 minimum rent under the new policy would experience an increase in their rent contribution while remaining at the same income level. (Note, however, that all 10 PHAs involved in this demonstration have a minimum rent.)
3) Households for whom gross income would put them in a higher tier than their adjusted income. These would include families with large deductions, for example, due to child care expenses, medical expenses, or larger families with dependent deductions.

At the same time, if the new rent policy leads to sustained increases in families' incomes, their experience of material hardship may be lower for the new rules group than the existing rules group.

The study could examine effects on eviction from the PHA data (if these data are available) and material hardship, if a long-term follow-up survey is funded. The survey would yield measures on various dimensions of material hardship, such as experiences of food insufficiency and difficulty covering utilities and unmet medical needs. It could also examine households' use of the hardship remedies offered, including how many households requested hardship exemptions and how many exemptions were granted by the PHA.

Effects on Household Composition

The extended recertification period may encourage (or at least not discourage) some household heads to add a new spouse or domestic partner to the lease because, at least during the extended recertification period, adding that person's earnings to the household's income would not necessarily increase the household's TTP if their voucher size does not increase (and, therefore, the same payment standard is used for the rent calculation. (In RRD, rent was recalculated if a new household member qualified the household for a higher payment standard and the household moved to a larger unit.) The triennial recertification period might also encourage other adults living in the household – such as young adult children – to delay leaving the household (or lease) in the short-term if their increased earnings do not increase the household's TTP, and may accelerate them leaving at the triennial mark, when their leaving would avoid their income being included in the household's retrospective income that would be used to set the household's rent for the next three years.

Variation in Impacts for Tiered Rent Policies

The tiered rent policies may have differential effects on different types of households. This study will conduct subgroup analyses to assess whether this is the case. Two of the most important subgroups for this analysis are: (1) members of households near the bottom of the income tier vs. members of households near the top of the income tier, and (2) tenants with any earnings at baseline vs. tenants with no earnings at baseline.

As described above, the tiered rent policy provides a work incentive for households at the bottom of the income tier and provides a work disincentive for households at the top of the income tier. Households at the bottom of the income tier have an incentive to increase their income within their tier, since it would not affect their rent share when their rent share is recalculated at their triennial recertification. Conversely, households at the top of the income tier have a disincentive to increase their income if it is not a substantial increase in income, because even a minimal increase in income could place them in the next income tier at their next triennial recertification, resulting in a significant jump in their rent share. If there are no limits on the number of interim recertifications that households can request or on the percent that their income must drop to request an interim recertification, then there could also be an incentive for households at the bottom of an income tier to reduce their earnings by a small amount to gain a substantial rent reduction. The wider the income bands, the stronger these incentives and disincentives would be (because of larger TTP changes associated with the movement across band thresholds). HUD's specified income band width of $2,500 may not be large enough to create these substantial differential incentives and disincentives. Even if the analyses does not find evidence of effects on employment and earnings for the full group of voucher recipients subject to the new tiered rent rules, it is possible that these opposing forces are balancing each other out to produce a null average effect. Therefore, it will be important to look at effects for these subgroups of households separately. (See the discussion of subgroup analysis in a later section of this paper.)

The tiered rent structure and the extended recertification period in the tiered rent structure may also have a differential effect based on whether household members are working at the time of the change. Adults who are already working may have more flexibility to adjust their earnings within tiers by increasing or decreasing the number of hours they work, while adults who are not yet working may have less flexibility in the number of hours they work if they gain employment during the three-year recertification period. On the other hand, adults who are not yet working may have more to gain with the extended recertification period. Any earnings they would receive from new employment would not increase their tenant rent share until their triennial recertification, so they would be able to keep 100 percent of their earnings from a new job. However, adults who are not yet working may have more significant barriers to employment, making it less likely for them to take advantage of the extended recertification period.

Long-Term Research Topics for Stepped Rents

With a stepped rent structure, tenant rent shares are increased annually following a fixed schedule. After the initial rent is established for the household, the household's rent share is decoupled from its income. Any increase or decrease in household income does not affect their rent share. Although the stepped rent policy will also use a triennial recertification, the only purpose of the recertification is to verify eligibility for the housing subsidy program, not to recalculate a household's rent share using their updated income information.

Effects on Tenants' Employment and Earnings

A primary objective of a stepped rent policy is to incentivize tenants to increase their earnings, leading to their reduced reliance on housing subsidies. A household's rent share is decoupled from its income (after the first step is set), and the requirement to pay a higher and higher rent

share over time regardless of household income is intended to encourage households to increase their income over time to be able to afford their rising rent share. The strength of this incentive is influenced by the size of the step – that is, the amount by which a family's expected rent contribution increases year to year. For households whose members have the capacity to earn more or that have members who are currently not working but are able to work, the expectation of regularly rising rent shares can create a strong incentive to increase their earnings. Furthermore, there is an incentive for households to increase their income as much as possible (within eligibility limits) as soon as possible since the rent share increases each year are fixed and larger income increases would result in more cumulative net income and would not influence the households' rent share amount.

However, it is uncertain what proportion of households will be able to increase their income to keep up with rising rent shares and to what extent. In some households, all work-able members may already be at their earning capacity. In others, some members may not be able to overcome significant barriers to employment without additional services. The study will estimate the effects on overall employment rates and average earnings and will also try to capture some of this potential variation by estimating effects for subgroups separately (described further below).

Effects on Housing-Related Hardship and Other Material Hardship

A primary concern with stepped rents is that this type of rent structure may lead to housing-related hardship such as rent burden and eviction and other material hardship such as food insecurity. The stepped rent policy effectively removes the built-in safeguard of the traditional percent-of-income rent policy, where a household's rent share is reduced if their income drops. As described above, some households may not be able to keep up with the fixed annual increases in their rent shares, either because their members are already working and at their earning capacity, or because they cannot overcome significant obstacles to gaining employment. However, if the new policy leads to an increase in households' earnings, the likelihood of material hardship may be reduced for the new rules group relative to the existing rules group.

The hardship policy described earlier aims to protect those households while minimizing the extent to which hardship exemptions may dilute the work incentive inherent in stepped rent structures. The evaluation will examine how many households requested hardship exemptions and how for how many households the PHA granted exemptions. It will examine effects on measures of housing-related hardship, including rent burden levels, eviction and homelessness using PHA and HMIS data. It will also assess whether the rent policy affects other aspects of material hardship, such as households' ability to cover basic needs such as food, utilities and medical expenses, and whether it led to increases in household debt. These aspects of material hardship could be measured using a follow-up survey of households, if funded.

Effects on PHA Administrative Efficiency

The stepped rent policy has the potential to lead to substantial reductions in administrative burden. After the first step in the rent schedule is determined for a household, the PHA no longer has to calculate the household's rent contributions. Under the stepped rent policy, households submit income documentation every three years to verify eligibility for housing assistance, but

no deductions or calculations are taken into account and the households' TTP does not need to be recalculated using the updated income information. Similar to tiered rents, the new policy should reduce staff time and effort for meeting with tenants, calculating TTP, and operating other aspects of the rent policy. The administrative efficiencies of the stepped rent could be offset, however, by the burden of reviewing hardship requests. Also, a change in the rate at which units turnover within a given period of time may also affect administrative efficiencies.

Effects on Households' Housing Subsidies

By design, a stepped rent policy should decrease households' average housing subsidies over time, regardless of its effects on tenants' employment and earnings. However, these reductions in housing subsidies could be at least partially offset if many households cannot keep up with rising rent shares and are granted hardship exemptions. Also, if the stepped rent policy increases average tenant rent shares at the same rate (or lower) as average income growth, it is possible that the stepped rent group's average housing subsidies do not decrease more than the control group's average subsidies decrease over time.

The stepped rent policy could increase the rate of households exiting assistance by three mechanisms. First, households with relatively higher incomes will start out with higher rents/smaller subsidies, and their subsidy may reach zero during the study period. For example, a voucher household with a HAP of $50 might have their HAP reduced to zero after a couple years of stepped rent increases. Second, if the stepped rent leads to increased earnings, some households might have their income increase beyond the eligibility threshold and leave assistance. Third, if households cannot increase their earnings and pay the stepped rent, they may face eviction; the hardship policy should prevent this scenario, but it will be important to monitor how hardships are administered.

If households do increase their earnings in response to the stepped rent policies, these earnings gains may also lead to reductions in other government benefits, including TANF and SNAP benefits, but increases in income from the Earned Income Tax Credit.

Effects on Household Composition

The stepped rent structure may encourage (or at least not discourage) some household heads to add a new household member that has income, since that person's income would contribute to covering the household's housing costs but would not trigger a new rent calculation to increase the household to a higher step, unless the addition of the new family member made the family eligible for a larger unit, and that family moved to a larger unit. At this time, this aspect of the policy is still being finalized.

Variation in Impacts for Stepped Rent Policies

The stepped rent policies may also have differential effects on different types of households. This study will run subgroup analyses for the following three subgroups to test for this heterogeneity of effects: (1) tenants with any earnings at baseline vs. tenants with no

earnings at baseline, (2) tenants with a high initial TTP vs tenants with a low initial TTP, and (3) tenants with high barriers to employment vs. tenants without.

Households with members who are not working at baseline may have the most to gain from a stepped rent policy in the short-term. A household member who gains employment after the rent schedule is set can keep a large portion of their earnings in the short-term (until the rent schedule catches up with the household's higher income), since the household's rent increases by a fixed amount each year, regardless of whether there was a large increase in household income. The sooner the household member gains employment (after the schedule is set), the more net income the household gains. Tenants who already have earnings may increase their earnings to keep up with higher rents (either by working more hours, advancing in their current job, or changing jobs), but they may have less flexibility to do so, and probably can only increase their earnings by smaller amounts.

The stepped rent policy can affect households differently who are starting with a low initial rent compared with households who are starting at a higher initial rent. Households with a low initial rent may have more flexibility to increase their earnings, while households with a high initial rent may already be near their earning capacity. If lower income households have more difficulty gaining employment, then these households could be especially vulnerable to increased hardship. On the other hand, households who are at a higher step in the schedule may also be at a higher risk of increased hardship if they are already at their earnings capacity.

Some tenants may have significant barriers to employment and may not be able to increase their earnings even if their rent share is increasing and they cannot cover the increased housing costs with their current income.

Short-term Research Topics for Tiered and Stepped Rents

In the short-term, particularly the period covered by Phase I, the evaluation will mostly focus on documenting the early phase of the demonstration, prioritizing topics related to policy implementation. It will also begin to examine some of outcomes described in the section above, particularly related to the rent policies' early effects on housing outcomes (that discussion not repeated here).

Implementation Fidelity of Alternative Rent Structures

The evaluation will assess how well the participating PHAs implement the alternative rent structures being tested. A primary question is whether each alternative rent structure was implemented with fidelity. MDRC's site monitoring efforts and implementation research will provide important insights on the question of implementation fidelity. In addition, HUD 50058 data from PHAs' data systems for program and control group households will be analyzed to verify that the alternative rent policies were implemented as intended.

Research Design Fidelity

Phase I of the evaluation will monitor random assignment and will use extracted PHA data to

confirm that random assignment is being properly conducted and that tenant rent shares are being calculated correctly for each research group. When random assignment is complete, MDRC will compare research group characteristics to verify the success of random assignment. A balanced sample where there are no substantial or systematic differences between the household characteristics in the new rent rules groups and the household characteristics in the control group would indicate that random assignment was successful and that any differences that emerge between the two groups over time are caused by the alternative rent policy.

Implementation Experiences Across Sites

The PHAs' operating experiences may vary, given differences in their administrative systems, the alternative rent policies selected, organizational capacities, and local housing market contexts. Consequently, it will be important to compare the operational and implementation experiences of the housing agencies across locations and over time.

Three types of data will shed light on how the new rent policy is operationalized in each agency: (1) observations from ongoing technical assistance monitoring efforts, (2) structured implementation research and interviews with program staff, and (3) quantitative data from the housing agencies on the recertification process, including the number of recertifications and hardship exemptions.

Combined, these data will enable the Phase I evaluation to speak to varied questions about early implementation and describe the methods each PHA uses to operationalize core features of the rent policies and staff perspectives on how well they are functioning. The Phase I evaluation will also document PHAs' efforts to help tenants understand how the new system creates a stronger financial incentive for them to increase their earnings, and whether staff find the new system to be more transparent and easier to comprehend. It will also seek staff's view on the fairness of the new rent policy, how easy or difficult they are to administer, and whether the simplified rent structure reduces errors in calculating subsidy amounts and tenant rent shares. It is hypothesized that a simplified system will also lead to a reduction in error rates in computing TTP and subsidy amounts (including in the calculation of utility allowances), disputes with tenants over subsidy amounts, and the frequency and complexity of Inspector General (IG) investigations. The Phase I evaluation will begin to set the groundwork for such analyses.

Participant Perspectives

Although not included in the scope of Phase I, in-depth interviews or focus groups with participants could yield important insights into tenants' perspectives on the alternative rent policies. In the RRD, MDRC conducted two rounds of interviews with a subset of participants in each study site to get an understanding of tenants' responses and reactions to features of the new rent rules, their perspective on fairness of the new policy, the level of burden for complying with the PHAs' recertification requirements, and their experiences with material hardship. In the absence of a formal survey, which was not funded until later in the evaluation, the RRD in-depth interviews served to provide data on the participants' perspective. Using a similar methodology, the present study could draw insights from participant interviews to learn how tenants think about their rent policies and how their new rent structures factor into their employment-related

decisions. In Phase I, MDRC plans to ask about participants' understanding of the alternative rent policies and their reactions to the new rent rules during its interviews with PHA staff, to gain preliminary insights into participants' perspectives.

Analytic Methods for Impact Analysis

This section describes the analytic methods that will be used to estimate the effects of the alternative rent policies on tenant outcomes. The demonstration uses a random assignment design, and the study will use a linear regression to estimate effects on tenant outcomes. This section also specifies which outcomes are confirmatory. The analysis will use a multiple hypothesis adjustment to account for potential false positives across more than one outcome, and this adjustment will be applied to the set of specified confirmatory outcomes. In Phase II, when the full set of data sources is known (especially the plans for any follow-up surveys, which is essential to measure material hardships, for example), the evaluator should assess if additional confirmatory outcomes, particularly related to material hardships, should be specified. This section also specifies which subgroups are confirmatory vs. exploratory.

Estimating Impacts on Tenant Outcomes

This demonstration uses an experimental design that randomly assigns households within each participating PHA to either the alternative rent policy or to a control group that will continue to be subject to the traditional percent-of-income rent policy. The power of the experimental research design will come from the fact that, with an adequate sample size, random assignment ensures that the intervention and control groups will be similar in terms of the distribution of observed and unobserved baseline and pre-baseline characteristics. Thus, post-baseline differences between the two groups can be interpreted as effects of the intervention.

The basic estimation strategy used here is quite analogous to the methodology that MDRC and other social science researchers have used in social experiments over the last few decades to generate credible results. The analysis will compare average outcomes for the intervention and control groups, and it will use regression adjustments to increase the precision of the statistical estimates that are performed. In making these adjustments, an outcome, such as "total earnings" or "total HAP" is regressed on an indicator for intervention group status and a range of other background characteristics. The following basic impact model would be used:

$$Y_i = \alpha + \beta P_i + \delta X_i + \varepsilon_i$$

where: Y_i = the outcome measure for sample member i;[19] P_i = one for program (or intervention) group members and zero for control group members; X_i = a set of background characteristics for sample member i; ε_i = a random error term for sample member i; β= the estimate of the impact of the program on the average value of the outcome; α=the intercept of the regression; and δ = the set of regression coefficients for the background characteristics.

[19] See Exhibit 15 for a list of key outcome measures. Broad research topics were discussed earlier in this section.

In estimating impacts on earnings and employment outcomes, separate estimates will be produced for the heads of households, other adults in the household, all adults combined, and the household (as defined at the time of random assignment).[20] However, at this time (pending further consultations with HUD), it is assumed that the heads of households will be the *primary* unit of analysis for estimating *confirmatory* impacts, and for a fuller range of subgroup analyses and, in the future, analyses of impacts on survey-based outcome measures.[21] For housing outcomes, such as subsidy levels, rent burden and use of homeless services, the unit of analysis is the household. Individual-level wage data will be used to create measures of quarterly and annual earnings and employment.

A linear regression framework will be used for both continuous and dichotomous variables. For dichotomous outcomes – such as whether the person was ever employed during the follow-up period, the effects will also be estimated using a logistic regression. This sensitivity test will be especially important for outcomes that are close to 100 percent or 0 percent over the full sample. For example, whether a sample household is still receiving any housing subsidies is an outcome that is close to 100 percent for the sample because the percentage of households who lose their subsidies or leave the subsidy program each year is very small. If appropriate, Poisson or Negative Binomial regressions may be used for outcomes that take on only a few values (e.g., quarters of employment); and quantile regressions may be used to examine the distribution of impacts for continuous outcomes.

Covariates

Exhibit 8 lists the baseline characteristics that will be included in the regression models to increase the precision of the estimates. The covariates are selected based on their expected correlation with the outcome measures of interest. For example, a person's earnings level at baseline is likely highly predictive of their earnings over the follow-up period. Whether there is a young child in the household is also likely correlated with employment and earnings outcomes during the follow-up period. This set of baseline characteristics matches those included in the regression models for the RRD. Measures from the administrative data sources will be used as covariates, such as baseline earnings and employment and historical TANF and SNAP receipt. Baseline measures from the Baseline Information Form (BIF) will also be used for individual or household characteristics that are not available in the IMS/PIC data, such as work history, public housing tenure and education level. Exhibit 8 includes some proposed covariates from the BIF, but the final set of BIF covariates will be specified after the BIF has been developed and approved by HUD and OMB.

---

[20] Unlike RRD, this current study will have the ability to include a household ID on the NDNH files. Therefore, in addition to estimating effects on individual-level earnings and employment, the study will also estimate effects on household-level measures of earnings and employment, with the membership of each household defined as that existing at the time of random assignment.

[21] This would be consistent with the strategy followed in RDD, which also used heads of households as the primary unit of analysis for employment-related outcomes. In that study, it was found that 80 percent of non-heads of households were young adult children, many of whom exited the family lease and the voucher program within the first few years of the study's follow-up period, limiting their exposure to the new rent policy. However, the pros and cons of designating household heads as the primary unit of analysis for STRD will be reviewed with HUD, taking into account the separate findings observed for household heads and non-heads of households in RRD. Any changes to the current plan for STRD will be documented in an addendum to this RDDCAP.

Exhibit 8: Proposed Baseline Covariates for Impact Models

Covariate	Data Source
Any earned income	50058
Youngest child is 5 or younger	50058
Race (categorical)	50058
Ethnicity	50058
Gender	50058
Age (categorical)	50058
Number of adults (categorical)	50058
Has TANF income	50058
Has SSI Income	50058
Program type (HCV or PH)	50058
New admission (vs. current household)	50058
Single parent status	50058
PHA indicator variables	50058
Any earnings in prior quarters (for all baseline quarters)	NDNH
Average earnings in prior quarter Q (for all baseline quarters)	NDNH
Missing earnings data in prior quarter Q (for all baseline quarters)	NDNH
Any TANF receipt in prior year	TANF
Any SNAP receipt in prior year	SNAP
Received housing subsidies for at least 4 years	BIF
Has at least a high school degree or GED	BIF
Employment status	BIF
Number of months employed in prior year	BIF

Outcome Measures

Exhibit 9 presents the proposed list of outcomes for the study.[22] The analysis will estimate the impacts of the new policy on these outcomes to address the research questions described above. The confirmatory outcomes for the study are indicated with an asterisk, and the statistical significance of these impact estimates will be adjusted for multiply hypothesis testing (described in the next section).

[22] An expanded table (Exhibit 16) shows how the qualitative data component will inform the evaluation goals.

Exhibit 9: Proposed Study Outcomes

Data Source	NDNH	50058 IMS/PIC	TANF/SNAP	HMIS	Other (survey, Medicaid, etc.)
Outcomes	Cumulative earnings over full follow-up period* Total earnings in Y1, Y2. etc. Average quarterly employment over full follow-up period Average quarterly employment in Y1, Y2, etc. Ever employed in Y1, Y2, etc.	Total housing subsidy amount over full follow-up period* Total housing subsidy amount in Y1, Y2, etc. Total housing subsidy amount in follow-up period – distribution (instead of average) Average number of months received housing subsidies Exited housing assistance in Y1, Y2, etc. Exited housing assistance during the follow-up period for reason 1, reason 2, etc. Ported out to another housing agency in Y1, Y2, etc. Ever requested a hardship exemption during full follow-up period Ever requested a hardship exemption in Y1, Y2, etc. Ever granted a hardship exemption during full follow-up period Ever granted a hardship exemption in Y1, Y2, etc.	Ever received TANF in full follow-up period Ever received TANF in Y1, Y2, etc. Average TANF amount over full follow-up period Average TANF amount in Y1, Y2. etc. Ever received SNAP in full follow-up period Ever received SNAP in Y1, Y2, etc. Average SNAP amount over full follow-up period Average SNAP amount in Y1, Y2. etc.	At least 1 night stay (in emergency shelter, transitional housing, etc.) during full follow-up period At least 1 night stay in Y1, Y2, etc. Any stay in an emergency shelter during full follow-up period Any stay in an emergency shelter during Y1, Y2, etc.	*TBD in Phase II* *e.g., job characteristics, household composition, material hardship*

As described in the Research Questions section above, PHA budget neutrality is an important objective of both rent policies. One aspect of PHA costs is the amount of subsidy paid on behalf of the household based on the household's contribution toward rent. (PHA administrative costs will be examined outside of the quantitative impact analysis described here.) Measuring this household subsidy amount is straightforward in the HCV program: it is the HAP, or Housing Assistance Payment, that the PHA pays toward gross rent (up to the payment standard), and it has a direct relationship with TTP: a $50 increase in TTP, for example, would result in a $50 decrease in HAP for a household.

In public housing, the household pays a tenant rent to the PHA, but there isn't an equivalent of a HAP payment. However, the *change* in that amount is what is of interest for the current evaluation. If a public housing household's TTP increases by $50, that is an additional $50 in revenue for the PHA. For the purposes of the impact analysis, where HCV and public housing households will be pooled together in the same sample (except for one subgroup analysis, described in a later section), MDRC will create a common measure for housing subsidies that is aligned between the HCV and the public housing program. For HCV, it will be HAP. For public housing, it will be a standardized base amount minus the TTP. This base amount will either be the FMR, 80 percent of the FMR (to approximate flat/ceiling rent), or a similar measure.[23] (MDRC will work with HUD to finalize which measure to use for the base prior to the impact analysis.) A change in this housing subsidy measure will represent the inverse of a change in TTP across both programs.

Multiple Measures

When multiple outcomes are examined, the probability of finding statistically significant effects increases, even when the intervention has no effect. For example, if 10 outcomes are examined in a study of an ineffective treatment, it is likely that one of them will be statistically significant at the 10 percent level only by chance. As the number of outcome measures expands, the number of "false positive" results may also increase. To address this problem, the current study will follow the strategy used by the RRD, which was finalized in consultation with HUD and other methodologists.[24]

The strategy includes the following two steps:

- Specify a small set of primary outcome measures, which are the most important measures for assessing the effectiveness of the intervention, given the policy goals behind it.
- Use the Benjamini-Hochberg method to adjust p-values for multiple hypothesis tests. First present the results of the independent hypotheses (using unadjusted p-values), then present the adjusted p-values to assess whether any statistically significant effects remain statistically significant after adjusting for multiple hypotheses.

[23] It is not possible to use the flat/ceiling rent amount as the base from which to subtract TTP because the flat/ceiling rent amount is often not reported to PIC for households who are not paying the flat/ceiling rent during that certification.
[24] Riccio and Deitch (2019).

The RRD study used three confirmatory outcomes: (1) cumulative earnings, (2) cumulative housing subsidies, and (3) a hardship scale. At this point, we propose two confirmatory outcomes: (1) cumulative earnings, and (2) cumulative HAP. When the data sources are finalized for the full evaluation for Phase II, the evaluation team will assess whether additional confirmatory outcomes can be specified. Especially if there is a follow-up survey, the hardship measure will may be added to this set, given that an important policy goal is to avoid worsening families' material hardships as a result of the new rent rules.

Site-Specific and Pooled Impacts

The main impact analysis will pool the samples across the cluster of PHAs that are implementing the same rent structure to estimate the effects of the alternative rent model for all those sites combined. Pooling increases the precision of impact estimates, which becomes especially relevant when estimating effects for subgroups of the full sample.

The analysis will include Houston in the tiered rent cluster and pool the site with the other four tiered rent policy sites for the main impact analysis. Although the PHA will be implementing a modified version of HUD's tiered rent policy, the differences in the policy specification are minor and it is unlikely that a differential effect for Houston could be clearly attributed to these differences in specifications rather than other site-level factors. However, an exploratory analysis will be conducted to examine whether the effects in Houston are statistically significantly different from the effects in the other four tiered rent sites. If the effects do differ, the research team will explore some possible factors that may be contributing to the disparities, drawing on the team's understanding of how the models differ and, possibly, differences in patterns of implementation and other quantitative patterns. It would not be possible to draw firm conclusions from this analysis because of the many confounding factors at play, but it is possible that the findings may generate some empirically-informed insights or hypotheses about the differences in impacts.

As an exploratory analysis, impacts will also be estimated for each site separately to examine the variation in effects across the sites within the same rent policy cluster. The analysis will use an H-statistic to test whether any differences in effects across sites are statistically significantly different from each other. As described in the minimum detectable effects (MDE) section below, the effects would have to be much larger to detect statistical significance at the site level compared with the pooled analysis.

Subgroup Analyses

The evaluation will investigate whether the new rent policy has differential effects for particular subgroups described in the research questions section above. Some subgroups are pre-specified as "confirmatory" and others are considered "exploratory." Confirmatory subgroups are ones for which differences in impacts across subgroup categories are predicted based on prior theory or evidence, or because a given subgroup is of great policy interest. For the tiered rent policy, there are three confirmatory subgroups: (1) whether the tenant is working at baseline, (2) whether the household is near the bottom or near the top of its income tier, and (3) whether the household member has significant barriers to employment (defined by a combination of education level and

work history). The rationale for the first two of these subgroups is described above. For the stepped rent policies, the confirmatory subgroups are: (1) whether the tenant is working at baseline, and (2) whether the household has a very high or very low initial stepped rent, and (3) whether the household member has significant barriers to employment (defined by a combination of education level and work history). Proposed definitions of these subgroups are specified in Exhibit 10.

Other factors affect employment decisions and may lead to differential effects. Exploratory subgroups for both types of rent policies may include: whether the household head is a single parent with no other adult in the household and is also not employed; the age of youngest child; whether the household is receiving SNAP benefits; whether the household is receiving TANF benefits; length of time receiving housing subsidies; education level; and whether the household is in the HCV program or living in public housing.[25] Some of these additional subgroup definitions (like single parent status and age of youngest child) may reflect other barriers to employment or labor market disadvantages. If PHAs enroll a sufficient sample of new admissions into the demonstration, an additional exploratory subgroup analysis would assess whether the effects of the alternative rent policies differ between new admissions and households that were already participating in the subsidy program.[26] Exhibit 10 shows the confirmatory and exploratory subgroups, and how each will be defined.

These subgroups will be defined using the same specifications as those used in the RRD. The analysis will draw on administrative data and BIF data to define the subgroups. If the response rate for the BIF is not close to 100 percent, the subgroup analyses that rely on the BIF data to define the subgroups (e.g., education level, barriers to employment) would be compromised, because any systematic sources of nonresponse would introduce bias into the analysis. (If BIF response rates are not very high, the evaluation team will assess the feasibility of these subgroup analyses.)

All subgroups will be defined using characteristics of sample members at the time of random assignment. Because these characteristics are not affected by whether a household was randomly assigned to the new rules group or the control group, any differences that emerge between new rules and control group household in a subgroup can reliably attributed to the alternative rent policy.

The analysis will primarily use a "split-sample" subgroup analysis approach, where the full sample is divided into two or more mutually exclusive groups (e.g. tenants working at baseline and tenants not working at baseline). Impacts will be estimated for each subgroup separately. In addition to determining whether the alternative rent policy had statistically significant effects for each subgroup, H-statistics will be used to determine whether impacts differ significantly across subgroup

[25] After the full set of data sources are specified for the full long-term evaluation, we will examine the study sample's distribution in baseline subsidy receipt for each type of subsidy and refine the plan for which subsidy type(s) to use to define subgroups. For example, is not highly likely that there will be enough variation in TANF receipt to define this subgroup – many sites will likely have very low rates of TANF receipt. If the full study will include Medicaid, it is likely that Medicaid receipt rates will be very high across sites and there won't be enough variation in baseline subsidy receipt for a subgroup analysis.

[26] The study sample is expected to include both currently and newly-admitted voucher households. It is unlikely that PHAs will admit a sufficient number of new households during the enrollment period for a sufficient sample to conduct a subgroup analysis to assess whether the effects of the alternative rent policies differ for these two groups; however, MDRC will revisit the feasibility of exploring this hypothesis when more information is available about the PHAs and their target populations.

categories.[27] To finalize how the subgroups within a subgroup analysis are defined, the research team will examine the distribution of each of the subgroup variables to ensure that there is enough variation to define the subgroups as proposed in Exhibit 10. If there is not enough variation for a subgroup definition measure (if one of the groups is too small), the categories will be consolidated into fewer groups. If there is more variation than anticipated (e.g., if a large proportion of study participants have a college degree), we will consider creating more refined categories (if there is a conceptual basis for expecting differential effects across the more refined categories). It is also possible that a lack of variation may make a subgroup analysis infeasible (e.g., if only a very small percentage of the study sample received TANF at baseline).

Since the three confirmatory subgroup definitions for stepped rents could be highly correlated (households with members working at baseline are likely to have higher initial rents than households with members who are not working at baseline, and tenants with higher barriers to employment are less likely to be working), we will also conduct a conditional subgroup analysis to assess the relative importance of each subgroup definition, controlling for other baseline characteristics (either in the confirmatory or exploratory category of subgroup analyses). A conditional subgroup analysis includes multiple baseline characteristics in the regression model both by themselves and multiplied by an indicator of which research group the person was in (new rent rules or control group). If the split-sample subgroup analysis shows that tenants who have higher barriers to employment have smaller positive impacts on earnings than tenants with fewer barriers to employment, for example, the conditional subgroup analysis can demonstrate whether those differential impacts still exist after controlling for whether the tenant is already employed at baseline.

[27] Greenberg, Meyer, and Wiseman (1994).

Exhibit 10: Subgroup Definitions

Subgroup	Tiered rents	Stepped rents	Data Source	Subgroup definition
Whether working at baseline	Confirmatory	Confirmatory	NDNH	No earnings in quarter prior to RA vs Any earnings in quarter prior to RA
Near bottom vs near top of tier	Confirmatory	N/A	50058	Bottom third of tier vs. middle third of tier vs. top third of tier
Lower vs higher step on stepped rent schedule	N/A	Confirmatory	50058	Bottom third of TTP vs middle third of TTP vs top third of TTP
High barriers to employment	Confirmatory	Confirmatory	BIF and NDNH	Combination of HS/GED attainment and work history, e.g. No earnings in year before RA and no HS/GED; some earnings in year before RA and no HS/GED; no earnings in year before RA and HS/GED; some earnings in year before RA and HS/GED[28]
New admission vs already in subsidy program	Exploratory	Exploratory	50058	New admission vs household is already in the HCV or public housing subsidy program
HCV vs public housing	Exploratory	Exploratory	50058	Household is in the HCV program vs living in public housing
Whether household head is a single parent with no other adult in the household and is also not employed	Exploratory	Exploratory	NDNH and 50058	Not Employed based on NDNH in quarter prior to RA and HH composition based on PHA data at RA
Whether household is receiving SNAP benefits	Exploratory	Exploratory	SNAP	SNAP receipt in the month prior to RA
Whether household is receiving TANF benefits	Exploratory	Exploratory	TANF	TANF receipt in the month prior to RA
Length of time receiving housing subsidies	Exploratory	Exploratory	50058	Less than 7 years vs 7 or more years
Age of youngest child	Exploratory	Exploratory	50058	0-5 years; 6-12 years; 13-17 years
Education level	Exploratory	Exploratory	BIF	Less than HS/GED; HS/GED; some college or more

Sample Sizes and Minimum Detectible Effects

The alternative rent policies will be limited to non-elderly, non-disabled households in the HCV program and in public housing. As noted in HUD's Request for LOIs, and consistent with the

[28] This subgroup definition represents our preferred subgroup definition. However, we will examine the distribution across these four groups in our sample to ensure there is enough variation to define four separate groups. If not, we will consolidate into fewer groups.

definition used for RRD, households with a head of household, co-head of household, or spouse aged 56 or older at the time of enrollment would be ineligible for rent reform, because they would surpass the age 62 elderly threshold during the 6-year evaluation period. The evaluation will include both current public housing residents and voucher recipients and new households that enter the subsidy system during the enrollment period.

HUD selected ten PHAs for the Stepped and Tiered Rent Demonstration, which range in size from approximately 1,000 to 11,400 non-elderly (18 to 61 years old) and non-disabled households. Half of eligible households in each PHA will be randomly assigned to the new rent rules group and half to the control group. The tiered rent cluster – comprised of five PHAs (including Houston, which proposed its own policy with minor changes to HUD's defined tiered rent policy) – includes approximately 20,000 non-elderly, non-disabled households, and the stepped rent cluster – also comprised of five PHAs – includes approximately 8,200 non-elderly, non-disabled households.[29]

Exhibit 10 presents estimated minimum detectable effects (MDEs) based on the sample sizes of the ten selected sites. The MDEs represent the smallest estimated effect that the analysis is likely to detect as statistically significant. For these calculations, to account for the fact that the sample will be limited to ages 18 to 56 (adults who will not become elderly during the follow-up period), the sample sizes described above were adjusted for this reduction (by 14 percent) to 17,000 total for the tiered rent cluster and 7,000 for the stepped rent cluster. For the individual site-level estimates, the sample size used was 1,000, although there was a wide range of sample sizes from approximately 1,000 to 2,400 for 8 of the 10 sites, 4,600 for Akron, and 11,400 for Houston for the 18 to 61 year-old non-disabled eligible sample. Therefore, for many of the sites, these MDEs are somewhat conservative. The table shows, for example, that the minimum detectable effect on earnings for the tiered rent cluster is $256 (representing 3.7 percent increase over the control group mean), for the stepped rent cluster (which has a smaller sample size) is $398 (or a 5.7 percent increase), and for an individual site (with a sample size of 1,000 total), it is $1,058 (or 15.1 percent). For Akron, (one of the two larger sites with a sample size of about 4,600), the MDE for earnings is $494, or 7.1% (not shown in exhibit).

The right panel of the exhibit presents estimated MDEs for the multiple hypothesis testing adjustments described in the Multiple Measures section above. The MDEs in this panel represent the smallest estimated effect that the analysis is likely to detect as statistically significant after the Benjamini-Hochberg multiple hypothesis adjustments are applied. The two columns show the estimated MDEs if the adjustments are applied for two confirmatory outcomes, and the last two columns show the estimated MDEs if the adjustments are applied for three confirmatory outcomes.[30] For example, the MDE for employment rate for the stepped rent cluster is 2.8 percentage points (or 6.3 percent). After applying the multiple hypothesis adjustment where two confirmatory outcomes are identified, the MDE increases to 3.2 percentage points (or 7.2 percent). In other words, the analysis can likely detect an impact on employment rate only if it is above 6.3 percent, but it the impact estimate would have to be at least 7.2 percent for it to be

[29] These sample sizes are based on the 2019 HUD PIC annual snapshot data used for the rent simulations, and are slightly lower than the eligible sample sizes reported by the PHAs.
[30] The estimated MDEs for the 3-confirmatory-outcome multiple hypothesis testing adjustment represent the MDEs for the outcome with the smallest p-value.

robust to the multiple hypothesis adjustment.

Exhibit 11: Sample Sizes and Minimum Detectable Effects (MDEs)

Sample size: N = Per **control** or **program** group, assuming equal size

Assumptions: Control group levels are assumed to be: 44% for employment,

$7,000 for mean annual earnings, and $858 for monthly housing subsidy; standard deviations of $7,100 for annual earnings, 49.6% for employment, and $473 for monthly housing subsidy. MDE calculation for 2-tailed test at 10% significance and 80% statistical power. Calculations assume that the R-squared for each impact equation is .10.

		Main Impacts		*With Multiple Hypothesis Testing*			
				2 confirmatory outcomes		3 confirmatory outcomes	
	N/Group	Impact	% Change	Impact	% Change	Impact	% Change
	Tiered Rent Policy						
Employment (% points)	8500	1.8	4.1%	2.0	4.6%	2.1	4.8%
Earnings ($)	8500	256	3.7%	291	4.2%	305	4.4%
Housing Subsidy ($)	8500	17	2.0%	19	2.3%	20	2.4%
	Stepped Rent Policy						
Employment (% points)	3500	2.8	6.3%	3.2	7.2%	3.3	7.6%
Earnings ($)	3500	398	5.7%	454	6.5%	476	6.8%
Housing Subsidy ($)	3500	26	3.1%	30	3.5%	32	3.7%
	By Site						
Employment (% points)	500	7.4	16.8%	8.3	18.9%	8.9	20.2%
Earnings ($)	500	1,058	15.1%	1,193	17.0%	1,271	18.2%
Housing Subsidy ($)	500	70	8.2%	79	9.3%	85	9.9%

Implementation Analysis

The goals of the implementation research will be to document how the new rent policy is implemented by each PHA, including (but not limited to) how it is described to and understood by tenants; how it compares with the existing rent policy in terms of ease of administration, transparency, burden on staff and on tenants; and whether it is less error-prone. During the on-site monitoring and implementation research data collection visits to each PHA (two visits assumed, per site), MDRC researchers will observe PHA staff as they complete rent calculations and interview those staff and their supervisors to collect additional perspectives and insights on the new policy.

To help interpret the findings on administrative costs, we will also explore what drives any reductions in staff administrative burden, whether challenges presented by the new policy limit the savings, and, if there are substantial savings, how they are used by the PHAs. If there is a reduction in administrative burden, it will also be important to understand how PHAs are using staff time differently.

Comparative Cost Analysis

Both tiered rents with an extended recertification period and stepped rents have the potential to reduce the burden and costs of administering the HCV program. Both alternative rent policies should reduce the frequency of regular recertifications and the number of interim recertifications with the extension of the recertification period to a triennial recertification for the tiered rent policy and the triennial eligibility verification for the stepped rent policy. On the other hand, the administration of the hardship policies may at least partially offset those reduced costs. The evaluation will assess whether either of the alternative rent policies is less expensive to administer than the traditional rent policy. It will also attempt to identify which aspects of the policy may be driving or offsetting any savings.

The evaluation will follow a similar approach as was used in the RRD study. Similar to RRD, the cost analysis will use transactions data from PIC/PHA and PHA financial data along with specially collected information on how PHA staff spend their time administering the new and existing rent rules.[31] The research team will interview staff to ask them about their time estimates for different types of tasks they perform, including certifications (e.g. annual/triennial recertifications, interim certifications) under the traditional rent policy and the new alternative rent policy. It will then use 50058 data on the total number of each type of certification to produce estimates of the total amount of staff time used for the alternative rent policy compared with the traditional rent policy. The research team will use data from PHAs on the estimated number of hardships households requested, the number of hardships exemptions the PHA granted to households, and the amount of time that staff reported spending on processing hardship requests and exemptions to estimate the total amount of time spent on administering the hardship policy. The RRD study also conducted several sensitivity tests for the cost study, including using the average amount of time from Abt Associates' HCV Program Administrative Fee Study (Admin Fee Study) on processing annual recertifications and interim certifications.[32]

The current study will make some modifications to how the data for cost analysis is collected, to ensure greater accuracy of the time estimates. For example, the research team will request that PHAs collect data on the number of hardship exemptions *requested* in addition to the number of hardship exemptions granted, so that this count does not need to be estimated using outside data sources. HUD's new MTW-50058 form collects data on hardship exemptions. Ideally, the evaluation team can use the new structure of the form to provide guidance to PHAs to record both hardship requests *and* granted hardship exemptions in the 50058. The benefit of this approach is that MDRC can obtain the needed housing subsidy data for the study directly from HUD, without relying on acquiring additional data directly from PHAs. If it is not feasible to collect these data on the new MTW 50058 form that is reported to HUD, then the evaluation team will work with the PHAs and their software vendors to modify the software so that it can capture both hardship requests and granted hardship exemptions for the evaluation.

---

[31] RRD is also using the HCV Function/Activity Checklist developed and previously used for HUD's HCV Administrative Fee Study to understand the types of activities staff conduct at the PHA. See Turnham et al. (2015). As part of the implementation study, staff will be asked to complete the Checklist and also estimate the percentage of time they devote to the most time-consuming activity they work on.

[32] Turnham et al. (2015).

The research team will further reflect on the data collection for the study's comparative cost analysis and may propose further refinements to data collection for the cost study. Options for obtaining more precise estimates of staff time use could include, resources permitting: observations of a sample of recertification meetings to determine how long they take; a selection of a sample of tenant cases to review in-depth with staff their level of effort on various aspects of each case within a specified period of time; and adaptations to the PHAs' software systems to record timestamps for starting and ending a recertification meeting. For Phase II, an option might be implementing a short-term web-based survey to capture the allocation of staff time across specified tasks.

In calculating the difference in administrative cost per household for each rent rule group versus the control group, we will use information on (1) the number of staff working with new policy households, and whether they work with any current policy households; (2) the number of staff working with current policy households and the proportion of their caseload that is eligible for the study; (3) staff schedules and hours; (4) staff salaries and fringe benefits; (5) the number of recertifications and interims/hardships completed per month for the alternative rent policy and control groups separately; (6) the number of additional types of action (new admissions, port-ins, port-outs, HCV program exits, public housing exits, etc.) and (7) non-labor and overhead costs.

The analysis will also attempt to identify which aspects of the alternative policy may be driving or offsetting any differences in administrative costs. It is, of course, understood that start-up costs can be higher than those achieved after routinized systems are established; and the analysis would attempt to focus on steady-state costs, not the higher start-up costs, to the extent possible.

The analysis will examine the differences in administrative costs from two perspectives: the difference in average cost per sample member in the demonstration within the research follow-up period (which may be affected by longer or shorter duration of subsidy receipt), and the cost per subsidy slot, taking into account the fact that the families in the demonstration who exit housing assistance during the follow-up period will be replaced by new families drawn from the agencies' waitlists. Again, the methodology used here will be adapted from the methodology applied in the RRD.

VI. Launching the Alternative Rent Policies and Enrolling the Study Sample

The implementation of a complex multi-site demonstration will require close coordination and planning on multiple fronts. The MDRC team expects to work closely with HUD and the 10 PHAs over the early design and implementation phases. The following section describes the types of activities MDRC will focus on, particularly to help launch the demonstration. Some details of these activities will need to be worked out with the sites, and those will be indicated, accordingly.[33]

Covid-19 is an important backdrop for the implementation of this demonstration, and we will need to take into account changes to PHA operational practices related to this health pandemic. Covid-19 has altered PHA operations around the country and many PHAs are – and may continue to – rely on online operations to meet the needs of their clients. This shift essentially limits the use of "on-site" trainings, observations, or rent policy implementation and MDRC will need to tailor training and other research plans to each PHA's operational environment (this also has implications for enrollment activities, discussed later).

Develop MOUs with the PHAs

As part of formalizing roles on the demonstration, MDRC will develop Memoranda of Understanding (MOUs) with each study site. These agreements will be between MDRC and the PHAs and will spell out: the terms of the partnership, roles, data and system requirements, study requirements (which often cover enrollment criteria, targets, and program group embargo requirements), study duration terms and implications, and other partnership obligations. Study-related funding, as in the case of software modifications, will be passed on to the PHAs and will be noted in the MOU. The term of the MOU will cover the demonstration period, which includes planning, launch, implementation, and the full evaluation period (or six years, per HUD's Request for LOIs). PHAs will also be reminded that HUD may select a different evaluator for Phase II of the evaluation, which extends from 2023 to 2029. A different evaluator will likely need to enter into a new MOU with each site, but the broad terms of the PHAs engagement in the demonstration will hold, in addition to any new evaluation requirements HUD approves for Phase II. Each PHA will also assign a project liaison, who will have close oversight of the project and serve as the main point of contact for the demonstration.

The MOUs, as is generally the case for such demonstrations, are generally developed when there is greater clarity around project roles and expectations, and before any data with personal identifying information are exchanged.[34] The MOU development timeline will need to account for any PHA-specific review processes, such as Board or other local stakeholders' review. MDRC and the PHAs will begin discussing the terms of the MOU in Q3/2021.

---

[33] Additional details are available in the project's Management Work Plan.

[34] As in RRD, the PHAs will be expected to execute separate agreements with their software developers, which will govern the terms of the system modifications for the demonstration. MDRC and the PHAs will monitor the system development effort, but the system modification contract will be between the PHAs and their software developers. The PHAs will receive HUD funding to support the software modifications (HUD has allocated $1.5 million to cover PHA system modifications for the demonstration).

PHA Communications

This is an ongoing part of working with the PHAs in the demonstration. MDRC recognizes that site needs will vary over the course of the demonstration and that site communication may have to take different forms over the course of the demonstration. Key to our communications approach is: (1) Assigning an MDRC site team, with a liaison and point of contact for each PHA. The MDRC liaison will remain the main point of contact for the site throughout the evaluation period. We will also assign an implementation researcher to conduct evaluation activities during enrollment and implementation stages to ensure that PHA staff and study participants understand their roles and responsibilities as a part of the study; (2) Our internal coordination efforts, which include standing meetings, will also allow team members focused on particular sites to stay informed about developments across all sites; (3) Stay in regular contact with PHA supervisors and management staff to discuss implementation progress; (4) Check-ins with housing specialists will be organized as needed to discuss specific implementation challenges experienced, which may also signal a need for more specialized support. In RRD, these types of standing check-ins allowed us to build a strong partnership with the PHAs, essential to ensuring that the new rent policy would be operated with fidelity, and that the integrity of the evaluation would be protected over the many years of the demonstration.

Software Modifications

MDRC will work with the PHAs and their software vendors to identify the required system changes, related to the implementation of the rent policy and random assignment, if necessary. The specifications will include changes to HUD-50058 fields, as well as other changes to support the calculations for the demonstration. The MDRC team will play an important role in supporting PHAs in this effort by participating in PHA and software developer meetings focused on software modifications, working with the PHAs and software vendors to develop the specifications for and monitor any system changes required for the demonstration, and once enrollment begins, ensure that the software systems implement the alternative rent policy correctly.

The selected PHAs use three software systems: Emphasys Elite, Yardi, and MRI. If needed, MDRC and HUD can also assess whether there is room for negotiating system modification costs with vendors. In initial meetings with vendors, MDRC will ask questions to assess whether any software modifications can be implemented across multiple PHAs. For example, an automatic hardship exemption at the triennial (that automatically expires after a specified amount of time) might be able to be implemented across all PHAs that use that software, regardless of whether they are implementing a stepped or tiered rent. It is also possible that, for Emphasys and Yardi, who worked with MDRC on the RRD software modifications, some functions (e.g., including a module to capture both retrospective income and current income) can be carried over from RRD and don't require new programming.

Before the launch of the demonstration, the PHAs and MDRC will test the modified systems to ensure that the alternative rents are calculated correctly for those randomly assigned into the new and existing rent rules, and that required functionalities for calculating rent for both groups work with the modifications. MDRC will devise a method for testing the modified system. For RRD,

MDRC was able to obtain access to a test environment for each software vendor and output test cases. We will request the same access from the vendors engaged with the demonstration sites.

As in the RRD, MDRC will recommend that an easy data extraction feature is designed as part of the software modification. This will allow the evaluation access to important measures for verifying rent calculations and for the analysis required for project deliverables. HUD's new MTW Expansion 50058 form contains critical fields for measuring outcomes and verifying calculations (e.g., total HAP, family share, payment standard, and unit's flat rent) that are not contained in the current MTW 50058 form. If the PHAs use the new MTW Expansion 50058 form, or are permitted to continue using the HUD-50058 in the event that the new MTW 50058 is not available in time for the start of the study, more fields would be available through PIC, which could save data extraction and data processing costs during the evaluation. However, it is possible that MDRC may need to receive data directly from PHAs if hardship requests and other needed variables will not be available using the new MTW Expansion 50058 form. This, along with reductions in MTW reporting requirements, might also be another way to save costs of software modifications.

Over the duration of the Phase I contract, MDRC will work with the PHAs and the system developers in the event system-specific implementation challenges occur and affect the implementation of the new rent policy.

Training Staff

MDRC will develop a training plan for Phase I of the demonstration, taking into account any changes to PHA operational practices related to the Covid-19 health pandemic. Leading up to the launch of the demonstration, staff will need to be trained on all research procedures and the goals of the rent reform, how to calculate rents under the alternative rent rules, and how to apply hardship provisions and other safeguards permitted by the policy. MDRC will also work with the PHAs to consider whether any of their current operational protocols (e.g., how interim recertifications or moves are handled) would need to change to incorporate the alternative rent rules. Although the software vendors will train staff on the system modifications, MDRC will also incorporate key modifications into its own training protocols, so that staff have additional opportunities to be oriented to the changes and clarify questions. MDRC will provide the PHAs with materials used in the trainings. MDRC will plan these trainings in close coordination with the PHA liaison.

Communication Tools and Materials

How the alternative rent model is explained and communicated to study participants will also be fundamental to their understanding of the study and the various features of the new rent rules – their understanding of the new rent policy is also key to whether they change their work behaviors in response to the incentives established by those rules.

As part of getting sites ready to implement the alternative rent policies, MDRC and PHA staff will identify, and work collaboratively to prepare, necessary materials that will need to be shared with the families. For instance, key Phase I materials include:

- **Initial recertification packets.** These packets, which include subsidy renewal information and forms, will need to be revised for households assigned to the study groups if special instructions need to be conveyed to households in advance of their initial recertification meeting or if they have to bring special documentation to complete their recertification. MDRC will work with the sites to ensure these materials are developed in time for site's study enrollment and recertification processes. The extent to which these documents are modified to reflect the new rent policy or study assignment, however, will depend on the random assignment approach selected. If households are notified of their research status at the time of their recertification meeting, as is beginning to emerge as a possibility for a number of sites in the demonstration, then fewer changes may be needed to the application form.

- **Orientation materials.** Communication materials will also be necessary to educate various stakeholders (residents/voucher households, landlords, program staff, and other key stakeholders in the community) about the demonstration, the alternative rent policy implemented by the PHA, and the study. These might include a short 1-pager, which summarizes core features of the local policy. Graphics and other visuals displaying the rent structure and how a family's employment and income can affect their rent (especially for the tiered rent group) will be an important part of this orientation effort.

Beyond these initial efforts, communication about the rent policy will not end once families are enrolled in the study: o*ngoing* communication will ensure that they understand the new rent policy's implicit incentives (especially for income-based tiers) or implications, and that they are reminded of the opportunities, the hardship protections, as well as their responsibilities associated with the new policy. Resources permitting, if there are ways to leverage technology to communicate with program group participants over the course of the demonstration, that might be worth exploring (for instance, it might be worth considering alternating between flyers, emails, and text messages, to maintain a steady stream of communication with study participants).

The MDRC team will monitor the implementation of local communication strategies and assess modifications, if necessary. Staff will also be encouraged to use their post-enrollment interactions with families, if any, to clarify questions or concerns that families may have about their new rent policy.

Embedding Random Assignment into PHA Operations

This demonstration uses a random assignment design, where, within each PHA, half of the eligible study participants will be randomly assigned to the alternative rent policy, and half will be randomly assigned to continue with the current rent policy. Two different types of random assignment processes were considered for this study: *batch random assignment* and *individual*

random assignment. [35] (Exhibit 12 contrasts the two options.) Batch random assignment is generally conducted in advance of the household's recertification meeting and individual random assignment is conducted at the recertification meeting.

Exhibit 12: Random Assignment Options

Individual-level random assignment is conducted one household at a time at households' recertification meeting. The housing specialist (or other designated PHA staff) would log into MDRC's web-based random assignment system to conduct random assignment. The housing specialist then notifies the household on the spot and proceeds with the recertification meeting using the rent calculation rules of the rent policy to which the household was randomly assigned.

In a **batch random assignment** process, random assignment is carried out in groups, or "batches," and is conducted for the everyone in the group all at once. A batch would be defined by households' expected recertification date, for example, all eligible households up for recertification for a June 2022 effective date. Half of the batch would be randomly assigned to the alternative rent policy, and half would be randomly assigned to continue with the current rent policy. Batch random assignment can be built into the PHA software system.[1] The timing of random assignment would be tied to households' recertification schedule and would be conducted shortly before letters are sent out to households with their scheduled recertification meeting date.

Individual random assignment is preferred from the research perspective, as it minimizes any changes that need to be made to the sample definition after random assignment due to having current information at the time of random assignment (vs batch random assignment, which uses eligibility criteria data from the household's most recent certification.)[36] . Eligibility determination would occur in individual meetings (in-person or remote) using current information from the participant and would happen at the same time as random assignment. This timing largely avoids the issues with sample definition mentioned above. It also allows for additional information not usually collected by the PHA to be used in eligibility determination. For example, the housing specialist can first ask the heads of households if they have recently applied for SSI and if their application is pending. This allows the study to exclude households that would likely be considered disabled early in the study. An additional advantage of the timing of individual-level random assignment (though secondary to the sample definition issues) is that

[35] The Tiered and Stepped Rent Study Research Design Memo detailed the advantages and disadvantages of the two random assignment options and mapped out important considerations for the feasibility of each process in each PHA. That discussion is not repeated here.

[36] The main drawback of batch random assignment, from a research design perspective, is that it creates a longer gap of time between actual random assignment (including eligibility determination) and when the first recertification under the demonstration becomes effective. The longer the period of time between a household's random assignment date and the effective date of their first recertification under the demonstration, the more changes could occur in the households' study eligibility and their subsidy status at the PHA. The data used to conduct batch random assignment are also more recent for some households rather than others (households who had an interim recertification or who had moved since their last annual recertification will have more recent data, and households with no certifications since the last annual recertification). In RRD, roughly 9 percent of the sample enrolled was ineligible for these reasons.

the baseline survey can be administered before random assignment is conducted, and therefore before the household knows about their random assignment status. This would eliminate the possibility that the participant's responses to the baseline survey are influenced in any way by their research group status. From a feasibility standpoint, having an individual random assignment process already in place would allow for a more seamless enrollment of new admissions as they enter the program on a rolling basis throughout the enrollment period.

Individual random assignment also allows for a more seamless inclusion of new admissions in the demonstration as they start assistance and would not require two entirely different procedures.

However, there may be operational considerations that might make individual random assignment challenging. For example, while batch random assignment would allow for households to be notified in advance through the recertification packet of the type of income information they need to provide (retrospective vs. current), this is not the case for an individual random assignment process. However, this can be addressed by holding the individual random assignment meetings soon after the recertification packets are mailed. Another consideration is the need to conduct study enrollment and random assignment virtually to align with the PHAs virtual and or mail-in recertification processes (Many of the PHAs have indicated they will continue remote recertifications). MDRC has experience developing procedures to conduct these activities remotely and will work with the PHAs to adapt their process as needed.

So far, based on initial discussions with PHA staff, it appears that they may be able to adapt their recertification processes to conduct individual random assignment and related research activities. The MDRC team will confirm this in upcoming meetings with the PHAs and will discuss the batch random assignment option only if the PHAs are unable to adapt their processes to conduct individual random assignment.

Sample Selection and Sample Size

HUD has selected 10 PHAs for this demonstration and all eligible households in these PHAs will be required to participate in the demonstration. Based on estimates provided in the PHA applications, there are roughly 29,000 nonelderly, non-disabled households in these 10 PHAs are eligible for the demonstration, which translates into approximately 24,000 households being eligible for the demonstration.[37] Exhibit 13 shows the total number of nonelderly, non-disabled households by site using information provided by the sites in their applications.

Related to sample eligibility, this demonstration targets households that are currently assisted – or begin to receive assistance – through the public housing or Housing Choice Voucher Programs (excluding special purpose programs), who are neither elderly[38] nor disabled. During the launch prep phase, MDRC and HUD will assess whether additional eligibility criteria need to be considered.

[37] The 24,000 estimate accounts for the 18 to 56 years old age range (instead of the 18 to 61 years old age range reported by PHAs in their applications.)

[38]The head of household, spouse, and co-head are 56 or younger – and will not become elderly (62) over the course of follow-up.

Currently, the eligibility criteria are (all based on the time at random assignment):[39]

- The household is nonelderly (the head of household, spouse or co-head is age 18 to 56 (so they remain non-elderly through the end of the study period).
- The household is non-disabled (according to HUD's disability status definition for the head of household, spouse or co-head is not disabled).
- The household does not have a special purpose voucher, including the Enhanced Voucher Program, VASH, Welfare-to-Work voucher program, or Certificate voucher program.
- The household does not have zero HAP if in HCV and is not paying a flat rent if in public housing.
- The household is not a mixed eligibility family (i.e., all members of the household must have legal working status in the U.S.).
- The household is not currently participating in the FSS program.
- The household is not living in a Jobs Plus development.
- The household did not port-out.

Exhibit 13: Study Sample Sizes by Site

State	PHA Name	Eligible Households
Tiered rent		
OH	Akron Metropolitan Housing Authority	4,706
WA	Everett Housing Authority	1,340
WV	Charleston-Kanawha Housing Authority	1,947
OR	Housing Authority of Washington County	1,149
TX	Houston Housing Authority	11,491
Tiered Rent Total		**20,633**
Stepped rent		
NC	Housing Authority of the City of Asheville	1,304
IN	Fort Wayne Housing Authority	2,230
CA	Housing Authority of the County of Kern	2,404
VA	Portsmouth Redevelopment and Housing Authority	1,366
UT	Housing Connect (Housing Authority of the County of Salt Lake)	1,131
Stepped Rent Total		**8,435**
Grand Total		**29,068**

[39] The sample exclusions include: the elderly and disabled, current FSS participants; those paying PH flat rent; HCV 0 HAP households; Special purpose vouchers; mixed eligibility families; households living in Jobs Plus developments; households receiving EID at RA *(TBD); h*ouseholds living in developments that underwent a PBRA RAD conversion (not excluded if PBV conversion); households in phase-in period under RAD protections; port-outs; households who are not yet indicated as disabled according to HUD definition, but have been approved to receive SSI/SSDI but have not yet received first payment, or have a pending SSI/SSDI application in (applied recently and waiting to learn of approval status).

Study Enrollment and Informed Consent

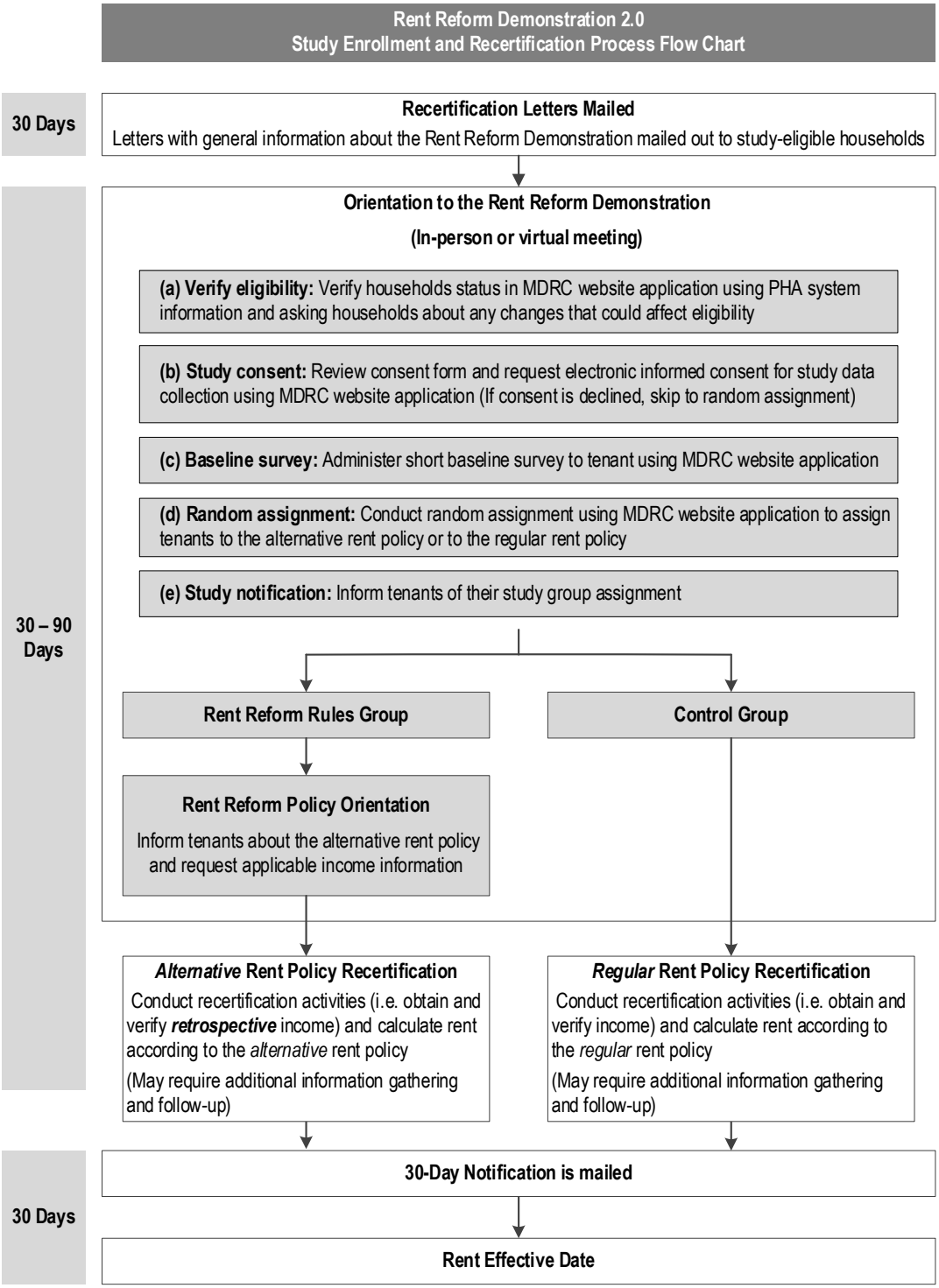
Random assignment procedures will be used to allocate eligible households to either the alternative or the traditional rent policy. Enrollment in the demonstration is mandatory and households will not be allowed to choose which of these policies will apply to them and they cannot opt out of the demonstration. Households in all sites will be asked to complete an informed consent form, providing consent to have their data gathered. Households will also be provided information for opting out of data sharing, which means that data on the households would not be gathered. MDRC will draft a consent form and present it to MDRC's IRB and OMB for approval. Draft documents will also be shared with the PHAs.

MDRC will work with the 10 PHAs to map out site-specific random assignment and enrollment flow processes. As part of the process, MDRC will try to understand how recertifications are generally conducted by the PHAs, how their routine processes have changed during the pandemic (and the extent to which they are relying on remote operations), and how they expect to be operating during study enrollment, to the extent they have thought that far ahead. For sites that expect to continue with remote operations during the study enrollment period, MDRC will adapt standard, in-person enrollment procedures (explaining the study, obtaining consent, BIF completion, and random assignment) and will draw on the experience across several MDRC projects that have developed and tested remote enrollment procedures.[40] Consideration will need be given to whether any data-providing agencies will have an issue accepting electronic signatures obtained remotely as part of the informed consent process.

A general process for a site using individual-level random assignment is depicted in Exhibit 14 below, but the process may require sone type of customization to be integrated into PHAs operational processes (which we will start learning about in the follow-up calls scheduled with the PHAs).

[40] For example, the Supporting Moves to Opportunity (SMTO) Demonstration, which is currently enrolling sample, is fully relying on remote enrollment procedures. MDRC team members on the Cohort 2 evaluation are also involved in SMTO and will draw on that experience, as needed.

Exhibit 14: Generic Example of Embedding Study Enrollment in First Recertification Meeting



During the sample enrollment stage, the MDRC data manager will routinely create BIF Data Collection Reports. The report will show the number of sample members randomly assigned to the program and control groups by site, cumulatively and month by month. Within each group

the reports show the number of households that:

- Completed a BIF
- Declined to complete a BIF
- Removed from study due to ineligibility at the time of random assignment (only where batch RA is used)

The MDRC team will also track the number of participants dropping out of the study.

Control Group "Embargo" Period

Each housing agency will continue to maintain its current rent policy for the control group for the duration of the demonstration (or at least 6 years). This is necessary to assess the full effects of the rent policy on households' employment, earnings, and other outcomes. Once the operational phase of the demonstration is completed, the participating housing agencies have the option, with HUD approval, of continuing the alternative rent policy and extending it to members of the control group, or dropping the policy in favor of the traditional rent rules or another alternative.

Technical Assistance

MDRC site liaisons will continually monitor demonstration activities for the duration of Phase 1 of the evaluation. More frequent check-ins are expected in the early stages, as needed, with administrators and frontline staff for more detailed design and implementation planning discussions. The need for more frequent follow-up will also signal where more specialized assistance on operational issues from the team might be necessary. Our monitoring plan includes two site visits for direct interaction with and observation of site staff. In general, expertise within the MDRC team will be tapped to address issues concerning the design and implementation of the new rent policy, the implementation of random assignment, tenant enrollment processes, and educating tenants and keeping them informed about the new rent rules and its features, as described below.

The need for this type of TA, focused on launching the policy and building the evaluation sample is expected to wind down as the sample builds up. However, some ongoing TA to focus on issues that might arise during the middle and later stages of the demonstration will be important. As the demonstration matures, the PHA staff could begin encountering a growing volume of hardship requests, as the circumstances of some households change and their incomes drop. It will be important to ensure that the safeguards established to help protect families are operating properly.

MDRC's ongoing engagement with the sites will also be used to ensure that policy changes or activities are not being planned that could unintentionally undermine or interfere with the successful completion of the demonstration. In particular, MDRC site leads and implementation researchers will try to identify in advance any plans that might change the current rent rules that apply to the control group. To the extent possible, it will be essential to ensure that the policies affecting the control group continue to mirror the current national policies in effect in non-MTW agencies.

The goal of continued TA is to ensure that the PHAs maintain strong and accurate implementation of the policy. Within the existing budget, this ongoing TA, which spans a 24-month period, would be largely structured around regular phone check-in meetings between MDRC TA staff and the PHAs to discuss any implementation challenges the PHAs may be experiencing. During these calls, the TA staff will confer with PHA managers, supervisors, and line staff to discuss the overall progress of the initiative and to assess whether the new policies are fully understood and are continuing to be communicated clearly and accurately. In addition, during site visits (or remotely), the team will conduct case file reviews to review rent calculations performed for a small number of households (10) in the new rent policy group in each site to assess the accuracy of the TTP and HAP calculations and the application of the policy's hardship provisions and other safeguards.

Technical Assistance for Baseline Data Collection

The TA and data teams will work closely with the PHA staff so that they understand their roles and responsibilities with respect to randomization and baseline data collection. Leading up to the launch of the demonstration, MDRC will work with the sites to integrate the random assignment process into their program operations. MDRC will conduct webinars and on-site training on the study, the alternative rent policies, and the baseline data collection process. During these trainings, the evaluation coordinators and agency staff have the opportunity to practice describing and answering questions regarding the study, random assignment, and the new rent rules.

As with RRD, MDRC will produce step-by-step baseline data collection guidance. Once the PHAs begin enrolling families in the study, the TA team will monitor and assess implementation issues and provide additional training, as needed. MDRC will produce periodic reports on sample characteristics and confirm that there are no systematic differences between research groups.

Specific details of this process are provided below (once the enrollment timetable is established, MDRC will develop and project enrollment flow charts, mapping out the flow of sample enrollment for each site).

Set Up the BIF Application for Data Collection

Completion of the Baseline Information Form (BIF) is voluntary.[41] For most sample members, BIF data collection will take place during the households' recertification meeting, which would be directly before random assignment, during the same meeting where random assignment is conducted.

MDRC will seek MDRC IRB and OMB approval prior to using the BIF in the field. The OMB approval number will be displayed on the data collection system, and paper BIFs, if any. The questions will be programmed into an online BIF tool, and will appear in data entry screens and

[41] MDRC may need to perform a response analysis if response rates are not near 100 percent or if they differ by research group.

have underlying data entry rules, including the sequence of data items, the designation of required and optional fields, and programming of skip patterns.

The BIF system will also include a data entry screen for collecting contact information for study participants and one or more relatives or close friends of study participants, which might be relevant for future tracking efforts.

Prior to the start-up of data collection, MDRC will work with the PHA liaisons and designated technical staff members to test the connection to MDRC's BIF application address (https://secure.mdrc.org).

During the training sessions, MDRC staff will:

- Introduce everyone's role in the BIF data collection process.
- Review the contents of the BIF and its purpose.
- Review how to handle different types of questions that might come up from participants
- Read through the consent form.
- Review data security policies and what should be done to prevent data breaches.

Following completion of the training, staff members will be encouraged to test the BIF Data Collection system by recording data on fictitious households and to report problems in data entry or system response. This exercise is primarily to give staff a chance to become familiar with the BIF screens and data entry process (in case they have to field questions from participants).

Back-Up Procedures for Collecting BIF Data

MDRC's online application is usually up and running throughout the day, although it is occasionally disabled as part of a general system shutdown, typically to facilitate installation of new network hardware (this is usually done after business hours in the Pacific Time zone). More often, sites lose their connection to the Internet. In the event connection to MDRC's website is lost, which is rare, housing authority staff members and participating heads of household may need to complete a paper BIF. The housing authority staff then input the data from the paper BIF into MDRC's database, when the connection is restored. Some problems in data entry may occur if the head of household is no longer present when the staff member enters the data from the paper BIF (for example, from outlier values or failure to follow skip patterns). MDRC's online system automatically flags these problems and requires a correction before saving the data. At that point, the staff member attempts to discern appropriate answers from the paper BIF or change responses to missing values ("No Answer"). The BIF Data Collection Manual prepared for this study would provide guidance to staff members for dealing with these problems when entering data from paper BIFs. It will also detail back-up procedures for PHAs conducting remote enrollment if they encounter internet connectivity issues or other technical glitches.

Monitoring BIF Data Collection

The project data manager will monitor random assignment and collection of RA-related forms and data files. The main components to monitoring RA are:

- Monitoring the sample buildup using tables and charts
- Checking the tracking data (the extent to which households completed the BIF, choose to forgo completion – this effort will also be coordinated with DIR, the survey firm that will follow-up with study participants who do not complete the BIF at the time of study enrollment)
- Tracking issuance of gift cards to BIF completers (DIR will issue gift cards to those who respond to the survey firm's outreach effort)
- Accessing, checking, and processing BIF data
- Tracking the number of households dropping out of the study

Once enrollment begins, MDRC TA staff will set up check-in meetings with designated site staff. These meetings are conducted over the phone and serve to monitor the BIF data collection process and trouble-shoot any issues that may arise. During these calls, the MDRC team may learn of exits and new hires among site housing specialists or intake staff , information that will be forwarded to the RA Manager, who, in turn, deactivates the passwords for departing site staff members and issue new passwords for new site staff members.

VII. Data Collection

The evaluation will rely on multiple data sources. Using these data, primarily administrative records, interviews, and observational data, the evaluation is designed to produce a careful assessment of the implementation, impacts, and cost of the new rent models. Exhibit 15 identifies the core data sources for the evaluation, some of which will be obtained and analyzed during Phase I.

Exhibit 15: Data Sources[42]

DATA TYPE	DATA SOURCE	PHASE I EXPECTATIONS
Baseline Characteristics	MDRC Baseline Information Form	Design BIF, collect baseline data
	PHA or HUD PIC 50058	Develop site agreements and process data
Housing Authority Data	PHA or HUD PIC	Develop site agreements and process data
Employment and Earnings from NDNH	Office of Child Support Enforcement	Develop data sharing agreements for future analysis
TANF and SNAP	State agencies	Develop data sharing agreements for future analysis
Homeless Management Information Systems (HMIS)	Local Continuum of Care	Develop data sharing agreements for future analysis
Qualitative data	Observations and interviews	Design and implement

MDRC will establish data sharing agreements to prepare for requesting all administrative data (PHA, PIC, TANF, SNAP, and HMIS) needed for the full evaluation, spanning two Phases, and establish the data fields to be requested and a preliminary schedule of when data deliverables will be requested. MDRC will also work with HUD and OCSE to gain access to NDNH and agree on the parameters of NDNH data collection, including proposing pass-through file specifications and working with HUD and OCSE to negotiate pass-through file specifications. Exhibit 17 presents the data acquisition schedule for each data source. Exhibit 17 identifies the study outcomes that will be measured with each data source.

[42] This exhibit does not list a follow-up survey, which HUD may consider for the longer-term study.

Exhibit 16: Data Acquisition Timing by Data Source

DATA TYPE	START DATA ACQUISITION	TIMING OF DATA DELIVERIES TO MDRC	EXPECTED LENGTH OF FOLLOW-UP
BIF	Administer Q3/22-Q2/23	Ongoing data extracts from MDRC's web-based tool; 2 data files from the survey firm (early (3 months into fielding and final)	Baseline
50058 for modeling	Received April 2019	Received	2014-2019
50058 baseline	Q3/22	Q3/22	Baseline
50058 follow-up	Q3/23	Q3/23	1 year (under this contract); TBD under future contract
NDNH data	Q3/21-Q2/25	N/A (Under a future contract)	
TANF and SNAP	Q3/21-Q2/25	N/A (Under a future contract)	
HMIS	Q3/21-Q2/25	N/A (Under a future contract)	

Baseline Survey

MDRC, in partnership with DIR, will create an online system to collect responses to the Baseline Information Form (BIF). The BIF, which will build on the baseline survey designed for RRD and other HUD evaluations, will be used to gather information that is not available from HUD administrative data, such as educational background, employment history, material hardship, and health and other issues that may affect tenants' employment. It may also include more detailed information on characteristics related to family composition, and income sources that are not fully captured in the 50058 data. However, given the importance of a smooth integration of the survey into the family's recertification process, and to maximize completion, the baseline survey will be limited to 5-7 minutes.

The baseline survey will be completed at the family's recertification meeting as a way to achieve a high response rate at low cost. It also preserves the integrity of the "baseline" definition because it is the soonest possible point in time after random assignment and informed consent. To reduce burden for the PHA staff, the survey will be designed as an online survey that the heads of household can complete themselves on a laptop or electronic tablet during the initial recertification meeting. (MDRC has successfully deployed a roughly similar strategy in another project.) During this meeting, and after the head of household has consented to data collection, a housing specialist would help them log into the online baseline survey tool and allow them to complete the survey while the housing specialist completes other administrative processes. While this baseline administration process would not remove all burden from the PHA staff, it would greatly reduce the burden of the housing specialist having to administer the full survey to the participant.

At present, this evaluation plan assumes that the baseline survey will be fielded to the full study sample. Since the survey is integrated into the initial recertification meeting and responses are collected in an online tool, the online survey costs for the full sample are only minimally higher

than the costs for a smaller sample. The survey firm would only need to contact households who leave the recertification meeting without completing the survey (and do not firmly decline it), and administer the survey by web or phone, until the target response rate is achieved for that site (e.g., 80% of consented sample for each site). A small financial incentive to complete the survey will be offered only to initial non-respondents, for whom the survey firm will attempt to complete interviews by phone, as those participants will need to take time out of their day outside of the regular recertification meeting to complete the survey. As a point of reference, the RRD baseline survey achieved an average response rate of 73 percent (prior to turning the non-respondents over to MDRC for follow-up calls), with a range of 63-82 percent across the 4 sites. For this demonstration, it is possible that families may be less likely to complete the survey if the specialist is not directly asking them questions. This possibility, along with not offering incentives to everyone upfront leads us to assume a response rate closer to 50 percent or 60 percent, which may be a conservative estimate. Thus, assuming the full study sample across the 10 PHAs will total approximately 24,000, DIR will need to make follow-up calls to 50 percent (12,000) of them.

MDRC will closely monitor the response rates at the sites, and if the response rates appear to be much lower than expected, and the cost to reach the target for the full sample response rate exceeds the budget, it may be necessary to consider a backup strategy, where a random sampling of non-respondents (participants who left the recertification meeting without completing the online survey) is selected to reduce the number of participants that the survey firm would need to field by phone. If the evaluation resorts to this back-up strategy, the descriptive statistics to describe the study sample would weight up the phone respondents to achieve a balanced sample. Even with a low initial response rate for the online survey, the evaluation should be able to describe sample characteristics with a reasonable level of certainty.

This strategy – administering the online survey to the full sample with a backup strategy of sampling non-respondents – is preferable to randomly selecting a smaller sample for fielding the baseline survey, as fielding a smaller sample from the start would incur a cost of implementing a sampling process as part of the random assignment process (especially if it requires an additional software modification with batch random assignment), and it may result in a possible reduction in the response rate if integration into the recertification process is less seamless due to the extra step of the housing specialist having to check a field in the software (or reference a separate list manually). If housing specialists are not used to providing the tablet with the survey as part of the regular recertification process, they may forget to check this field, and it is more likely that they may choose to skip the survey entirely if the housing specialist is pressed for time or dealing with tenants who are in a hurry or distracted by children. This could introduce selection biases into the survey if the non-respondents are not random. In addition, certain fixed costs for the survey firm limit the amount of savings that can be achieved with a sampling strategy.

Through our TA and implementation observations, the team will also monitor the BIF data collection processes being implemented by the sites.

Housing Subsidy Data

MDRC will collect data recorded from HUD MTW Expansion 50058 forms directly from the housing agencies or will use the centralized HUD PIC data. All HCV and public housing households enrolled in the study complete or update a 50058 form as part of their initial or redetermination interview at the beginning of the study. Where possible, we will use 50058 data from 1-3 years prior to random assignment to supplement data collected at random assignment and to describe household characteristics and housing subsidy variables including estimated TTP. Data from later extracts will be used to track changes in tenants' reported income, TTP and receipt of housing subsidies over the course of the follow-up period. If the complete set of variables needed for the analysis is not available in the HUD PIC data, the study will collect data directly from PHAs. For study participants, for example, this could include additional information on their use of hardship requests and exemptions and retrospective income. As described elsewhere in this document, MDRC will work with the housing authorities to identify changes that will be required to their existing software

Employment Data

Tenants' employment and earnings information for the evaluation will be tracked via the National Directory of New Hires (NDNH). The NDNH is a national database of wage and employment information that was established pursuant to the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). Quarterly earnings data will be used to construct cumulative earnings measures (e.g., total earnings in first year after random assignment, for one-year impact estimates) and employment measures. MDRC will work with HUD to establish the necessary agreements to obtain the NDNH data, building off our experience on other HUD projects.

Homelessness Data

Data on participants' use of homelessness services will be collected from the Homeless Management Information System (HMIS). This system is used by localities around the country to track use of homeless shelters and other housing for homeless individuals and families, and their receipt of homelessness services. The study sample will be matched to the HMIS database in each of the participating sites to determine whether the alternative rent policy group was any more likely than the existing rules group to use homelessness services.

TANF/SNAP Data

Administrative data on TANF and SNAP participation will be collected at baseline and over the follow-up period to measure study participants' receipt and levels of these government subsidies. The data acquisition methods will vary in form, intensity, and duration, based on (1) how each agency organizes and extracts the data for the jurisdictions in the study; and (2) whether MDRC has had prior experience in collecting these data for previous and ongoing studies from the state or local agencies.

Follow-Up Survey(s)

Follow-up surveys, which are not included in the Phase I scope of work, may be conducted at one or more time points during the follow-up period covered by Phase II. These surveys will permit data collection on outcomes of interest that are not available in the administrative data sources. The survey instrument should be informed by the survey instrument used in RRD, and some elements (especially questions about the specific rent rules and participant experiences with them) should be modified for each of the tiered and stepped rent policies. The survey is particularly helpful for understanding dimensions of hardship that can't be measured in the administrative data, such as households' ability to cover food expenses and other necessary expenses. Likely survey modules include: educational attainment; job history, work search, and barriers to employment; household composition and child care; income, food security and material hardship; health status, housing and moving; and rent policy experiences.

PHA Financial Data

In order to build accurate estimates of the costs incurred by PHAs to administer the alternative rent policy compared with the current policy, MDRC will collect data directly from each PHA on staff salaries with benefits, direct costs of certifications, comprehensive financial reports, staff time use; and the total number of annual (or triennial) and interim recertifications and other types of actions recorded on HUD Form 50058 per month. These data will be collected (in Phase 2) from the PHAs' own financial statements and other administrative records and will be combined with the PIC or PHA management information system data on total households served and types of action each month during the follow-up period. As previously mentioned, during Phase 1, we will collect information on staff time use across activity categories primarily through interviews with frontline staff and their supervisors. For the longer-term analysis, additional methods for collecting more refined estimates of staff time use should be considered (see Section V, analytical methods).

Implementation Research Data

Site visits will be used to collect data on how the PHAs implement the program. In the shorter-term, MDRC's TA will focus on helping PHAs work through the operational aspects of the new policy, and this work will also provide an important additional source of information for MDRC's implementation analysis and reporting on early implementation of the new rent rules. At the same time, the qualitative implementation research will similarly inform ongoing TA. PHA staff and participant experiences over the long-term will be documented as part of the ongoing implementation study.

Under the current contract, MDRC will conduct two site visits to each PHA to assess their progress in meeting the requirements of the demonstration and to collect qualitative data informing the implementation study. Such visits will be important for determining the extent to which they are implementing the alternative rent rules with fidelity, and for formulating corrective action plans where needed. MDRC will develop semi-structured interview guides for use with PHA staff to assess overall implementation and to get an early comparative understanding on some of the implementation challenges and advantages that might be

associated with the tiered and stepped rent policies that the PHAs in this demonstration have adopted. MDRC will tailor questions for housing specialists (including some working with the existing rules group), supervisors, and senior administrators, each of whom would speak to implementation experiences from different perspectives. Interviews with study participants are not planned for Phase I of the evaluation.

Exhibit 16: Evaluation Topics, Hypotheses, Data Sources, and Key Outcome Measures

TOPIC		DATA SOURCE					
	Hypotheses	**Interviews / Observations / document review**	**HUD PIC**	**NDNH**	**TANF**	**SNAP**	**HMIS**
Staff burden in administrating alternative rent policies	Level of staff burden should decrease through handling fewer actions (annual recertifications and interims), though this reduction may be at least partially offset by administering the hardship policy	X	- Number of actions - Regularly scheduled recertifications - Move/change of unit action - Interims due to decreased income - Interims due to hardship remedies - Interims due to increased income - Interims due to household composition change - Interims due to contract rent change - Other actions				
PHA administrative costs/savings due to alternative policies	PHA administrative costs should decrease	X	- Administrative cost of existing policy per household				
Employment and earnings	Employment and earnings should increase			- Total earnings - Any employment - Average quarterly employment			

Exhibit 16: Evaluation Topics, Hypotheses, Data Sources, and Key Outcome Measures

TOPIC		DATA SOURCE					
	Hypotheses	**Interviews / Observations / document review**	**HUD PIC**	**NDNH**	**TANF**	**SNAP**	**HMIS**
Use of hardship system	Minority of participants will request or receive a hardship remedy	X	- Number and percent of hardship requests (by type, if applicable) - Number and percent of hardships granted (by type, if applicable)				
Percent leaving subsidy system or losing subsidies; reasons for exiting subsidy system	For tiered rents with the extended recertification period, program exits due to becoming self-sufficient may increase at the time of the subsequent triennial certification but decrease up to the triennial recert; for stepped rents, program exits should increase as households progress through the stepped rent schedule	X	- Percent left subsidy program - Percent still receiving subsidies - Exits due to reaching zero HAP (due to increased income or, in the case of stepped rents, by reaching the last step in the rent schedule if the last step is 0 HAP) - Terminations due to program violations - Exits due to head of household death - Exits for other reasons				
Changes in port-outs (HCV program)	No expected change in port-outs for tiered rents; possible increase in port-outs for stepped rent policies		- Percent ported out				

Exhibit 16: Evaluation Topics, Hypotheses, Data Sources, and Key Outcome Measures

TOPIC		DATA SOURCE					
	Hypotheses	**Interviews / Observations / document review**	**HUD PIC**	**NDNH**	**TANF**	**SNAP**	**HMIS**
Understanding, knowledge, awareness of rent reform; perceptions of and relationship with PHA	N/A: Will observe and document	X					
Rent burden, rent arrears, evictions	For tiered rents, rent burden may decrease during the extended recertification period (but income can't be measured accurately during this period); for stepped rents, rent burden may increase if households can't increase income to cover higher rent shares, and evictions due to non-payment of rent may increase as a result		- Family Share - Rent Burden - Rent arrears (if PHA maintains data on rent arrears) - Evictions (if PHA maintains data on evictions)				
Changes in household composition and structure	Household size may increase due to allowing adult additions to the household without increasing TTP as long as voucher size remains the same		- Number of adults - Number of children				

Exhibit 16: Evaluation Topics, Hypotheses, Data Sources, and Key Outcome Measures

TOPIC		DATA SOURCE					
	Hypotheses	Interviews / Observations / document review	HUD PIC	NDNH	TANF	SNAP	HMIS
TANF and SNAP subsidy receipt	Receipt and amount of TANF and SNAP should decrease				- Ever received TANF - Number of months of TANF receipt - TANF benefit amount	- Ever received SNAP - Number of months of SNAP receipt - SNAP benefit amount	
Homelessness	No expected change in evictions and homelessness for tiered rent; possible increased use of homelessness services for stepped rent						- At least one night stay - Any use of homelessness service - Any stay in emergency shelter
PHA current rules	N/A: Will observe and document	X	X				
Service context, local conditions	N/A: Will observe and document	X					

VIII. Reports and Deliverables

Two interim reports and one final implementation report are slated for Phase I of the evaluation.

Interim Report 1 will document the work carried out by MDRC and the PHAs during the early phases of the demonstration—specifically, all the work required to prepare the PHAs to implement the alternative rent policies and evaluation in accordance with the research design. It will describe the models tested and discuss the main results of the simulation exercises to support the design of the new rent models; technical assistance and training provided to the PHAs; challenges faced and overcome by the PHAs; the status of software modifications; and the steps taken by the PHAs to prepare for study enrollment. The report will provide an assessment of the preparedness of the PHAs to implement the alternative rent policies and the research design, and it will also outline the learning agenda for the remainder of the demonstration and what to expect in future deliverables.

Building on the initial deliverable, **Interim Report 2** will focus on the implementation and enrollment phase of the demonstration. It will describe how the PHAs achieved their enrollment goals and their early implementation experiences. The report will also describe the baseline characteristics of households enrolled in the study and compare program and control group characteristics to verify the success of random assignment; documentation of any threats to validity observed during the enrollment phase; and any early successes or challenges observed during implementation. The analysis of baseline characteristics would draw on the baseline survey and PHA or HUD administrative records. It will also compare the enrolled sample across the PHA model-clusters to show how similar or different the samples are for which each tiered and stepped rent policy is being tested. To the extent that the different clusters are serving similar kinds of families, the more appropriate it would be (with the usual caveats) to suggest that differences in impacts across the rent policy clusters may be associated with differences in the models, not differences in the populations served. (Of course, this evidence would only be suggestive). Comparisons would also be made with the characteristics of the national voucher population meeting similar eligibility criteria (an analysis that was also completed for the RRD) to assess the degree to which this tiered and stepped rent study's results can be considered more broadly relevant for national policy. Finally, the samples for the tiered and stepped rent and RRD studies will be compared. Along with documentation of any challenges, including threats to validity, if HUD agrees, we will also include preliminary observations of the PHAs' experiences in administering the new rent policy and communicating it to tenants, and tenants' early reactions to the rent reforms, primarily as reported by the PHA staff based on their interactions with families.

Final Implementation Report. This report will provide a comprehensive summary of the demonstration, taking a comparative approach that compares the tiered and stepped models and findings related to them, and also draw comparisons to the RRD and Santa Clara studies. The report will draw on the two interim reports and examine the extent to which the demonstration has been implemented with fidelity, and whether any threats to validity have been identified and addressed. Drawing on site observations, staff interviews, stakeholder interviews, and analysis of PHA data, the report will also examine the PHAs' ongoing implementation of their new rent policies, how implementation experiences vary by rent policy, early indications of possible

effects on administrative burden, and tenants' reactions to the new rent policies (as observed by staff, for example). The report will begin exploring early impacts of the alternative rent policies (1 year after random assignment) on housing-related outcomes for families, some of which may also have implications for PHA budgets. Such outcomes may include recertifications, hardships, other staff actions, average housing subsidies, exits from housing assistance, and porting out (for HCV households), and on income changes reported to the PHA.

Exhibit 18 shows the proposed deliverables schedule. Once the sites are selected and the enrollment is well underway, MDRC will review the deliverable schedule with HUD and assess whether any schedule adjustments are needed, to provide the type of follow-up and scope described above.

Exhibit 18: Reports

Interim Report 1	
Submit First Draft to HUD	December 14, 2022
Meeting with HUD	January 18, 2023
Submit Final Draft to HUD	February 15, 2023
Interim Report 2	
Submit First Draft to HUD	January 31, 2024[43]
Meeting with HUD	February 28, 2024
Submit Final Draft to HUD	March 27, 2024
Final Report	
Submit First Draft to HUD	May 15, 2025
Meeting with HUD	June 11, 2025
Submit Final Draft to HUD	July 10, 2025

Finally, these reports will be structured in a way that takes into account the feedback from HUD on MDRC's baseline and interim reports for the RRD evaluation. Many of the decisions that have been made with HUD input on the scope of issues to be addressed, measurement of certain constructs, and stylistic feedback from HUD's editor will likely be relevant to this study and applied as appropriate. This will help to facilitate comparisons of findings and lessons across the rent reform demonstrations, and, in doing so, help ensure that the Stepped and Tiered Rent study is contributing in an integrated way to a growing body of evidence on rent reform.

As specified by HUD, MDRC would produce two drafts for HUD review and the final report document incorporating HUD's comments for each of the written deliverables. This process is in keeping with MDRC's standard publication review process. In addition to reviews by HUD, several internal reviews with the most senior research, operations, and publications staff at MDRC and its partner organizations (including an early storyline review, a first draft review, and a final report review) help ensure that the report is written clearly, addresses the perspectives of policymakers and practitioners who may make operational and other decisions based on the design recommendations, and is methodologically accurate. Reviews with external committees

[43] The timeline for the second interim report is based on the assumption that we will complete enrollment by the end of June 2023, that we will receive complete HUD PIC data by early October 2023, that we would be rely only on HUD PIC data (not data that we would need to obtain directly from the PHAs) to describe baseline characteristics, and that we'd receive the final survey file from the survey firm by the end of September 2023.

of academic and other policy researchers also frequently ensure that the recommendations in a given report reflect current research methods and results. The major steps include: (1) conducting an initial review with HUD and submission of an outline and table shells that lay out the structure and content of chapters and proposed measures, (2) creating a storyline (building on the outline) that lays out emerging findings (3) writing a draft report and executive summary; (4) revising the draft based on HUD feedback; and (5) producing an edited report in accordance with HUD's guidelines. With approval from HUD, we intend to make this report available on MDRC's website and disseminate findings at conferences as well as at meetings with key stakeholders.

References

Abt Associates Inc., the Urban Institute, and Applied Real Estate Analysis, Inc. 2010. *Study of Rents and Rent Flexibility*. Report prepared for the U.S. Department of Housing and Urban Development, Office of Public and Indian Housing. Washington, DC: U.S. Government Printing Office.

Government Accountability Office. 2012. *Housing Choice Vouchers: Options Exist to Increase Program Efficiencies.* Washington, DC: U.S. Government Printing Office.

Greenberg, David, Robert H. Meyer, and Michael Wiseman. 1994. "Multisite employment and training program evaluations: A tale of three studies." *ILR Review* 47, 4: 679-691.

Khadduri, Jill, Melissa Vandawalker, Rebecca Cohen, and Jeffrey Lubell. 2014. *The Innovations in the Moving to Work Demonstration*. Cambridge, MA and Bethesda, MD: Abt Associates.

MDRC. 2015. "Testing an Alternative Rent Policy for Housing Choice Voucher Recipients." Unpublished paper. New York: MDRC.

Public Housing Authorities Directors Association. 2005. *Rent Reform: Fair and Simple Solutions*. Washington, DC: Public Housing Authorities Directors Association.

Riccio, James, and Victoria Deitch. 2019. *The Rent Reform Demonstration: Interim Findings on Implementation, Work, and Other Outcomes*. New York: MDRC.

Riccio, James, Victoria Deitch, and Nandita Verma. 2017. *Reducing Work Disincentives in the Housing Choice Voucher Program: Rent Reform Demonstration Baseline Report*. New York: MDRC.

Turnham, Jennifer, Meryl Finkel, Larry Buron, Melissa Vandawalker, Bulbul Kaul, Kevin Hathaway, and Chris Kubacki. 2015. *Housing Choice Voucher Program: Administrative Fee Study Final Report*. Washington, DC: U.S. Department of Housing and Urban Development.

U.S. Department of Housing and Urban Development
Office of Policy Development and Research
Washington, DC 20410-6000

January 2022