

## But, Do They Help? Landlord Incentives in the Mainstream Housing Program



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### **Executive Summary**

Are landlord incentives worthwhile? To encourage landlords to lease to households with federal rental subsidies, many Public Housing Agencies (PHAs) now offer incentives, including sign-on bonuses, special new insurance coverage, and more. Despite the growing popularity of incentives, these programs are rarely coupled with scientific evaluation. Too often, we do not know if they work.

This paper was written as Harbor Care, a health and human services non-profit and PHA, was considering its own incentive program. The agency noticed that while numerous entities espouse landlord incentives, few offer guidance to define the need for of the effectiveness of incentives. This hopefully palatable dose of science was created to assist.

In addition to methods of traditional evaluation, this paper draws heavily on behavioral science—a field of study that uses psychology to understand and improve economic, health, and other decisions. Applied behavioral scientists help companies resolve issues caused by the "human element" of conscious and subconscious tendencies. This perspective is helpful in understanding the subjective, data-limited world of federally-subsidized leasing.

Part one of this paper offers some background into federal housing subsidies and landlord incentives. Part two shows how a PHA can look internally to assess the need for an incentive program. Part three turns to landlords and how incentives might (and might not) help PHAs effect typical leasing decisions. Part four—the main course—outlines an experimental survey PHAs might use to test if incentives work in their communities. Finally, part five recaps recommendations and addresses some feasibility concerns.

### **About Harbor Care**

While this paper focuses on generally applicable insights, the story is of Harbor Care, a 501(c)(3) non-profit and PHA in Nashua, New Hampshire. The agency extends rental subsidies to hundreds of households each year.

Drawing on four decades of experience, Harbor Care helps at-risk populations solve some of life's most challenging issues, particularly those that lead to homelessness. Its mission is to provide vital services, including housing and healthcare to all in their communities needing assistance. Its vision is a community where everyone gets to live safe, stable, and healthy lives, filled with purpose, respect, and dignity.

Modelled on data-driven best-practice, Harbor Care serves more than 5,000 individuals annually. The agency is currently growing to integrate its service lines and create a "no wrong door" model of care, through which clients can receive inter-disciplinary care, inclusive of health, housing, and social supports.

1.
Background

### I. Background - Mainstream & Incentives

### Mainstream Vouchers: Who's Who

"Mainstream Vouchers" represent a commitment from the federal government to cover a portion of rent for a low-income household (the "voucher-holder"). The program has many names—e.g., Tenant-Based Housing Choice Vouchers, HCV, and Section 8 Vouchers. While much ink has been spilled on its behalf, we will begin by outlining only a few of the most important perspectives of the program.

- Historical Perspective "Mainstream helped privatize public housing"
  The current Mainstream program was formalized in 1998 via the Quality Housing and Work Responsibility Act, though housing vouchers predate the program. By shifting from a model of government-owned properties to government-subsidized rentals, the hope was to decentralize poverty and crime that had come to define public housing.<sup>i,ii</sup> Today, the Mainstream program represents the lion's share of the federal governments' provision of housing for low-income households.<sup>i</sup>
- Policymaker's Perspective "Mainstream works...to an extent." To date, the Mainstream program has moved millions of individuals and families out of homelessness or housing insecurity, but has had at best mixed results in decentralizing poverty. Decades later, it is still debated along ideological and economic lines. Some argue that the program has an inherent "moral hazard"—depressing employment or other self-driven anti-poverty strategies. Yet, the dominant theory, and the typical justification for the program, is that housing provides essential stability and prevents the costs of emergency housing and healthcare caused by unsheltered homelessness.
- Administrator's Perspective "Mainstream is colossal."

  Mainstream is administered through the U.S. Department of Housing and Urban Development (HUD), as a substantial part of the Section 8 Program. With a budget of more than \$16 billion as apportioned by Congress in 2022, the program serves well over 2 million households. Importantly, the program operates as a block grant rather than an entitlement program, so state allocations are limited. Since 2018, the program has allocated an additional 50,000 vouchers, many during the COVID-19 pandemic.
- Housing Authority's Perspective "Mainstream is a lot of work—and insufficient." HUD works with a network of more than 3,300 Public Housing Authorities (PHA) to distribute vouchers according to area need. \* PHAs then work directly within their communities to do the leg work—maintain waitlists, qualify applicants, allocate vouchers, pay rent, and monitor properties. PHAs monitor voucher-holders as well, particular during housing search; they may grant extensions or repossess vouchers if they are not used in a timely fashion. Waiting lists are infamously long—stretching for years if not decades. By some estimates, only 25% of individuals who might qualify for a housing voucher actually access the program.\*
- Tenant's Perspective "Mainstream is housing."

  Mainstream vouchers are designated for "non-elderly persons with disabilities." Disabilities might be related to physical or mental health, including substance use disorders. Moreover, individuals or households must have extremely low-income and be "chronically homeless," with extended or repeated experiences of homelessness. In the program, tenants pay no

more than 30% of their income to rent, and PHAs use allocated funds to cover the difference between a tenant's contribution and the full cost of rent. Tenants must report their income, and the amount a tenant contributes is re-assessed regularly. Tenants must pay security deposits or other fees. If tenants increase their income significantly they graduate from the program, though this is rare.<sup>xiii</sup>

• Landlord's Perspective – "Mainstream is avoided, or attractive." Landlords who decide to take on a Mainstream tenant must have a property that falls within an appropriate range of area median rent and must meet "habitability standards," which are also monitored by PHA inspectors annually. Landlords collect rent, maintain the property, and evict if the lease is violated—as with any tenant. Landlords do, however, maintain two contracts—one with the tenant and one with the PHA. As described further below, landlords have a very varied view of the Mainstream Program. While some rely on its regular payments, many avoid it on principle, supposed risk, or uncertainty. xiii, xiiv

### Current Challenge: Leasing-Up

For PHAs and voucher-holders, finding a new landlord can be hard. Recent research from the Urban Institute showed that across five communities, 60% of landlords do not accept vouchers, even when their rentals appeared to meet all obvious regulations.\*\* The reasons for avoidance were not clear, especially since approval rates varied widely, from nearly 80% approval in Los Angeles to just 15% in Washington D.C. Some have theorized that market factors and housing stock quality may be related.\*\* Observations from a 2015 meta-synthesis of qualitative research also support the idea that participants frequently encounter discrimination for fear that tenants might damage property and raised the related issue of racial discrimination. Voucher-holders may be described as "tenants of last resort." iii

In recent years, drops in rental vacancy rates may have made the situation more challenging. Rental vacancy rates have been tied to homelessness in general as well as difficulty in finding housing on HCV. \*vii, xviii\* In the last fifteen years, U.S. Census data indicates drops of nearly 40% (4 percentage points: from 9.8 Q3 of 2007 to 6.0 in Q3 of 2022). \*xix\* Entering the pandemic, rental vacancy rates also took a steep dive.\*x

To help voucher-holders find housing, thirty-three states have passed laws barring discrimination against voucher-holders, known as "source of income" protections.\*xi These laws may have impact; landlords in states without laws accept a voucher-holder 35% of the time; states with laws have a 78% success rate, though the authors note some methodological concerns.\*xii Nevertheless, the challenge of enforcement is complex: landlords may legally hide behind legitimate cost burdens or may simply not be challenged for discrimination.\*xiii Laws often also do not apply evenly across municipalities. New Hampshire, Harbor Care's home state, has no source of income protections. Notably, other states, including Texas and Oklahoma, have protected landlords' rights to reject voucher-holders as not to "be subjected to increased costs, administrative delays for payment, and various other financial risks.", xxiii

All in all, the result is a great many days searching for housing. Due to program rules, vouchers may be repossessed if a household cannot find housing. In addition, protracted housing searches lead to increased operational costs for PHAs and other community programs, as they may have to offer additional support and emergency services. Voucherholders and their families, meanwhile, continue to live in potentially unsafe situations. \*V

### Promising Solutions: Incentives.

In summer 2022, in response to the lingering housing issues of the pandemic—and perhaps to spend down allocated funding of the CARES Act—HUD provided funds for "extraordinary administrative costs" in the Mainstream Voucher program, which might include incentive payments for landlords. These funds are remarkable as the first federal funds allowed for such incentive payments.

The idea of incentive payments to landlords extends back at least a decade. By 2015, thought leaders were publishing on them; states, including Illinois and Virginia, had implemented tax incentives for landlords leasing to voucher-holders; and a few PHAs began their own programs. \*\*xiv, xxv\* Today, while no estimate exists for the number of PHAs using incentives, HUD has published numerous case studies, start-up guides, and issue briefs on incentives.\*\*xvi, xxvii Technical assistance representatives of HUD recommended Harbor Care begin an incentive program.

### Popular incentives include:

- Signing Bonuses, which are often reserved for new landlords;
- Mitigation Protection, with funds paid-out in the event of damages;
- Enhanced Security Deposit, with the landlords retaining funds in the event of damages;<sup>2</sup>
- Vacancy Protection, with funds paid-out in the event of extended lease-up or exit;
- Rehabilitation, with funds to bring apartments up-to-code or more complex savings on loans for housing complexes that rent a certain percentage to voucher-holders.

Additional non-financial incentives also exist, including landlord-tenant mediation and tenant support programs.

So much discussion grants incentives legitimacy. Yet, research on incentive effectiveness is scant. For policy insiders, this may not be surprising. Beyond a handful of economic metrics, research into the private rental market is limited, xxviii and research in the homelessness sphere is complicated by a slew of methodological issues. xxix xxx Evaluation does exist in the "gray literature"—the unreviewed internal assessments of PHAs—but is still rare.

The most comprehensive evaluation, which was highlighted by HUD, occurred in Marin County California.\*\*xxii Using a quasi-experimental method, evaluators compared the percentage of successful lease-ups among voucher holders in the county before and after incentives were implemented. The program and evaluations are compelling, but faced methodological issues. While utilization rates increased 22 percentage points (from 37% to 59%), the study used no control group, but rather a pre-post methodology, with no accounting for market changes. In addition, the county initiated a prodigious number of interventions simultaneously, including vacancy protections, damage protections, security deposits, housing search assistance, and a 24-hour landlord hotline, so there is no way to understand which

<sup>&</sup>lt;sup>1</sup> Specifically, funds were for "(1) any currently eligible voucher administrative costs, including activities to support housing search and lease up of eligible applicants; and (2) costs related to the retention, recruitment, and support of participating owners in the form of security deposits, signing bonuses, vacancy payments, and damage mitigation" (PIH-2022-19).

<sup>&</sup>lt;sup>2</sup> Note enhanced security deposits are illegal in NH.

interventions were most effective. Interventions were developed with a landlord council. Not including staff time, which had to be significant, the program had already cost more than \$100,000 in incentive payments alone and signed fewer than 100 new leases.

### Recommendation: Investigate Locally

Should PHAs start an incentive program? Based on current knowledge, it is difficult to recommend or not recommend incentives, especially since market and other regional factors are likely to vary landlord assent rates. More research is needed.

Fortunately, PHAs can do some themselves. The rest of this paper walks through processes and tools that Harbor Care used or will use to help assess the issue of landlord hesitancy in Greater Nashua, New Hampshire. Each section explores a separate topic:

- Internal Analysis: How to internally assess if landlord acceptance is a root problem at a PHA;
- Behavioral Bias: How to break-down landlords' decision-making and explore opportunities; and
- Experimental Survey: How to test, measure, and compare incentives.

Each section explores different analytic or evaluations techniques that take advantage of the data available, including journey-mapping, KPI definition, behavioral bias identification, and experimental surveying. While the guide is written for a broader audience, I do assume some knowledge of statistics. The methods and solutions proposed here may give PHAs a good understanding of potential impact of incentives in their communities.

# 2 Internal Analysis

### II. Internal Analysis - Looking at the PHA

When initiating an incentive program, it is tempting to consider only supply-side challenges, e.g., do landlords need incentives? Yet, PHAs should first consider their internal systems to make sure that protracted housing search is both an issue and one which may be solved by incentives. Here are presented the steps that I took with Harbor Care to understand housing search issues within its own program, drawing on methods from human-centered design and more typical evaluation methods.

### Harbor Care's Mainstream Program

Harbor Care has long provided housing for low-income households, through place-based housing, HUD's Permanent Supportive Housing program, and other initiatives. In 2010, the agency acquired 50 Mainstream vouchers. With additional federal allocations, since 2018, the program grew to include 225 Mainstream vouchers.

Like other Mainstream programs, Harbor Care screens potential candidates, distributes vouchers, and pays rents. In the wake of the opioid crisis, which hit New Hampshire with particular force, a large number of applicants to the program struggle with substance use. Harbor Care's support for housing search is perhaps average. Staff distribute a list of landlords who have previously rented to Mainstream voucher-holders to guide tenant search, though voucher-holders reported that few landlords on the list had available units. Staff may also help voucher-holders access other community supports, such as security deposit assistance.

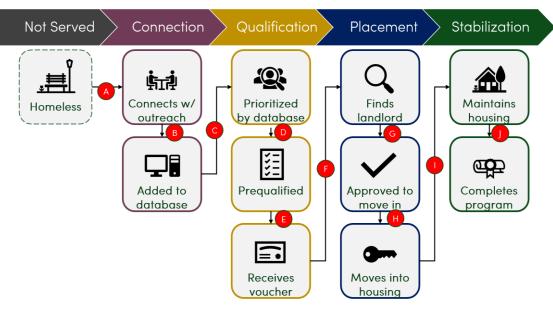
Harbor Care also received \$112,000 (\$500 per voucher) to assist as part of HUD's "extraordinary administrative" allocation in November 2022. But how should funds be used?

### A. Contextualize the Issue: Journey Map

From speaking with voucher-holders in its program, Harbor Care knew that the housing search process was long. What the agency did not know was if landlords were the primary cause of delays. To model all potential sources of delay, Harbor Care staff created a "journey map." Journey mapping is a technique borrowed from user experience designers, typically in the technology space, but has been adapted by "human-centered" designers to depict the client experience in social programs.\*\*xxxiii It is simple, though.

The below journey map consists of eleven steps, extending from homelessness to graduation. It was created through a series of meetings and emails. Harbor Care staff were not challenged to lay out the steps, nor uncover technological, administrative, and financial barriers at each step. Notably, Landlord non-acceptance of a voucher holder only slows one step (F).

Laying these barriers out enabled Harbor Care to have a clearer conversation about the many possible issues and prioritize solutions. For example, the "pre-qualification" step was added to catch common reasons that candidates may be rejected for housing vouchers; the change might save weeks of effort. In addition, housing searches (of step F) were identified as a significant barrier—with landlord acceptance as one of the most significant challenges.



OTED	
STEP	Potential Barriers
А	<ul> <li>Insufficient outreach</li> <li>Lack knowledge/training of internal/external staff</li> <li>Infrastructure doesn't support system</li> <li>Transient population</li> <li>Communication issues w/ client</li> </ul>
В	<ul> <li>Lack of structured/enforced data collection system</li> <li>Human error/ entered incorrectly</li> <li>System access issues</li> </ul>
С	<ul><li>Report is not prioritizing based on length of time/vulnerability level</li><li>System access issues</li></ul>
D	<ul><li>Time-lag due to staffing</li><li>Communication issues w/ client</li></ul>
Е	<ul> <li>Insufficient vouchers/resources compared to # in need</li> </ul>
F	<ul> <li>Low vacancy rates/rental volume</li> <li>Hesitant/discriminatory landlords</li> <li>Expenses (app. fees/back rent, transportation)</li> <li>Client can't independently search/use online searches</li> <li>Background check/previous record</li> </ul>
G	No security deposit
Н	<ul><li>Lacks essentials (furniture, house hold items, mattress)</li><li>Lack transportation to move items</li></ul>
l	<ul> <li>Lacks benefits/knowledge of resources</li> <li>Poor primary/ BH care</li> <li>Lack of employment opportunities</li> <li>No income</li> <li>Substance use</li> <li>Disconnects from staff support</li> </ul>
J	<ul> <li>Lack of high paying opportunities</li> <li>Lack of education</li> <li>Fear of losing voucher</li> </ul>

### B. Define and Test Key Performance Indicator (KPI)

Once Harbor Care staff had contextualized the housing search process, the challenge became quantitative: what metric might be used to demonstrate the difficulty of housing search? Unfortunately, the most direct metric, "number of landlords contacted per voucher-holder," could not be assessed since the data were not tracked; voucher-holders search themselves, and self-report data may not be reliable. Instead, three performance indicators were developed, all of which supported the conclusion that searches were not easy and that they had become more difficult in 2021 compared to 2020.

- Reasonable search length
  - Definition: Percentage of households with fewer than 90 days between voucher award and leasing, during an interval
  - o Limitations: Does not include clients with unsuccessful searches
  - o Analysis: 79% in 2020 to 54% in 2021 ( $n_1$ =53,  $n_2$ =46,  $\chi^2$ =5.91, p=0.02)
- Successful searches
  - o Definition: Percentage of successful housing searches, during an interval
  - o Limitations: Does not indicate the relative difficulty of the search
  - o Analysis: 95% in 2020 to 79% in 2021 ( $n_1$ =56,  $n_2$ =58,  $\chi^2$ =5.06, p=0.03)
- Average days searching
  - o Definition: Avg. time between voucher award and leasing, during an interval
  - Limitation: More recent pools will necessarily have shorter search times;
     particularly long searches may unduly influence results; does not indicate unsuccessful searches
  - o Analysis: Rose from 59 to 106 days ( $n_1$ =53,  $n_2$ =46, t=-2.4, p=0.02)

### C. Understand Trends, But Carefully

In looking at the KPIs in the future, such as to evaluate the success of any interventions, it is important to understand the volatility of the data. Unfortunately for Harbor Care, larger samples give better measurements, which is why the above data points were evaluated over a year-long time frame.

Simply put, the capacity for trend analysis here is weak. Chart 1 below shows the variations from quarter to quarter at Harbor Care. Because these are small groups, between 3 and 24 people served over a quarter, there are large random fluctuations, with large jumps from adjacent quarters and larger error bars (confidence intervals). There may be genuine variance, such as between a peak in Q2 of 2022 and the trough in Q3 2021. And variations may be related to the vacancy rate (based on quarterly data published by the Census Bureauxxxiii) as seen in Chart 2. These results are not statistically significant (p=0.41) and are underpowered (Cl = 0.41). New Hampshire's eviction moratorium, too, which ended in October of 2021 may have caused the vacancy peak around that time, but we cannot be sure.

While other PHAs may have better data, the quarterly trend analysis here provides only an intuition. Placements fluctuate—from 33% to 85%—perhaps dictated by the market, policy, or random chance. Based on this volatility, Harbor Care should be careful at interpreting trends—as well as any changes following implemented interventions such as incentives.

Chart 1.

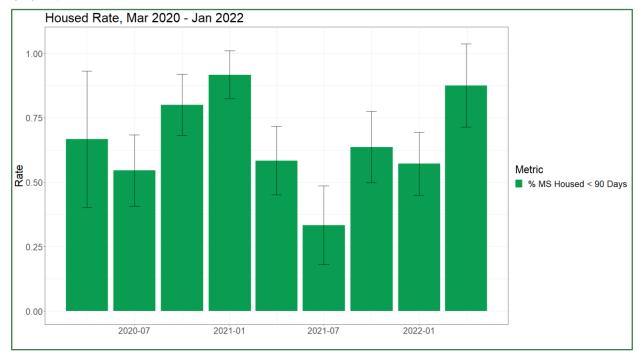
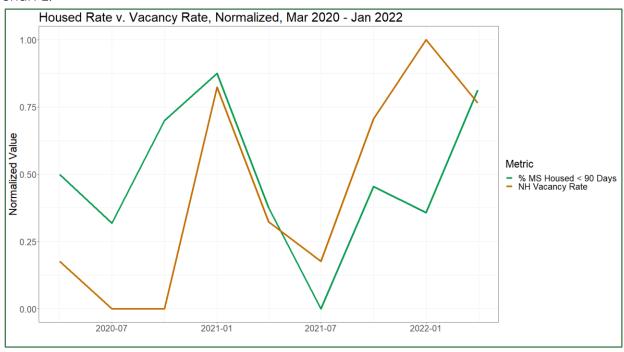


Chart 2.



### Recommendation: Make a Decision

The journey map, KPI identification, and trend analysis helped show that while voucher-holders face many systemic problems to accessing housing and while a majority do access housing within a reasonable timeline, a substantial minority of voucher-holders served by Harbor Care struggle with housing search.

With the problem identified and quantified, as best as possible, the next question appears: should the PHA invest to improve this situation, and if so, how? The first portion of this question is strategic—what is the value of getting a vulnerable family off the streets a month early? In Harbor Care's case, the decision to act was not easy for financial reasons—until the agency received funding from HUD expressly for the purpose of improving housing searches.

With the will and means determined, we next explore how PHAs can effect change, by looking at landlords' decision to lease.

# 3. Behavioral Biases

### III. Behavioral Biases - Looking at Landlords

To encourage landlords to rent to voucher-holders, we need to deeply understand the fundamental: "Will I rent to a vouch-holder?"

Unfortunately, HUD and researchers alike have bemoaned a lack of research on landlord perceptions. \*\*xxi\* Nevertheless, in this section, I analyze the data we do have, from two of the most in-depth qualitative studies (which include 34 interviews of landlords in Illinois \*\*xi\* and 127 interviews of landlords in three U.S. cities \*\*xi\*) as well as an unpublished landlord survey from an entity in southern New Hampshire (53 responses to a seven question online survey). Using a practice common to applied behavioral science, I identify research-validated psychological mechanisms, commonly referred to as behavioral barriers, that may be causing landlords to avoid renting to voucher-holders. This analysis shows not only that incentives may help, but recommends other strategies to help engage landlords.

### The Ideal Way – Expected Value

So how do landlords make leasing decisions? We start with the impossible ideal—expected value. Researchers often call this the "prescriptive model," and it helps in understanding deviations. Expected value links costs, benefits, and risks in a simple way that has made it extremely popular, informing clinical trials,\*\*\*\* when to retire,\*\*\*\* and hedge fund operations.\*\*\*\* It is the method landlords would ideally use to weigh the benefits, costs, and risks of renting to a voucher-holder versus someone else. As a formula, it may be expressed as:

[ expected value ] = [ probability of success ] x [ potential payout ] - [ entry fee ]

Really, expected value helps evaluate the outcome of a bet—a positive value indicates a good bet, while a negative value indicates a bad one.<sup>3</sup> The model may accommodate more complex decisions, with multiple payouts and costs, all of varying risks. To use the model, landlords would pop in numbers for risks (e.g., late payments, damage) and rewards (e.g., rent) of every potential tenant and then select the most lucrative option.

### The Real Way – Substitution Questions

Behavioral economists and scientists have fun pointing out the deficiencies of expected value theory.\*\*

Simply put, it is not how regular people make decisions. Costs, benefits, and risks are often too difficult or impossible to calculate. This is the case among landlords. Landlords certainly conduct backgrounds and credit checks to get a broad sense of risk. Yet, there is a paucity of research in the private rental market, not to mention research specific to Mainstream vouchers. While eviction rates or local market vacancy rates are collected, many statistics are proprietary (to rental insurance companies) or simply unknown, such as the likelihood of damage to a property or the duration of vacancy between tenants. \*\*iv

<sup>&</sup>lt;sup>3</sup> To run through a simple example, suppose a \$10 lottery card had a 50% chance of winning \$100 (and no other prize). Multiplying the probability of success, 50%, by the potential payout, \$100, and subtracting the cost of \$10 leaves \$40—the expected value. With a positive expected value, the bet is a good one—earning an expected \$40 for each play. To make it more intuitive, consider if someone paid for 6 lottery cards, so \$60. They would likely win on half or three of those tickets, gaining \$300 and netting \$240—the same result as multiplying the expected value (\$40) by the number of turns (6).

In general, this lack of data makes being a landlord difficult, especially a small landlord. Without quantitative metrics, landlords are left to their own perceptions, and often misperceptions, to quantify and understand risk. Meanwhile, voucher-holders become impossible to assess: many indicators that landlords use to assess tenants' risk (i.e., income, rental history) do not hold for voucher-holders. xiv

Instead, landlords are liable to follow the procedure described by Daniel Kahneman, one of the progenitors of behavioral science: "When faced with a difficult question, we often answer an easier one instead, usually without noticing the substitution."xxxviii As lottery ticket buyers just answer a non-rational question—do I feel lucky?—landlords ask a series of alternative questions:

- Is this a good tenant?
- Is this more work?
- Are similar landlords doing it?

Unfortunately, while these questions help landlords escape the indecision of expected value, the door opens for cognitive and psychological biases—the non-rational processes of decision-making.

### Landlord Behavioral Biases

We turn now to each of these "substitution questions" and try to understand why landlords may be answering "no" for each. Note the goal of these analyses is not to comment on the merit of landlord's concerns (we often lack the data), but to describe the thought processes so we may respond to those concerns. The theories derived here should be empirically tested, as in the final survey.

### • Substitution Question 1: Is this a good tenant?

Relevant Bias: Stigma (a.k.a. negative halo effect). In the qualitative research, landlords commonly cite accepting tenants based on a "gut feeling" or "based on the tenant." Unfortunately, a high number of vouchers holders are perceived as "worse." xiv In Nashua, surveyed landlords linked voucher-holders with high levels of damage, stating "I feel that someone not able to afford my rentals will probably not move to first priority maintaining my building.." It seems landlords may be guided by a negative "halo effect," which is behavioral science speak for stigma. The negative halo effect operates when a single perceived negative quality of an individual informs a negative perception overall.\*\*

Evidence. In the Illinois study, a PHA staff member effectively summarizes a common perception among landlords: "They're on Section 8, and they're going to trash my place. So, I don't want to rent to them." The "negative schemata" that landlords hold may stem from negative experiences or stereotypes. For example, if a tenant causes damages, landlords are permanently biased against the program. xiv In addition, class or racial stereotypes are also common, as landlords may understand Mainstream to cater to "urban households with limited economic mobility"—even though vouchers are distributed evenly by populations. xvi In Nashua, landlords similarly report being uneasy as tenants have "no skin in the game," despite being on the hook for at least a portion rent. Ultimately, this negative halo effect encourages landlords to presume voucher holders are "bad" and liable to damage property,

be evicted, or leave unexpectedly. As a result, landlords will go to great lengths to avoid the program, even where discrimination is illegal. xvi

Solutions. Rationales based on the negative halo effect are not only unethical, they ignore relevant criteria and cost landlords the opportunities presented by the Mainstream program. Literature indicates a powerful way to shift this bias is by contrary information, such as objective data. If the Mainstream program has benefits, and communities should attempt to gather evidence that tenants are not of greater risk than others, based on tenancy length, eviction, and property damage. Tenants of Harbor Care's program have lower evictions (2% annually versus 5% in Greater Nashua) and lower turn-over rates (6 years versus the 2.5-year average in the Northeast).

Impact on Incentives. Be warned: incentives may legitimize some landlords' concerns of the riskiness of mainstream tenants. \*\*xxxiiii\* That said, mitigation protection and vacancy protection may allay fears caused by stigma. Indeed, stigma may cause landlords to overvalue protection incentives, as they perceive a greater likelihood of payout. \*\*Landlords at the extremes—i.e., those who feel assured of no damage or huge amounts of damage—may feel unmoved by such an incentive; landlords in the middle may find it excessively reassuring.

### Substitution Question 2: Is this more work?

Relevant Bias: Unfamiliarity (a.k.a. disparate mental model). Landlords are somewhat accustomed to administration; they navigate administrative hurdles, from apartment posting to leasing agreements to property maintenance to eviction procedures. At the same time, landlords cite "too much bureaucracy" in the Mainstream program. \*iv Interacting with a new system is challenging, often because of varying "mental models." \*Mental models are a person's understanding of "the way things should be." Encountering a new mental model has been documented as a form of ambiguity aversion, \*lii in which the known is preferred to the unknown—even when change may be benefits.

*Evidence.* Landlords, including those in Nashua, perceive the Mainstream program as complex. In particular, smaller landlords feel they cannot afford the "time cost" of the program \*\*i They report dissatisfaction around additional paperwork, bureaucratic delays, and an uncertainty of responsibility. \*\*i Also bothersome are annual inspections, which may be seen as capricious or unpredictable. \*\*iv These are legitimate concerns, yet seasoned landlords may perceive costs as different, not more or unprofitable. Indeed, some larger firms hire separate staff for Mainstream and other tenants. \*\*vi In addition, while many landlords begin renting to Mainstream clients by (unhappily) acquiring a property with a voucher holder, those same landlords continue to engage with the program and acclimate to the bureaucracy. \*\*vi They note the lease-up process may be longer, but engaging with the PHA can shorten the search process; the paperwork is cumbersome, but it can be framed as an investment for lower turn-over; multiple renters and inspections may be annoying, but they also mean diverse payors and free maintenance checks. \*\*iv

*Solutions.* Once landlords know the process, they can balance the costs and benefits. While most PHAs provide information packets to landlords, programs should also develop a precise cross-walk of differences of the Mainstream program's life cycle to help landlords adapt their

<sup>&</sup>lt;sup>4</sup> Note stakeholders recommend "mitigation" to "damage" to mitigate perceived stigma.

current mental model. To counter feelings of unexpectedness or confusion, PHAs should emphasize their unique benefits, such as reliability, and should be exactingly clear and timely in their communication.

*Impact on Incentives.* To reduce the real and perceived upfront costs of time, sign-on bonuses can be structured as a form of payment for new landlords to learn the new mental model, an "onboarding fee." This rational also reduces perceptions of stigma.

• Substitution Question 3: Are my peers doing it?

Relevant Bias: Peer influence (a.k.a. network effects). Interestingly, most cities have bubbles of landlords willing to rent to voucher-holders. \*iv The extent of these communities can vary and may be consolidated geographically, at times in a single block. This consolidated behavior is interesting. Behavior change is often understood as a contagion, jumping as easily information is spread; however, researchers, such as Damon Centola, have theorized that adopting new complex behaviors—such as adopting new health or business behaviors—require communities to support change, with the behavior modelled by numerous, reliable sources.\*

Because the behavior of leasing to voucher-holders appears in bubbles, it may require communities to spread.

Evidence. While landlords are certainly competitors, peer influence is foundational for many business decisions. Online guidebooks are replete with recommendations to "look to the competition"—including rent setting, rental agreement policies, utility coverage, and pet policies.\*\*Including rent setting, rental companies may even cause smaller landlords to match the consumer price index.\*\*Including rental companies may even cause smaller landlords to match the consumer price index.\*\*Including rental companies may even cause smaller landlords to match the consumer price index.\*\*Including rental companies may even cause smaller landlords to match the consumer price index.\*\*Including rental companies may even cause smaller landlords to match the consumer price index.\*\*Including rental companies may even cause smaller landlords to match the consumer price index.\*\*Including rental companies may even cause smaller landlords to match the consumer price index.\*\*Including rental companies may even cause smaller landlords to match the consumer price index.\*\*Including landlords was resistance for housing authority staff involves working with willing landlords who are renting in submarkets that already have a substantial share of low-income and voucher-assisted renters.\*\* Landlords may be looking to their peers to determine their own acceptance of voucher-holders.

Solutions. As peer networks hinder change, they may also influence it: a public health campaign to ban smoking in apartments successfully leaned on the landlord industry to advocate for change. XIVII PHAs should also work with "community champions," such as landlord groups, to explain the benefits of the program. PHAs could also experiment with less conventional landlord programs that offer recognition awards to build community and underscore the broadness of the program's appeal. XXIV Finally, to expand their networks into new areas (and to avoid concentrating poverty), PHAs should be strategic: they may outreach to landlords currently in the program, but with properties in multiple areas.

*Impact on Incentives.* Depending on market penetration, PHAs may benefit from a "landlord referral program," through which landlords are incentivized to convince their peers into taking on clients. Research into similar referral programs shows they can create community champions.\*

### Recommendations: Build and Test Solutions

The insights from this behavioral bias analysis have led us to possible responses PHAs may take to more effectively engage landlords, including:

- *Publish statistics.* Analyze and present objective statistics about the value of the Mainstream program;
- *Crosswalk differences.* Provide guidance, such as FAQs or a timeline, that clarifies the differences and benefits of the Mainstream program;
- *Galvanize champions*. Emphasize the many profitable landlord relationships in the community, preferably through an industry-affiliated champion.

Harbor Care wisely designated some of its "extraordinary administrative" funding to a parttime landlord representative. This individual may complete these and other engagement activities.

In addition, these insights from the analysis have helped us theorize on the effectiveness of incentives, based on their ability to answer substitution questions:

- **Mitigation protection**, for vacancies and damages, may convince landlords that tenants are "sufficiently good", though boomerang effects are possible;
- Sign-on bonuses may curb real and perceived fears of time loss to bureaucratic burdens, making the work load "sufficiently manageable"; and
- Landlord referral bonus may galvanize community champions, showing new landlords that the program is "peer approved."

At this point, while grounded in theory, the existence of these biases and the effectiveness of incentives or other interventions is merely hypothesized. The next and final analysis tests their existence empirically.

### Bonus: Engagement Flyer

PHAs can structure their outreach materials in ways that build on likely behavioral biases and help landlords answer the "substitution questions." The somewhat name for this practice is behavioral marketing.

On the next page is an example of an outreach engagement flyer, which may be sent to new or current landlords of the program.(The letters correspond to the references on the flyer.) It answers:

- A. **"Is this a good tenant?"** While only the interpretation is provided here, the survey itself has objective statistics and comparative statistics that demonstrate higher eviction rates and lower turnover, as defined above.<sup>5</sup>
- B. "Is this more work?" The PHA counters accusations of bureaucracy with emphasis reliability.
- C. "Do my peers do it?" While not nearly as effective as coming from a landlord champion, social proof statements like this one can tap into network effects and encourage behavior. As a caveat, such statements only work if landlords see themselves as members of the group being discussed—boomerang effects are possible.

### In addition, the document:

- D. Stands firm against incentive stigma Because landlord may perceive incentives as an indicator of a lower quality of tenant, incentives are intentionally cast here as an added perk of a higher quality tenant.
- E. **Draws on Lose Aversion** One of the cornerstones of behavioral-science marketing is lose aversion, which builds on the general concept that people fear losing out more than they want to win.<sup>1</sup>
- F. Reduces Cognitive Bandwidth The call to action is a simple QR code. In this case it leads to the final survey, though it may be simplified to a sign-up page.

<sup>&</sup>lt;sup>5</sup> Actual risk of damages is an essential statistic. Harbor Care has some data on this—being a property owner for many years—but records were not able to be analyzed.



# Rental Incentives

Harbor Care connect hundreds of landlords tenants with government subsidized rents. You may be missing out...

В

- → Reliable payments
- A Low eviction rates
  - → Low turnover
  - → ...and now cash and other incentives!

Got Units for Rent?

Fill out this short survey to learn more — You could win \$100 just for answering F harborcarenh.org/landlord-survey





4.
Survey

### IV. Experimental Survey - Looking at Incentives

Below I outline an experimental survey which can be completed to help PHAs understand incentives and behavioral biases in their communities. As noted, we do not currently know the extent to which incentives work. Especially with multiple incentive options available and potentially stark regional differences (based on markets, housing stock, poverty level, or behavioral biases), PHAs like Harbor Care need more data prior to committing to an incentive strategy. The proposed survey experimentally measures that change in landlord's "willingness to accept" voucher-holders as tenants based on various incentive types. It also operationalizes and measures behavioral biases.

While the most technical and labor intensive of analyses in this paper, this survey offers the most empirical data. Harbor Care is still in the process of releasing the survey, and results may be added to this paper at a later date.

### Questions & Outcomes

The primary questions we need to answer include:

- How likely are landlords to accept tenants with subsidized housing if offered various incentives?
- How relevant are stigma, unfamiliarity, and peer influence to landlord assent?
- Are protection incentives overvalued due to stigma?

The primary outcome measure (variable) is landlord assent, measured as a percentage of landlords. This outcome represents what incentives buy—a greater probability that landlords will assent to a tenancy request. Note this outcome can also be understood as a stand-in measure for the amount of work to find a landlord in each incentive condition. These analyses also provide essential data on the cost, effectiveness, and marginal costs of incentives.

### Design

Experimental Design. This survey tool is experimental in nature, meaning that it has a more rigorous scientific backbone than an average survey, as to demonstrate causality. To use technical terminology, it may be classified as within-subjects, specifically relying on the "strategy method," so that responses are incentive compatible and non-hypothetical. This is to say that subjects in the survey (in this case, landlords) believe that each experimental condition (each incentive) is real—that they may receive the incentive, based on their agreement to lease to a tenant. Often in strategy method experiments, a condition (i.e., an incentive) would be chosen and offered at the end, but as discussed in the limitations below, this selection could not be accomplished. This method was chosen in place of a more typical between-subjects design (say, in which different landlords are randomly offered various incentives) for ethical reasons and to maximize the sample size despite financial limitations. The design is depicted in the figure below.



*Implementation.* The survey may be distributed online, although a more targeted strategy, such as to landlord list-serv or mailing addresses, is preferred. Harbor Care plans to use a mailing list and the above engagement flyer to encourage landlords to take the survey. A \$100 gift card will be offered as a lottery to all landlords.

Limitations. As all surveys and experiments, this survey has limitations. First, the results are not from a true random sample, but rather a convenience sample; it may include landlords who are more willing to assent than typical. That said, statistics are still valuable, particularly the relative effectiveness of incentives. Second, the survey uses the strategy method somewhat imprecisely, which may compromise the non-hypothetical, experimental nature of the survey. Harbor Care did not wish to commit to protection incentives prior to research, given inconsistent guidance from HUD (it was unclear if funds designated for insurance funds would be considered spent in the allotted time). Thus, the survey implies rather than states the actual existence of all incentives. Third, because sign-on bonuses were considered the most desirable of incentives and may pollute the acceptance of other incentives, landlords consider them after other treatment; thus, conditions were not randomized, which is standard procedure in within-subject research to limit carry-over effects. Finally, data derived from the study only correspond to the moment of data collection and separate incentives; results may not carry into other market changes or if incentives are stacked.

### Harbor Care Incentive Survey

Estimated time: 10 mins

Because of low rental vacancy rates, Harbor Care is offering incentives to help renters of our *Mainstream Housing Program* access housing more quickly. This survey will help us understand what incentive works for you.

### About the Mainstream Program

Harbor Care has connected hundreds of landlords with renters receiving government subsidies, through Mainstream or Section 8 Vouchers. In the program, tenants pay no more than 30% of their income to rent, and Harbor Care makes up the extra through federal funds. Tenant income and rates are assessed regularly. Renters also pay the security deposit, often with financial help through local agencies if needed.

Becoming a landlord of the Mainstream Program has many benefits. The subsidized portion of rent is guaranteed from month to month. Our tenants also have lower eviction rates (2% annually versus 5% in Greater Nashua) and lower turn-over rates (6 years versus the 2.5-year average in the Northeast).

### About the survey

Harbor Care has received funds to help renters access housing as quickly as possible during this period of low rental vacancy. Harbor Care would like to use these funds to form strong, mutually beneficial relationships with new and existing landlords.

Incentive payments may come in three (3) types, and your responses will help us understand your needs. Note completion of this survey does not guarantee incentive payment, as supply is limited. Those who complete the survey will be entered into a raffle to win \$100.

### Personal Information

- 1. Name:
- 2. Email\*
- 3. Phone Number
- 4. Affiliated Rental Company/Agency
- 5. How many apartments do you or your company rent?
- 6. What is the average monthly rent of your apartment(s)?

### History

- 7. Do you currently rent to households through the Mainstream/Section 8 Voucher program?
  - a. Yes
  - b. No
- 8. Have you rented to households through the Mainstream/Section 8 Voucher program in the past?
  - a. Yes
  - b. No
- 9. Provided a potential tenant meets other qualifications, would you take on a Mainstream/Section 8 renter without any incentive? This is for information purposes only and will not affect any incentive amount offered.
  - a. Yes
  - b. Maybe
  - c. No

### Mitigation Protection (1/3)

Incentive Option 1: Mitigation protection operates like insurance. If a landlord has such protection, they would be paid up to an agreed amount in the event of property damage following a tenants' exit.

- 10. Provided a Mainstream/Section 8 renter meets other qualifications, would you accept them as a tenant if you were to receive up to one month's rent in mitigation protection from Harbor Care?
  - a. Yes
  - b. No, but I would if the amount were higher.
  - c. No

11. If no, please indicate **the minimum amount of <u>mitigation protection</u>** that Harbor Care would need to offer for you to accept a tenant.

### Vacancy Protection (2/3)

Incentive Option 2: Vacancy protection also operates like insurance. If a landlord has vacancy protection, they would be paid up to an agreed upon amount in the event the rental remains empty following a tenants' exit.

- 12. Provided a potential Mainstream/Section 8 renter meets all other qualifications, would you accept them as a tenant if you received up to one month's rent in <u>vacancy protection</u> from Harbor Care?
  - a Yes
  - b. No, but I would if the amount were higher.
  - c. No
- 13. If no, please indicate the minimum amount of <u>vacancy protection</u> that Harbor Care would need to offer for you to accept a tenant.

### Sign-on Fee (3/3)

Incentive Option 3: A sign-on fee is paid to new landlords. It is an amount paid upon signing a new tenant, typically to cover the time costs of learning the Mainstream program.

- 14. Provided a potential Mainstream/Section 8 renter meets all other qualifications, would you accept them if you receive a sign-on bonus equivalent to one month's rent from Harbor Care.
  - a. Yes
  - b. No, but I would if the amount were higher.
  - c. No
- 15. Please indicate **the minimum sign-on bonus** that Harbor Care would need to offer for you to accept a tenant.

### Risk

- 16. Out of 100 non-subsidized renters, how many do you suspect would cause substantial damage to a rental property?
- 17. Out of 100 Mainstream/Section 8 renters, how many do you suspect would cause substantial damage to a rental property?

### Network

- 18. How many landlords do you know who have had:
  - a. Positive experiences with tenants the program
  - b. Neutral experiences with tenants of the program
  - c. Negative experiences with tenants of the program
  - d. No experiences with tenants of the program
- 19. Would you refer a fellow landlord to the Mainstream program if you were provided a \$500 bonus, should they sign on a tenant?
  - a. Yes
  - b. Maybe
  - c. No

### Final Preference

- 20. What type of incentive would you prefer?
  - a. Mitigation Protection
  - b. Vacancy Protection
  - c. Sign-on Bonus

Thank you! We appreciate your attention to this survey. At this time Harbor Care may be able to offer a sign-on bonus of one-month's rent to all landlords who accept a new client.

- 21. May we contact you to discuss further?
  - a. Yes
  - b. No

### **Analyses**

Presented here are the technical definitions and methods for evaluating survey results.

Research Question 1: How likely are landlords to accept tenants with subsidized housing if offered various incentive types?

### Hypotheses:

- (a) All incentive types will lead to higher acceptance than no incentive, that is:
  - o Sign on bonuses will lead to higher acceptance than no incentive.
  - o Mitigation protection will lead to higher acceptance than no incentive.
  - o Vacancy protection will lead to higher acceptance than no incentive.
- (b) Sign on bonuses will lead to higher acceptance than protection incentives, that is:
  - o Sign-on bonuses will lead to higher acceptance than mitigation protection.
  - o Sign-on bonuses will lead to higher acceptance than vacancy protection.

### Operationalization:

• Acceptance: Indicating "Yes," "Maybe," or "No, but I would if the amount were higher" for the relevant incentive question (Q9, Q10, Q12, Q14).

*Statistical Analysis:* For comparison in hypotheses (a) and (b), matched Wilcoxon sign-rank tests are recommended. Matched student t-tests may also be used, though non-parametric tests are advised when population distributions are unknown.

Research Question 2: How relevant are stigma, unfamiliarity, and peer influence to landlord assent?

### Hypotheses:

- (c) Greater stigma leads to lower acceptance in any incentive condition.
- (d) Unfamiliarity leads to lower acceptance in any incentive condition.
- (e) More negative network connections lead to lower acceptance in any incentive condition.

### Operationalization:

- Greater Stigma: The difference between the perception of risk among Mainstream renters (Q16) and perception of risk among all renters (Q17) for each subject, converted into a binary, with those above the mean as "perceiving high risk" and those below the mean "perceiving low risk"
- *Unfamiliarity:* Indicating no current (Q7) or former tenants (Q6) in the Mainstream program
- Negative Network Connections: The "known landlords with bad experiences with the program" (18c) divided by the total of "known landlords" (18a, 18b, 18c, 18d)

Statistical Analysis: Greater stigma, greater unfamiliarity, and greater network connections are expected to correlate with a lower likelihood to assent in any of the incentive conditions. The recommended statistical test is Pearson's R. Positive correlations would give evidence to the corresponding incentive as well as the behavioral biases and educational initiatives outlined above.

### Research Question 3: Are protection incentives overvalued due to stigma?

### Hypotheses:

- (f) Protection strategies will have a lower marginal cost than sign-on bonuses, indicating a cost-savings opportunity for PHAs, that is:
  - o Considering total cost, sign-on bonuses will have a higher marginal cost than mitigation protection
  - Considering total cost, sign-on bonuses will have a higher marginal cost than vacancy protection
- (g) Among those who accept any incentive, greater stigma leads to a statistically significant higher acceptance in the damage insurance incentive condition.

### Operationalization:

- Incentive Total Cost: The cost of a sign-on bonus or a referral bonus is the product of the incentive amount and the number of vouchers. The cost of mitigation or vacancy protection is the product of the incentive amount, number of vouchers, and the probability of damages or vacancies (25%).<sup>6</sup>
- Marginal Cost: The Total Cost of an incentive divided by the difference in an incentive's
  acceptance rate and no incentive uptake; this may be understood as a cost per
  percentage point increase of a landlord's willingness to accept.

Statistical Analysis: Hypothesis (g) may be verified by comparing the marginal costs of the specified incentives and may compute upper and lower bounds based on the confidence interval (based on a t-test) of an incentive's acceptance rate. Hypothesis (h) may be verified using a matched Wilcoxon sign-rank test, comparing the acceptance rates in the perceiving high-risk and perceiving low-risk conditions.

### Additional Information & Analysis

The survey may also be useful for the below data, statistics, and complex analyses:

- Contact Information: Perhaps the most useful data provided by this survey is a list of interested landlords, particularly those with multiple properties (Q1 Q6).
- Referral bonus interest: Likelihood of landlord participation in the referral bonuses program may be defined (Q19).
- Cost-Benefit Analysis: Landlord acceptance rates may guide cost-benefit analyses of each incentive, as it gives some evidence for the length of time or effort needed to fully engage landlords (Q9, Q10, Q12, Q14).
- Demand Analyses/Price Setting: Because incentive questions request an input willingness to accept price (Q11, Q13, Q15) as well as the rental price (Q6), more advanced analyses may be conducted with larger sample sizes. These would allow PHAs to assess uptake at various price points.
- Robustness tests: Variation in acceptance based on the number of properties (Q5) or rental prices (Q6) may also be assessed.

<sup>&</sup>lt;sup>6</sup> Note the probability of damages is a sorely needed statistic, one which Harbor Care is continuing to calculate, based on historical damage and vacancies costs. Records are not easily accessible. In addition, actual payouts of mitigation funds are not routinely published, though some PHAs have reported no or low allowances from funds. 25% is considered to be conservative.

5.
Conclusion

### V. Conclusion: Recommendations, Feasibility, Consequences

Based on the various analyses, Harbor Care can now do the following:

- Continue to address barriers not related to landlords in the lease-up process;
- Monitor the rates of reasonable search length, successful searches, and average search days, though be wary of over-interpreting trends;
- Consider implementing **educational solutions** based on the identified biases of stigma, unfamiliarity, and peer networks, including:
  - o publicizing essential statistics (e.g., length of tenancy and eviction rate),
  - o developing a **cross-walk** that highlights the differences between leasing to voucher-holders and non-subsidized tenants, while framing the benefits,
  - o engaging landlords to assist in outreach efforts, and
- Consider a referral bonus for landlords;
- Consider biases in marketing materials;
- Brainstorm additional solutions based on identified behavioral biases;
- Use a portion of the "extraordinary administrative" funding from HUD to implement the developed survey and conduct the necessary analyses to determine the appropriateness of incentives.

For the more general audience, I conclude with the looming challenge: feasibility. The recommendations presented—investigate locally, make strategic decisions, and build and test solutions—are not ground-breaking, but they are not easy either. PHAs face constraints of time, funding, and capacity. A dollar for research is a dollar not for direct services.

For this reason, the processes advocated here are balanced. The analyses draw on a variety of methods—from human-centered design, applied behavioral science, and traditional evaluation approaches—because they get useful data, efficiently. In addition, the research itself leads to better fiscal stewardship. A PHA's own untested incentive program may be hugely influential in countering all housing search issues: they may save weeks or months of apartment searching for their community's most vulnerable residents. Or incentives may be inconsequential, and PHAs could waste thousands in untested programs.

By conducting analyses within this paper PHA not only work towards increased effectiveness and cost-effectiveness for themselves—they help the entire industry improve. Evidence-based decision making is not free; but it is important and we need to practice. The much discussed "social determinants of care" are evidence of the systemic challenges that race, geography, and income are linked to worse access of education, employment, housing, and healthcare. We need solutions that demonstrably work. Fortunately, over the last twenty years, evidence-based policy in the U.S. has increasingly gained ground, with big data opening new possibilities and robust analytical methods trickling into front-line organizations.

Indeed, the U.S. government's public housing programs are themselves long-term experiments. \*\*vi\* Voucher programs replaced prior models of tenement housing when externalities proved harmful; more recently, new programs, such as through the "Moving to Work" initiatives or the more recent "EnVision Centers," have emerged to improve deficiencies of the Mainstream model by promoting employment, health, or exit outcomes. We just need to keep going—happy hunting.

### Citations

- <sup>i</sup> U.S. Department of Housing and Urban Development. (2001). Housing Choice Voucher Program guidebook (*No. 7420.10G*). Washington, DC.
- http://portal.hud.gov/hudportal/HUD?src = /program\_offices/public\_indian\_housing/programs/hcv/forms/guidebook.
- Schill. (1990). "Privatizing Federal Low-Income Housing Assistance: The Case of Public Housing." Cornell Law Review. 75(4).
- Erin Graves (2016) Rooms for Improvement: A Qualitative Metasynthesis of the Housing Choice Voucher Program, Housing Policy Debate, 26(2), 346–361, DOI: 10.1080/10511482.2015.1072573
- <sup>iv</sup> Vale, & Freemark, Y. (2020). "The Privatization of American Public Housing." The Routledge handbook of housing policy and planning / (pp. 189–206). Routledge, DOI: 10.4324/9781315642338-15
- <sup>v</sup> Homes for the Homeless Room for Debate NYTimes.com. (2015, February 19).

https://www.nytimes.com/roomfordebate/2015/02/19/homes-for-the-homeless

- vi Public Housing and Rental Subsidies. (2017, March 23). Manhattan Institute. https://www.manhattan-institute.org/html/public-housing-and-rental-subsidies-10055.html
- v<sup>ii</sup> Dennis P. Culhane & Seongho An (2021): "Estimated Revenue of the Nonprofit Homeless Shelter Industry in the United States: Implications for a More Comprehensive Approach to Unmet Shelter Demand", Housing Policy Debate, DOI: 10.1080/10511482.2021.1905024
- viii Housing Choice Voucher (HCV) Data Dashboard. (n.d.). U.S. Department of Housing and Urban Development (HUD). https://www.hud.gov/program\_offices/public\_indian\_housing/programs/hcv/dashboard
- <sup>ix</sup> U.S. Department of Housing and Urban Development, Office of Public and Indian Housing. (January 22, 2020) *Notice PIH 2020-01: Revised Policies and Procedures for the Mainstream Voucher Program.*

https://www.hud.gov/sites/dfiles/PIH/documents/PIH-2020-01.pdf

- × U.S. Department of Housing and Urban Development. (n.d.). *Mainstream vouchers.* https://www.hud.gov/program\_offices/public\_indian\_housing/programs/hcv/mainstream
- xi Public Housing and Rental Subsidies. (March 23, 2017). Manhattan Institute. https://www.manhattan-institute.org/html/public-housing-and-rental-subsidies-10055.html
- Long Waitlist for Housing Vouchers Show Pressing Unmet Need for Assistance. (2021, October 6). States News Service, NA. https://link.gale.com/apps/doc/A678100751/ITOF?u=upenn\_main&sid=summon&xid=1f1c4221
- xiii Mainstream voucher topic guides. HUD Exchange. (n.d.). https://www.hudexchange.info/resource/6548/mainstream-voucher-topic-guides/
- xiv Philip M. E. Garboden, Eva Rosen, Stefanie DeLuca & Kathryn Edin (2018) "Taking Stock: What Drives Landlord Participation in the Housing Choice Voucher Program," *Housing Policy Debate*, 28:6, 979–1003, DOI: 10.1080/10511482.2018.1502202
- xv Cunningham, M., Galvez, M., Aranda, C. L., Santos, R., Wissoker, D. A., Oneto, A. D., ... & Crawford, J. (2018). *A pilot study of landlord acceptance of housing choice vouchers*. Washington, DC: US Department of Housing and Urban Development, Office of Policy Development and Research.
- xvi Andrew J. Greenlee (2014) "More Than Meets the Market? Landlord Agency in the Illinois Housing Choice Voucher Program", Housing Policy Debate, 24:3, 500-524, DOI: 10.1080/10511482.2014.913649
- xvii Praopan Pratoomchat (2019). "Homelessness and Housing Market Condition in the United States," Proceedings of the 13th International RAIS Conference, June 10–11, 2019 02 PP, Research Association for Interdisciplinary Studies.
- xviii Study on Section 8 Voucher Success Rates: Volume 1 Quantitative Study of Success Rates in Metropolitan Area (November 2001). U.S. Department of Housing & Urban Development, Office of Policy Development. (pp iv) https://www.huduser.gov/publications/pdf/sec8success.pdf
- xix Rental vacancy rate in the United States. (November 2, 2022). https://fred.stlouisfed.org/series/RRVRUSQ156N
- \*\* Richardson, B. (June 23, 2022). Sky-high rental prices surpass pre-pandemic levels by more than 25%. Forbes. https://www.forbes.com/sites/brendarichardson/2022/06/22/sky-high-rental-prices-surpass-pre-pandemic-levels-by-more-
- https://www.torbes.com/sites/brendarichardson/2022/06/22/sky-high-rental-prices-surpass-pre-pandemic-levels-by-more-than-25/?sh=1399fbab57e6
- xxi Source of income laws by state, county and City. NMHC. (n.d.). https://www.nmhc.org/research-insight/analysis-and-guidance/source-of-income-laws-by-state-county-and-city/
- <sup>xxii</sup> Bell, A., Sard, B., & Koepnick, B. (2018). Prohibiting discrimination against renters using housing vouchers improves results. *Center on Budget and Policy Priorities. December, 20.*
- skiii Schwemm, R. G. (2019). "Source-of-income discrimination and the fair housing act." Case W. Res. L. Rev., 70, 573.
- mallach, Alan. (December 2015). Raising the Bar: A short guide to landlord incentives and rental property regulation. Center for Community Progress. https://mayorscaucus.org/wp-content/uploads/2016/01/SSMMA\_landlord-incentives\_how-to-guide\_final-am-12-28-15.pdf
- xxv Cunningham, Mary. (September 16, 2016). *To increase housing choice, try incentivizing landlords.* Urban Institute. https://www.urban.org/urban-wire/increase-housing-choice-try-incentivizing-landlords

xxvi Engaging & Supporting Landlords through Risk Mitigation Funds Community Profiles (April 2016). U.S. Department of Housing and Urban Development.

https://www.usich.gov/resources/uploads/asset\_library/Risk\_mitigation\_funds\_community\_profiles.pdf

xxvii HCV Landlord Strategies Guidebook for PHAs. (2022) U.S. Department of Housing and Urban Development, 109–115.

https://files.hudexchange.info/resources/documents/PIH-HCV-Landlord-Strategies-Guidebook-for-PHAs.pdf

xxviii Philip M. E. Garboden, Eva Rosen, Stefanie DeLuca & Kathryn Edin (2018) "Taking Stock: What Drives Landlord Participation in the Housing Choice Voucher Program", Housing Policy Debate, 28(6), 979-1003, DOI: 10.1080/10511482.2018.1502202

xxix Axelrath, S. (2022). "Challenges Encountered in the Public Health Data Collection of COVID-19 Cases Among People Experiencing Homelessness." JAMA Network Open, 5(8), e2229703-e2229703.

xxx Office, U. S. G. A. (January 7, 2020). "The challenges in counting and serving homeless populations." U.S. GAO.

https://www.gao.gov/blog/challenges-counting-and-serving-homeless-populations

xxxi Meena Bavan (HUD), Paul Joice (HUD), and Sage Computing (2019) "Landlords and Vouchers." *Evidence Matters*, 2019 (Winter). U.S. Department of Housing And Urban Development (HUD).

xxxii "|ourney Map." (n.d.). Design Kit. https://www.designkit.org/methods/63

xxxiii "Quarterly Residential Vacancies and Homeownership, Third Quarter 2022" (November 02, 2022) U.S. Census Bureau. https://www.census.gov/housing/hvs/index.html

xxxiv Flight L, Julious S, Brennan A, Todd S. "Expected Value of Sample Information to Guide the Design of Group Sequential Clinical Trials." Medical Decision Making, 2022;42(4):461-473. doi:10.1177/0272989X211045036

xxxv Ted G. Eschenbach & Neal A. Lewis (2019) Risk, standard deviation, and expected value: when should an individual start social security?, The Engineering Economist, 64:1, 24-39, DOI: 10.1080/0013791X.2018.1532543

xxxvi Cremers, J. H., Kritzman, M., & Page, S. (2005). "Optimal hedge fund allocations." *The Journal of Portfolio Management*, *31*(3), 70-81.

Earberis, N. C. (2013). Thirty years of prospect theory in economics: A review and assessment. *Journal of Economic Perspectives*, 27(1), 173–96.

xxxviii Kahneman, D. (2011). Thinking, fast and slow. Macmillan.

xxxix Forgas, J. P., & Laham, S. M. (2016). Halo effects. In Cognitive illusions (pp. 286-300). Psychology Press.

xl Forgas, J. P., & Laham, S. M. (2016). Halo effects. In *Cognitive illusions* (pp. 286–300). Psychology Press.

xli Gentner, D., & Stevens, A. L. (Eds.). (2014). *Mental models*. Psychology Press.

Machina, M. J., & Siniscalchi, M. (2014). Ambiguity and ambiguity aversion. In *Handbook of the Economics of Risk and Uncertainty* (Vol. 1, pp. 729–807). North-Holland.

xliii Centola, D., & Macy, M. (2007). Complex contagions and the weakness of long ties. *American journal of Sociology, 113*(3), 702-734.

xliv Adams, A. (July 19, 2021). Comprehensive Landlord's Guide to Pet Policies for Rentals. Bay Property Management Group. https://www.baymgmtgroup.com/blog/guide-to-pet-policies-for-rentals/

xlv How Much Should I Charge for Rent? (Quick Guide to Rental Rates) | SmartMove. (n.d.).

https://www.mysmartmove.com/SmartMove/blog/how-much-charge-for-rent.page

x<sup>lvi</sup> Gilderbloom, J. I. (1985). Social Factors Affecting Landlords in the Determination of Rent. *Urban Life*, *14*(2), 155–179. DOI: 10.1177/089124168501400202

xivii Pizacani, B., Laughter, D., Menagh, K., Stark, M., Drach, L., & Hermann–Franzen, C. (2011). Moving multiunit housing providers toward adoption of smoke-free policies. *Preventing chronic disease*, 8(1), A21.

xiviii Van Den Bulte, C., Bayer, E., Skiera, B., & Schmitt, P. (2018). How customer referral programs turn social capital into economic capital. *Journal of Marketing Research*, *55*(1), 132-146.

xlix Hallsworth, M., List, J. A., Metcalfe, R. D., & Vlaev, I. (2017). The behavioralist as tax collector: Using natural field experiments to enhance tax compliance. *Journal of public economics, 148,* 14–31.

Paraschiv, C., & L'Haridon, O. (2008). Loss Aversion: Origin, Components and Marketing Implications. *Recherche et Applications En Marketing (English Edition)*, 23(2), 67–82. DOI: 10.1177/205157070802300204

<sup>II</sup> Brandts, J., Charness, G. "The strategy versus the direct-response method: a first survey of experimental comparisons." *Exp Econ* 14, 375–398 (2011). DOI: 10.1007/s10683-011-9272-x

Adina Preda & Kristin Voigt (2015) The Social Determinants of Health: Why Should We Care?, The American Journal of Bioethics, 15:3, 25-36, DOI: 10.1080/15265161.2014.998374

iii van Veenstra, Anne Fleur & Kotterink, Bas. (2017). "Data-Driven Policy Making: The Policy Lab Approach." 100-111. DOI: 10.1007/978-3-319-64322-9\_9

liv Baron, J. (2018). "A Brief History of Evidence-Based Policy. The ANNALS of the American Academy of Political and Social" Science, 678(1), 40−50. DOI: 10.1177/0002716218763128