Rethinking Change:
Measuring Quality of Life Outcomes in
Housing First Residents in Portland, Oregon

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Abstract

The undisputed cost-effectiveness of the anti-homelessness program “Housing First” is well established in the empirical literature, but fewer studies have considered the impact of the program on individual residents. This mixed-methods study examines the lives of a cohort of residents in a Portland-based Housing First project, seeking to determine whether Housing First interventions create positive life changes in formerly homeless residents. The project includes an examination of the assessment records of all current residents, as well as a more in-depth analysis of the life narratives of a selected sub-sample. Quantitative analysis is used to determine long-term changes in the core areas of substance abuse and mental health, while qualitative analysis gives special attention to the individual experiences of residents and quality of life changes in their daily existence. This paper speaks not only to a changing definition of what constitutes success—formerly, total abstinence by the prevailing treatment models; now, a more holistic approach—but also to how we formally assess life change and the merits of a mixed-methods approach, as well as the implications for future homelessness policy and programs.
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Introduction

Homeless individuals’ lifetime prevalence for bipolar disorder, schizophrenia, and depression is more than twice that of the general population (Greenwood et al. 2005). Approximately 50-70% of homeless individuals with severe mental illness also have substance abuse problems (Padgett et al. 2011). This co-occurrence is very difficult to effectively treat, and, in conjunction with a life spent on the streets, often coexists with severe physical ailments. The implications of failure to properly engage this highly-comorbid population are dire—not only for health and well-being, but ultimately, mortality (Collins et al. 2012c). Yet many programs struggle to successfully aid these individuals, and many return to the streets, time and again, until days and weeks grow into years and decades—what has now become known as chronic homelessness.

Enter “Housing First”—a harm reduction-based housing model targeting this precise population. The basic idea of harm reduction is that, where risky behaviors or severe risk factors are likely to continue, programs can directly seek to reduce the harm that arises from those behaviors or characteristics while accepting that these still exist. Housing First thus offers housing to homeless individuals, often with severe substance abuse and/or mental health issues, with few preconditions or requirements. It also allows residents a choice in whether to pursue treatment or sobriety while offering a safe and permanent home regardless of what they choose. Housing First also goes a step beyond simple harm reduction by suggesting that not only is housing for all a basic human right, but that offering individuals this safe and stable foundation and personal agency can effectively inspire individuals to significant personal change in the long run, even without any such requirements.

This radical approach has proven beneficial for cities and counties around the country, particularly over the last decade since rising to fame under the second Bush administration. One of the program’s most popular features is its ability to save cities thousands, even millions, of dollars over time, relative to sustained homelessness or treatment programs. Numerous studies have been conducted on this topic. But as with any program, it is crucial to know not only how it affects municipalities’ budgets, but also the target population itself. Does Housing First spark the kind of change the designers of the program suggest? Is quality of life improved? Cost and retention studies often address this indirectly—fewer hospital visits may infer better health, for example—but leave many questions unasked. A rapidly growing literature in the last few years has sought to address more specific questions in these areas, but further research is yet needed to improve our understanding of the direct effects of this program on individual lives.
There is another important set of questions to address within this realm as well—how do we define success and failure in highly comorbid populations? Can we question the idea of trajectory in recovery—a constant line of improvement—or acknowledge a rougher, but no less meaningful, path that may not suit an individual to a program where basic necessities are contingent on sustained compliance and improvement? Finally, we may also consider what effects long-term and cyclical homelessness have upon a person. Does that kind of homelessness affect individuals’ future abilities to thrive and grow in a newly-housed environment? These are the questions to which this study speaks.

The essential theory underlying Housing First is reminiscent of Maslow’s hierarchy of needs in nature—that the fulfillment of the most pressing needs will allow individuals the space necessary to make personal changes at higher levels and cease behaviors that have served as substitute for healthier outcomes; for example, substance abuse standing in for a lack of healthy relationships. The underlying hypothesis of this paper is the same: that the presence of safe, stable housing, non-contingent on adherence to treatment, will allow individuals to build on that experience and make positive changes in their lives over time, as exemplified via substance abuse patterns, mental health, physical health, employment, meeting personal goals, restoring relationships, and improving self-care, among other factors.

Uniquely available data makes it possible for me to explore this hypothesis. Longitudinal client data was gathered from a nonprofit agency practicing the Housing First model in Portland, Oregon. One hundred twelve formerly homeless individuals’ annual records were analyzed to create a comprehensive quantitative dataset. As substance abuse and mental health comprise the two main afflictions of this target population, I chose to focus on these two markers first. I perform basic trend analysis and, following, panel data regression analysis, to measure changes in these two markers over time. However, understanding that outcomes cannot always be numerically expressed, a qualitative component was also added to the study to better understand the day-to-day experiences of residents and seek out potential areas of improvement or lack thereof not observed elsewhere. The records were thus also analyzed to better understand the life narratives of these individuals, what kind of improvements might be seen in other, more non-measurable areas, and what common factors appear to lead to “success” or “failure”—a valuable exploration for service providers and policymakers alike. I hypothesize modest gains in substance abuse and mental health functioning over time, with concurrent gains in quality of life as measured by life skills, self-
care, relationships, and goal achievement, while acknowledging the potential for variation in the recovery process. But first, I explore the unique program creation and policy history of Housing First, as well as the existing research.

Background

What is Housing First?

In 2003, in a move that would surprise many on both sides of the political aisle, the Bush administration included a 10-year plan to end chronic homelessness as one of its top policy priorities in its annual budget proposal. Funds were allocated (an overall increase of 35% for homelessness-targeting programs), the dormant Interagency Council on Homelessness was revived, and an emissary was dispatched to sign up all the major cities in the nation to create their own 10-year plans modeled after the President’s. This action would not only elevate “chronic homelessness” to buzzword status in the homeless services world, but would also elevate this little-known program from New York, known as Housing First, from local experiment to national model.

While the idea of harm reduction was not new, Housing First was formally developed as a model in 1992 by psychologist Sam Tsemberis from “Pathways to Housing,” a New York-based response to the needs of the mentally ill homeless population. The program soon thereafter expanded to substance addicts and others with long-term problems as well. It offers independent housing without precondition, operating under the idea that shelter was a basic human right that should not be contingent upon behavior or clinical status. Homeless residents in these programs are not forced to pursue treatment or counseling of any kind, although these and other services are made readily available. Rather, the idea is that the program gives them both a safe place to live and the ability to make their own decisions on their own timing, protecting them from the material dangers of the streets while upholding some level of personal agency. This is something lacking in more heavily regulated programs. This model places high value upon the idea of consumer choice, allowing participants to decide when and if they will pursue sobriety and/or take advantage of other offered services; thus, being a “consumer” in a market of providers. Treatment teams are available for support and referrals, but their services do not need to be utilized for an individual to remain housed. In the original program, among many others, if an individual does decide to pursue outside treatment, the organization will hold housing for them until their return, and if personal issues contribute to behaviors deemed too disruptive to the community, the program, while “evicting” the resident, will also actively seek to find them housing elsewhere. (This also holds true
for the Portland organization examined in this study.) Housing is the priority, and harm reduction the goal—more reasonable for this population, some conclude, than programs that require absolute abstinence (Padgett, Gulcur, and Tsemberis 2006; Padgett et al. 2011). The ultimate hope is that, once away from the daily battle for survival of street life, individuals will choose treatment options when ready, and housing will provide both a stable foundation for change and something that residents want to retain in the long run—an external motivator to become independent and able to provide for themselves, with the additional motivator of being unwilling to return to programs which they risked failing out of or to return to shelters, often seen as dirty, unsafe, and, ultimately, disempowering (Greenwood et al. 2005).

The alternative is a basic model with which most are well familiar. The more traditional residential approaches in the homeless services sector, often denoted as “Treatment First” or “linear” models, usually follow a set sequence of events that includes sobriety, counseling, educational and vocational training, and other life improvement endeavors in order to prepare a person to be “housing ready”—in other words, a fully independent individual capable of maintaining housing on their own. When a certain standard of recovery is achieved, the person is either aided in obtaining or released to independently pursue permanent housing. During such programs, residents are usually required to be sober and to follow certain rules, often at risk of losing shelter, food, and other offered benefits for non-compliance. It is from this approach that Housing First sought to differentiate itself. Beyond concerns of housing contingent upon behavior and the lack of choice is even the setting itself. “If the goal is for the individuals to learn to live independently in the community, the optimal setting to learn the necessary skills is the community”1 (Tsemberis and Eisenberg 2000:492). Shelters or transitional housing, Housing First proponents argue, do not provide such readily transferable skills to regular community life; something essential to future survival.

These concepts can rightly be construed as a radical break from the traditional model—from the norms of welfare and service provision that have existed for decades or even centuries, in fact (see, for example, the 19th century lodging houses that administered a work test before administering aid to determine one’s “moral fiber” (Willse 2010)). These approaches have frequently expressed ideas regarding the “deserving” and “undeserving,” the “Protestant work

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1 This has also proved to be a major argument for scattered-site housing over centralized housing within the spectrum of Housing First models, which allows for both options.
“ethic,” and so forth, indicating that all assistance is to be earned. Separating shelter and food from these service requirements as a basic right was a bold move that made many uncomfortable, but ultimately became one of the “hottest” new solutions in the political sphere—and, over time, in the world of service providers as well. Perhaps most surprisingly, this program’s diffusion as national policy solution took root under the conservative George W. Bush administration, as mentioned earlier. This “Cinderella story” of policy implementation has an interesting history deserving of further exploration, especially to situate the need for analysis of Housing First’s efficacy into a broader policy context.

Problems, policy, and politics

To understand what Stanhope and Dunn call the “heartening” yet “surprising” story of how a conservative administration that expressed “deep skepticism about social welfare” became such an enthusiastic endorser of a very progressive social policy that, until that time, had been fairly marginal in the world of services provision (2011:279), we must understand the policy and research context of the time, and how that allowed for not only a renewed emphasis on addressing homelessness, but also for such a radical plan to be encouraged. Understanding how this occurred will also provide additional context for the importance of studies examining life outcomes of residents within these programs, such as my own.

The types of individuals we characterize today as “chronically homeless” have long existed, but the invention of the term to concretely describe this subpopulation is fairly recent. Culhane and Kuhn, in a 1998 work examining service utilization patterns, divided homeless individuals frequenting shelters into three groups. The first they termed the “chronically homeless,” a group typified by serial episodes of homelessness that would last for years at a time (Culhane and Kuhn 1998:41). This categorization was very similar to how the U.S. Department of Housing and Urban Development (HUD) would later formally characterize the population. They identified this subgroup as being responsible for a “disproportionate consumption of system resources,” and characterized them primarily by age, mental disorders, and substance abuse. As described earlier, traditional interventions often fail to engage such highly comorbid populations, and individuals thus ultimately cycle in and out of services over an extended period of time. The most widely publicized claim from this study stated that, while chronically homeless individuals comprised only 10% of the homeless population studied, they consumed 50% of the resources made available to the homeless at large. The authors subsequently recommended transitional or permanent housing be made quickly
available to “reduce their risk for continued utilization of emergency shelter (and the associated costs)” relative to other populations (Culhane and Kuhn 1998:38, 40), thus making the first public call for and justification of a new approach.

Their numbers had far-reaching implications. Culhane and Kuhn’s paper preceded HUD’s first defining and inclusion of the chronically homeless as a target population by only three years. Two years later, it was enshrined in the President’s first national budget. In a brief period, chronic homelessness would be transformed from a vague term that originated in academia into a political buzzword circulating among nonprofits, service providers, and the public as well, and quickly rose to become the top priority in ending homelessness. In one of HUD’s major reports on the subject in the early years after the nationwide push for plans targeting this population, it was even stated that “communities have come to recognize that addressing chronic homelessness is the cornerstone of an effective plan to end homelessness” (Williams 2007:1, emphasis mine). The idea was that specifically targeting this vulnerable population would free more resources for other populations, and ensure that taxpayer dollars were being used with greater efficacy. The population was not new. What was new was the formal terminology with the assigned cost and the accompanying sense of urgency surrounding this population. This ultimately aided in translating a little recognized social problem into a major economic issue in a sphere where social program expenditures were already highly suspect. This “biopolitics,” as Willse (2010) calls it, helped create the impetus for a completely new kind of service provision.

At this time, certain research and policy norms were also gaining ground. Stanhope and Dunn (2011) argue that the rising emphasis on evidence-based policy at the national political level helped spur Housing First’s surprising adoption. Evidence-based policy is based on the idea of “what matters is what works”—an allegedly values-free approach where objective data, not normative ideals, is the key to solving our social ills. However, the authors argue that this process is not as objective as it purports to be. “[Evidence-based policy] is particularly problematic, charge its critics, because not only does it oversimplify a complex, value-laden process, but the values underpinning positive [evidence-based policy] are covert and therefore become givens rather than being subject to debate” (Stanhope and Dunn 2011:277). The reliance on “objective” data, taken to its fullest extent, can fail to recognize that there are other legitimate concerns of public policy, such as equity or human rights. It also fails to note that this reliance is values-based itself in many ways, in that holding to the importance of outcomes over process is a value judgment, as is deciding what to
measure and what constitutes success. However, these “covert values,” as the authors term them, that decide outcomes and success often go unseen under the language of “evidence-based,” which implies neutrality, and are thus all the more critical to discern. How one defines efficiency or “what works” matters. In the case of chronic homelessness, in light of the original “crisis,” the measurable outcomes became cost and retention. Willse (2010:171) argues that “the genius of Culhane and his colleagues’ research is that they were able to mobilize neo-liberal discourse of cost and efficiency to advocate successfully what humanist or ethical discourses have failed to do—that people in need of shelter should be housed as quickly as possible. In recasting housing insecurity in terms of financial cost, their research provides an economic justification for permanent, long-term housing…the invention of chronic homelessness retrofits a social problem as an economic problem.” Turning homelessness into a numbers game, as Culhane and Kuhn had, fit well into this policy paradigm, as well as into the ideology of the new administration in power, which idealized free market-style consumer choice, cost-savings, and business-like solutions. These ideals, set as measures of success, along with the economic problematization of chronic homelessness, directed the political rise of Housing First.

It was in this environment that Housing First was able to move from a little-known program concerned about human rights and non-discrimination to a nationally-endorsed solution. The subsequent diffusion of this nationwide illustrates the concepts just described. The launching of this effort began with the moral epiphany of the newly-appointed HUD secretary of the time. In 2001, not long after taking office, Mel Martinez would later recount to a reporter how he noticed, as if for the first time, the number of homeless people out in the winter cold as he drove to his new job. “Somebody ought to do something for them,” he told the reporter, echoing his thinking at the time. “And it dawned on me at that moment it was me” (Greve 2008). Martinez first brought these issues to the administration’s attention, persuading them to include that pledge to end chronic homelessness within 10 years in Bush’s first fiscal year budget, as well as significant funding increases. That pledge also included a call for the nation’s largest cities to follow suit by creating their own 10-year plans to end homelessness within their communities. While we cannot know the precise content of those conversations, we can refer to the current events and context just

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1 We must be cautious when imputing ideologies and motivations to individuals. This discussion is intended to represent generalized ideological orientations toward different types of government policy and the creation thereof, with attendant motivations, not necessarily any personal charitable feelings or lack thereof that we cannot observe.
explored to provide some level of rationale for his success. Martinez subsequently tapped Phillip Mangano, a homelessness advocate from Massachusetts, to find programs that could meet these aims and to take it nationwide. Mangano was summarily appointed the head of the Interagency Council on Homelessness—the umbrella agency that had lain dormant for years, but had once coordinated the activities of 15 different federal agencies in targeting assistance to the homeless. Mangano had a long history of success gathering support for helping the homeless, and understood well the duality of moral and economic motivations in public policy that issues such as poverty and homelessness elicited. In an early interview, he described his different approaches: “[With Democrats], if you went in with a couple of good stories on a snowy winter day, you could get some money; [but with Republicans] stories didn’t cut it. [They] would ask ‘What are the numbers on that?’” (Greve 2008). This ability to meet multiple concerns was something he would carry into his new position.

In his current context, Mangano needed the numbers. And it was here that a little-known program called Housing First would step into national prominence. The program had already proved to be a very cost-effective solution, relative to homelessness, treatment programs, or shelters, with high retention rates. In fact, at the time Culhane and Kuhn were drafting their seminal paper on the subject, Sam Tsemberis, who developed the original Housing First model with the ideals of human rights in mind, was commissioning his own housing study to prove the merits of his approach—and therefore, whether he knew it or not at the time, justify its adoption on a broader scale. His results were encouraging—after a five-year period, he found that 88% of Housing First participants were still stably housed, as opposed to only 47% of those from Treatment First programs (Tsemberis and Eisenberg 2000).\(^3\) His program would thus not only resonate with many advocates from a human rights perspective\(^4\), but it was also able to demonstrate its effectiveness from a more numerical approach, and could thus achieve the desired administrative aims.\(^5\) Upon meeting with Tsemberis, Mangano was convinced by the results and by the program’s unique emphasis on “consumer

\(^3\) Housing retention indicates how long an individual stays stably housed after all outside assistance ends. High rates of retention thus reflect both an individual’s empowered ability to remain housed independently after assistance ends and a reduced cost burden on the assisting agency or other social services in the long-term—a dual benefit.

\(^4\) It should, however, be noted that this approach was still somewhat suspect in much of the services provision world at large at the time, given its subversion of the regular service model. However, the language of social justice is not suspect among most advocates, even while having different approaches in mind.

\(^5\) The tension between activists’ motivations and political maneuvering appears all over the social services world—the need to justify in numbers what those involved personally in the work believe to be moral or justice issues.
choice” (the allowance for clients to choose if, when, and what services they would utilize; also a traditionally conservative free market ideal), and recognized that he could integrate these with the personal success stories Tsemberis could share to prove his point that “housing the chronically homeless was both frugal governance and a moral good” (Greve 2008) and reinforce that “compassionate outcomes must be both congruent with and stated in terms of market needs,” courting governing officials’ and the public’s approval (Stanhope and Dunn 2010:280).

Subsequently, under the umbrella of the ICH and working with the U.S. Conference of Mayors, the National League of Cities, and the National Association of Counties, Mangano prepared to convince 100 of America’s biggest cities to create their own 10-year plans, with Housing First playing a central role. He received 127 commitments in the first year. ICH presentations focused on local resource consumption and chronic homelessness’ impact on communities’ visible safety and attractiveness⁶, and, in response to hesitancy about past failures in targeting homelessness, argued that this new approach, as a “business plan...that anticipates outcomes and results” (American City 2006), would more ably address these longstanding issues. Cities were encouraged that, with the right practices, they could manage this problem and take control of it (Willse 2010:170). Creating the plans also enabled unique local alliances to develop between politicians, businessmen, clergy, service providers, advocates, and citizens—each with their own unique motivations—who would carry on the efforts into the future.

Mangano’s dualist approach of “frugal governance and moral good” illustrates the longstanding tense relationship between economics and ethics in determining the course of social policy. While we see the concern with human impact in the development of Housing First as a solution, we see the role of economic impact in determining how chronic homelessness became an issue of importance and in how its best solution was often sold to cities nationwide. I do not suggest that human rights were not a consideration whatsoever—after all, the program solution was developed with those ideals in mind, and certainly Martinez, Mangano, and many of those involved in the policy process at all levels espoused these ideals as well. But evidence suggests that

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⁶ Visibility often serves as a determinant of the priority of a problem, and under that rationale, a middle-aged man with a substance problem on a street corner may impose greater urgency than a mother with three small children in a shelter—symbols of two very different types of homelessness in need of attention. Conversely, the social construction language of deservedness may, in other cases, prioritize the mother with children over the man with an addiction. The assignation of “deserving” and “undeserving” labels and what populations are selected as policy targets under what circumstances is an area worth considering in any policy context.
its prompt adoption and promotion on such a large scale was largely spurred by the economic rationally, and upon determining that these were the outcomes worthy of examination, several other important conversations were neglected—for example, the structural issues that lead to poverty, the non-chronically homeless populations and their specific needs, and further investigation into how the Housing First model directly impacts the lives of those it serves. The fact that chronic homelessness merited this level of attention, along with a progressive policy solution in thorough contradiction of many of our standard norms of welfare, is highly impressive. However, whenever a social policy is constructed and under whatever circumstance, we must consider how it will directly affect the target population, first and foremost. Does the low-threshold, harm reduction approach of Housing First, without compelling any treatment, work for residents? Does it inspire the kind of personal change that the designers hoped? These were the questions unaddressed in the national conversation, and it is these questions that must be answered in order to continue to move forward into the future. 

**Purpose of this study**

Thus, it is with these questions in mind that I pursued this study. We have a program grounded in very noble human rights aims and social justice norms that has risen to immense popularity in the last decade, with a renewed focus on helping an extremely vulnerable population. (As of 2011, more than 400 cities had created individualized 10-year plans to end chronic homelessness modeled after Bush’s original plan, with two-thirds including a Housing First element (Tsemberis and Henwood 2011).) Its national promotion, with a renewed care for addressing homelessness, is worthy of applause. But its political adoption omitted discussion as to its true effects. It initially led to an abundance of literature on cost-effectiveness and retention in early years, but with less inquiry into human impact, and it is for this this reason that further studies on the effectiveness of this program in terms of personal outcomes are so essential. While a harm reduction approach is easy to comprehend, the program also claims that, theoretically, individuals will improve over time. Considering the long history of Treatment First programs and their predecessors in early American work houses and similar institutions, this is an investigation worth undertaking. And while this type of research has grown rapidly in the last few years, with admirable results, there is certainly a need to continue that growth and understanding. It is imperative to ensure that programs, whether adopted for political, economic, or ethical reasons, serve their populations well, even as economic sustainability and other such factors are viable considerations
in the policy adoption process.

Context of this study

I located this study in a nonprofit organization in Portland, Oregon—one of the few major metropolitan areas of the Pacific Northwest, located near some of the most recent research on Housing First’s impact (Seattle and Vancouver, BC have been the source of many recent studies). In Portland and Multnomah County, approximately 18,000 individuals (including children) are homeless at some point during each year (NAEH 2007), and, previous to the city’s 10-year plan, there were 4,000 men, women, and children on the street or in shelters on any given night (Citizens Commission 2004). In 2004, Portland’s Citizens Commission on Homelessness drafted a 10-year plan to end homelessness. The report stated that only 30% of homeless citizens made it into permanent housing after receiving emergency services from the city—a poor success rate if the ultimate goal is enabling people to obtain permanent housing. The new plan focused on three major principles: ending chronic homelessness, streamlining access to services that prevent homelessness, and investing in programs that produce measurable positive results in terms of both housing retention and significant life changes. These constituted a balanced approach that incorporated multiple populations and quality of life considerations. Housing First is the primary model they chose to adopt to address the first and third of these principles, and utilizing that model is the number one step they list to end homelessness by 2015 (Citizens Commission 2004).

The 10-year plan’s 2010 annual report (the most recent comprehensive numbers available) stated that 2,272 households were directly moved into permanent housing during that year alone. The city was also over halfway to meeting the plan’s goal of creating 2,200 new permanent housing units. As of December 2010, 1,320 had been created (Citizens Commission 2011). According to the National Alliance to End Homelessness, the use of Housing First has produced a savings of approximately $15,006 per individual on average in the city, taking these savings primarily from annual health care and incarceration costs.慢性 homelessness also saw a 13% drop between 2005 and 2007—concurrent with the first three years of Housing First and other elements of Portland’s plan to end chronic homelessness. In 2006, of 1,015 households participating in Housing First, 74% were still in housing six months after assistance ended, showing strong retention (NAEH 2007). The city has also displayed attention to human impact considerations, such as a recently-

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7 This study was conducted at the host organization of this study, under a federal grant.
commissioned health impact study which found that individuals participating in the city’s primary centralized Housing First project experienced reductions in traumatic events experienced, unmet health needs, and healthcare utilization, with increases in physical and mental health and happiness in life (CORE and Providence 2014).

Both government and nonprofit entities locally have utilized the Housing First model throughout this process and, as we approach the final year of the 10-year plan and return to its hopes and goals, it seems a fitting time to return to the subject of that final goal: life change. How has Housing First personally impacted this small segment of the chronically homeless population?

**Literature review**

A large number of studies showcase the cost and/or housing retention benefits of Housing First or Housing First-inspired programs as their central focus (Tsemberis and Eisenberg 2000, Stefancic and Tsemberis 2007, Pearson et al. 2009, Palepu et al. 2013) or as a strong consideration alongside other outcomes, such as substance abuse, mental health, physical health, legal involvement, or employment (Gulcur et al. 2003, Tsemberis et al. 2004, Milby et al. 2005, Padgett et al. 2006, NAEH 2007, Larimer et al. 2009, Tsai et al. 2010, Tsemberis et al. 2012, Frisman et al. 2012, Collins et al. 2012a, Srebnik et al. 2013). It is well-established in the literature that Housing First provides significant cost savings for cities relative to the most frequently utilized alternatives, such as increased hospital visits or encounters with the legal system (for example, Srebnik et al. (2013) found the cumulative savings in these two areas alone to be as high as $62,504 per year for one cohort of Seattle residents). Housing retention is also widely upheld as a significant outcome of this program—that individuals are able to maintain their housing long after assistance has ended, showing a measure of self-sufficiency that may override critiques of the “free housing” idea. (One of the most widely cited studies of this, by Tsemberis and Eisenberg (2000), found an 88% housing retention rate after a five-year period, relative to only 47% for the Treatment First programs utilized as controls.)

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8 The residents maintained important health connections and ongoing services, but reduced emergency care and inpatient treatment.

9 In a slightly different twist, Palepu et al. (2013) focused on whether the presence of substance abuse specifically within this population made housing retention more or less difficult and found that residents with substance abuse and substance dependence were no different than their non-using counterparts in ability to sustain housing over time. And while housing problems related to the inability to meet basic life demands were frequently reported in a 2009 three-city study of those with serious mental illness in Housing First programs, the researchers found that these reports averaged no more than one per person in the 12-month time period studied, and that 84% of individuals were still housed at the end of the period without problem.
But we must also inquire after the day-to-day life of these individuals. Does Housing First help its residents in the ways that Treatment First programs seek to do? Of course, housing retention is important, but one of the central tenets of Housing First is giving individuals, once a safe and stable foundation is established, the opportunity to seek help on their own terms for the myriad of other critical issues that they face. Do they? As substance abuse and mental health issues are the most frequently faced challenges\(^\text{10}\) of the chronically homeless and central to this study, I turn to the existing literature on these two subjects in particular.

**Substance abuse**

Current findings on the interaction between Housing First programs and addiction recovery are mixed. Some studies have found that Housing First programs have little to no effect on substance abuse outcomes (Frisman et al. 2012, Kertesz et al. 2009, Padgett et al. 2006). Others have found positive outcomes on both substance abuse and alcohol abuse outcomes (Padgett 2011, Collins et al. 2012a, Collins et al. 2012b, Larimer et al. 2009). It is certainly notable that, of the studies that did not find distinct improvements in substance abuse, many did find other positive outcomes of the type outlined earlier, such as lower dependence on public services, significant cost-savings, and higher housing retention, as well as a lack of increase in any substance abuse, disproving the idea of an enabling effect. For example, in Frisman et al.’s (2012) 12-month study of a Connecticut Housing First program, while no substance abuse change occurred, they found that participants dropped from an average of 153.6 hospital days in a nine-month period to a mere 3.5 days, on average—a significant change that speaks to both health and cost savings. Padgett et al. (2006), in a four-year comparative study between the original Pathways to Housing (PTH) and traditional Treatment First programs, found that there were both higher cost-savings and housing retention rates in PTH than in traditional Treatment First models. The one-year cost of PTH was assessed at $22,500 per individual, while the traditional treatment models averaged $40,000-50,000 per year, jail cost approximately $85,000 per year, and state psychiatric hospitals ran about $175,000 per year for each individual. The lack of increase in substance abuse is also significant. It was also noted in this study that, while Treatment First participants accessed more treatment services on average (as one may expect in a compliance-based model), their rates of use did not decrease significantly, leading to questions of whether the alternatives of homelessness or even

\(^{10}\) Physical health and disability is the third major challenge, but was beyond the scope of this paper.
treatment would foster reductions at any greater rate. The authors further note, as do many other scholars, that participants in sobriety-dependent housing have far more reason to underreport use than Housing First participants, given the potential consequences. And when it came to alcohol abuse in this particular study, Housing First participants actually reported using less than traditional model participants.

In studies that have found positive outcomes, some of the most promising results have come from alcohol abuse studies. Several studies have found that Housing First programs have a positive effect on reducing alcohol abuse over time, and that length of program exposure is strongly correlated with continued decreases in alcohol consumption over time (Collins et al. 2012a, Collins et al. 2012b, Larimer et al. 2009, Tsemberis et al. 2012). Collins et al. (2012a) tracked 95 individuals with alcohol abuse issues in a Pacific Northwest Housing First program for two years, specifically testing the enabling effect hypothesis described earlier. Decreased use was observed, with “intervention exposure”—the ready availability of supportive services—a key variable. For every three months that participants were in the program, alcohol use was reduced by 7-8%; reports of DTs decreased from 65% to 23% of participants throughout the two-year period. At the beginning of the study, only 54% reported having a single day in the previous month of not drinking to intoxication; at the end of the study, that number had increased to 73%. In Collins et al.’s follow-up study (2012b), the authors found that, while alcohol abuse’s decrease was still a function of the length of exposure to Housing First, the variable described as “motivation to change” explained away a large part of the relationship, while actual attendance at treatment had no strong effects—an important consideration. Larimer et al. (2009) studied alcohol intake reduction at the 1811 Eastlake project, a Housing First program in Seattle, Washington, where she found that residents reduced their daily alcohol intake from 15.7 drinks per day to 10.6 drinks per day by the 12-month mark. Benefits continued to accrue the longer they were housed. And, as with other studies previously discussed, significant cost-savings were also observed. Residents averaged $2,449 per month in cost savings, taking controls into account, with a combined total of over $4 million dollars saved in the course of a year. Finally, Tsemberis et al. (2012) noted a reduction in alcohol-fueled impact on functioning and psychological distress, along with higher recovery scores, after two years within a Housing First program—a result that can speak to the harm reduction philosophy, as well as potential decreased use.

There are additional substance abuse studies that have shown positive results. In another
comparative study, Padgett et al. (2011) found that, while Housing First participants were less likely at the outset to have a substance abuse issue than their Treatment First counterparts (speaking to the idea that initial addiction severity is an important control (Kertesz 2009)), the authors did find that those who were substance abusers at initial intake did become less prone to substance abuse during their time in Housing First. Additionally, all stayed enrolled in the program, and only two previously-active substance abusers suffered relapse. By comparison, Treatment First participants were 3.4 times more likely than Housing First participants to abuse substances in their first year in their respective program, and nearly 65% of participants prematurely left the program before completion. Likewise, Tsai and Rosenheck (2010) found that those in supported housing had less substance abuse-related expenses than their treatment program counterparts. However, initial addiction severity continues to be a complicating factor, as severity tended to be higher in the treatment cohort, as is the fact that treatment participants are required to seek treatment—studies utilizing this measure may thus be more suspect. However, those in supported housing did have other long-term benefits over their treatment counterparts that are still significant.

In a similar study, Milby et al. (2005) compared a sample of homeless individuals accessing day treatment, individuals housed in abstinence-contingent housing, and individuals housed in non-abstinent housing, and found that, while each group experienced positive outcomes in substance abuse, employment, and housing retention, the abstinence-contingent housing had the highest success—a divergent outcome from the previous studies. However, all three methods showed positive outcomes.\textsuperscript{11} This leads to the question of whether the simple presence of an intervention—any kind of intervention—involving committed and supportive teams such as these models present may have a positive impact. Milby’s work also serves the purpose of tentatively supporting Housing First as a viable option without weighing in on the ongoing debate of if any one best solution for all populations can truly exist.

There are several mitigating factors discussed by the previously-described studies that may affect results. Of these issues, the most severe is that of self-reporting, even as it is noted that Treatment First participants would have a higher reason to underreport than Housing First participants (Padgett et al. 2006, 2011; Collins et al. 2012a; etc.), given that their housing and other benefits are contingent upon compliance. Another factor may be differences in the studied agencies.

\textsuperscript{11} It bears noting that the substance abuse results, while perhaps clinically helpful, were not statistically significant.
themselves. Despite the unifying principles of Housing First, individual programs are largely self-directed, and programmatic elements may vary widely. Controls for initial addiction severity should be introduced into many of these types of studies as well (Kertesz et al. 2009, Padgett et al. 2006, Tsai et al. 2010). Missing data is also an issue, particularly in substance abuse studies (Milby et al. 2005). Finally, biased samples are of concern—for example, the Milby study drew upon a population that had volunteered for treatment, and the impact of housing upon those not willing to change, but willing to receive free housing, could arguably be very different. These factors suggest a cautious approach to current studies.

Mental health and quality of life

Along with substance abuse, mental illness is the other primary affliction of the chronically homeless population. The homeless typically experience far higher rates of psychiatric disability—the lifetime prevalence for schizophrenia, bipolar disorder, and depression are more than double that of the general population (Greenwood et al. 2005)—and the frequent co-occurrence of substance abuse and mental health issues are what make interventions for the chronically homeless population more difficult, as discussed earlier.

Tsemberis et al. (2012), utilizing client records and interviews with clients and staff in a study of alcohol impact, psychiatric symptoms, and housing retention in Washington, DC, found that psychiatric symptoms decreased significantly over a two-year period (as well as finding positive impacts in the other areas studied). Gulcur et al. (2003), alongside cost savings and housing retention, also found decreased time spent in psychiatric hospitals relative to Treatment First residents—while potentially a simple side effect of having a stable home (i.e., the hypothesis underlying much of cost-savings studies is that emergency rooms, jails, etc. serve as proxy homes for those with nowhere to go), it can also be a sign of improved mental health.

Likewise, Patterson et al. (2013) also found positive outcomes in an interview-based study over 18 months in Vancouver, BC; as compared to Treatment First residents, Housing First residents had positive or mixed recovery trajectories (characterized by positive changes in substance abuse, mental illness, social support, community involvement, reduced anti-social behavior, and self-awareness), whereas Treatment First residents had negative or mixed trajectories. An element of Patterson et al.’s paper that contributed significantly to this project is their acknowledgment of

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12 This includes my own study. These were concerns taken seriously in the creation of methodology, and unavoidable limitations will be discussed later on.
certain limitations in studying the chronically homeless population—classifying trajectories as positive or negative is difficult, given the volatility of the lives of these individuals, with sudden changes and transitions, mental health issues, and so forth. Gains are gradual, the authors found, but negative events were often sudden and devastating, and patterns are thus more difficult to discern, especially where these events were unknown or not able to be considered in program evaluation. However, good support and stable housing were still seen to lead to stable gains for residents over the 18-month period, and the authors subsequently advocated a “whole person” approach over a more clinical approach, taking many different life factors into account.

Consumer choice, beyond simply providing housing, is one of the central elements of Housing First, and a number of scholars have specifically explored the positive relationship between consumer choice, mental health, and quality of life (Greenwood et al. 2005, Tsai and Rosenheck 2012, Nelson et al. 2007; Srebnik et al. 1995). “Mastery [of one’s self and circumstances] is believed to be an important personal coping resource” (Greenwood 2005:226), and the perception of choice in living environment and utilizing supportive services has been found to greatly increase personal satisfaction, subjective quality of life, residential stability, and overall mental health (as just described via the psychiatric studies). Tsai and Rosenheck (2012) note that empowerment is particularly crucial for those with mental illnesses who have difficulty engaging in treatment and possess limited housing options, and found choice to have positive impacts on both psychological well-being and subjective quality of life for their study participants. Likewise, Nelson et al. (2007), in an Ontario-based study, found that perceived choice in housing and support were positively related to subjective quality of life, satisfaction with housing, and ultimate adaptation to community living, echoing the argument that, if we want to prepare people to live independently, we must give them opportunity to do so in a safe environment (Tsemberis and Eisenberg 2000). Srebnik et al. (1995) found similar results linking perceived housing choice to housing satisfaction, psychological well-being, and long-term residential stability, as well as achieving a better match between resident needs and available services. Finally, Greenwood et al. (2005), in a three-year interview-based study, found that increased perception of choice and more time spent in housing were fundamental to mental health improvement, as measured by decreased psychiatric symptoms. More specifically, the authors found that the Housing First model resulted in the greatest perception of choice and the best housing retention among all options considered, thus contributing to that positive effect.

Similar to the substance abuse literature, other studies have found no significant change in
psychiatric symptoms, while still acknowledging other positive gains. Tsemberis, Gulcur, and Nakae (2004), in a comparative study with Treatment First programs, followed 225 participants for two years, and found no positive difference in either psychiatric or substance abuse patterns for the Housing First cohort. However, they did find improved housing retention and residential stability (80% remained stably housed, as opposed to only 30% of the Treatment First cohort), and the lack of any increase of negative behaviors. Likewise, Pearson et al. (2009) found no significant improvement in impairments among participants, but noted that the one-year time period studied was likely too small to see any significant trajectory, and that individual months within that period had seen great variation in outcomes—again leading to questions regarding trajectory as a “straight line.”

**Home as foundation**

Having discussed housing retention, substance abuse, consumer choice, and psychological well-being, there is another element worthy of discussion: how residents actually feel about having a home and their integration into their communities. Padgett’s 2007 study analyzing the experiences of those residing in a Housing First project and their conceptions of the meaning of home notes additional benefits that, while not strictly recovery-based, may also be important to overall well-being: that “having a ‘home’ may not guarantee recovery in the future, but it does afford a stable platform for recreating a less stigmatized, normalized life in the present” (Padgett 2007:1934). Likewise, Gulcur et al. (2007) found that a scattered-site Housing First model, in its similarity to “normal” living relative to other housing arrangements for those with mental health issues, was the greatest predictor of social integration into one’s community. The element of choice (another mark of normalcy) was the greatest predictor of psychological integration (the feeling of belonging). Padgett describes home as a place of constancy and stability where routine can be established and where individuals feel in control of their lives once again; a secure foundation intimately connected with identity development. Transitional housing, she argues, does little toward creating a home. Study participants described having permanent housing as providing freedom from some of the negative elements of their past life, such as dangerous situations, unhealthy relationships, or having to engage in destructive behaviors to earn money, as well as freedom to pursue new opportunities. They took pride in some of the more minor aspects of home life, such as chores, and valued this in comparison to shelter life. They also saw their homes as havens from stress, which promoted greater self-reflection and an urge to identify what their next
step would be. While some worried about their ability to be sober without strict requirements, they also feared what occurs when one “messes up” in a Treatment First program—the cycle of being released and starting over once again, and the inherent instability of that process. Further explorations of these themes would greatly benefit the Housing First literature, as service providers, researchers, and government officials ponder the different ways in which “success” and “failure” manifest themselves in program evaluation and open the conversation to a new cohort of voices: the residents themselves.

This review of the literature does reveal some mixed results in terms of substance abuse and mental health, but a generally positive trajectory in terms of outcomes. There are acknowledged methodological flaws, as discussed, that are common to these types of studies—some may be avoidable, some not. We also see much of the literature focused on a limited number of programs—for example, a large number of the studies are derived from the New York Housing Study (involving the original Pathways to Housing), and many of the studies are authored by individuals associated with that project (Groton 2013). Recent years have shown more diversity, especially with a newer cohort of Pacific Northwest and Canadian studies and a new fold of researchers, but, considering that several hundred cities now host Housing First programs, future studies must continue to seek more programmatic and geographical diversity. This study aims to build upon the research that has come before while contributing to the diversity of the Housing First literature, expanding our understanding of this program and its implications.

Methods

This study examines the lives of 112 enrolled individuals at a nonprofit Housing First project in Portland, Oregon. Information was gathered via internally-administered annual assessments, to which I was granted full access. To be eligible for inclusion in the study, a resident had to have been in the program for at least one year, be currently enrolled at the time research began, and to have signed a consent form which included a research-specific clause for disclosure. To minimize the problems of missing forms or alternate versions of the assessment, the data was restricted to records from 2008 to 2013.

There are two primary Housing First approaches to providing housing—scattered site and project-based. Scattered site provides subsidized housing integrated into the broader community, with traveling treatment teams. This is the model utilized by New York’s Pathways to Housing. Project-based models involve centralized housing and centrally-delivered services on-site, as
exemplified by the well-known 1811 Eastlake project in Seattle. The Portland organization I studied utilized both centralized and scattered housing, dependent upon availability, and delivered many of its services via a central location near organization-owned housing, although caseworkers also conducted home visits. It is part of a larger homelessness-targeting organization, which also offers affordable housing (including alcohol and drug-free housing), healthcare, and employment assistance, among other services. Individuals entered the program via referrals from other agencies, with the only criteria being meeting the definition of chronic homelessness and having co-occurring mental health and addiction issues. “Graduation” from the program occurs when the client has completed the majority of his or her treatment plan goals, has an established income (be it employment, SSI, or other benefits), has stable housing, and is either sober or managing substance use in a way that does not cause immediate risk to losing that housing or causing other significant life problems.

The annual assessments were administered by caseworkers to individual clients at intake and each year thereafter, with some small deviation. They covered demographic information, mental and physical health, patterns of substance abuse, activities of daily living, goal achievement, personal relationships, levels of risk, and client history, among other areas, thus providing a wealth of both quantitative and qualitative data. All quantifiable data for each eligible and consenting individual was extracted and entered into a new dataset organized by panel. Qualitative data was gathered from a purposive sample of 26 individuals catalogued as improved, unimproved, or varying by substance abuse and mental health standards, and subsequently analyzed for common themes and for changes in self-care, life skills, relationships, and personal goal achievement.

Quantitative analysis: substance abuse and mental health

I examined outcome measures from other Housing First-related literature as a starting point for developing my own substance abuse measures. Given the specific and predetermined nature of the data, I was unable to fully imitate any of the measures suggested in previous studies, but developed ones of similar intent that fairly capture the essence of the data and stay true to appropriate indicators of substance abuse and mental health.

My two primary variables were the current frequency of substance use and the length of

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13 This is not necessarily contradictory to the idea of Housing First—establishing personal goals and encouraging positive steps forward can still be a component of the caseworker relationship without forcing these options or adding any punitive consequences if goals are not met.
time since last use, each coded into six-item scales. These were utilized to measure what I termed “hard drug” use, collapsed from more specific categories of illegal substances (cocaine, amphetamines, hallucinogens, PCP, non-prescription opiates, etc.) and excluding marijuana and alcohol. Any substance noted as prescribed was also excluded (including methadone), as well as all benzodiazepines, given the high number of prescriptions reported (26% of total observations within this category) and the possibility of even more being undetected. (I acknowledge the high potential for abuse in these categories as well, but the data precluded my exploring this further, and any conclusions would have been highly suspect.)

Following is the coding for frequency of use:

<table>
<thead>
<tr>
<th></th>
<th>Current Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than once per month/abstinent</td>
</tr>
<tr>
<td>2</td>
<td>Once per month</td>
</tr>
<tr>
<td>3</td>
<td>More than once per month</td>
</tr>
<tr>
<td>4</td>
<td>Once per week</td>
</tr>
<tr>
<td>5</td>
<td>More than once per week</td>
</tr>
<tr>
<td>6</td>
<td>Daily</td>
</tr>
</tbody>
</table>

If the listed data crossed a line between categories—for example, “one to three days per week”—the average was taken; in this example, two days per week, which would subsequently be coded as more than once per week.

Variations in caseworker assessment language presented occasional challenges for quantifying answers (Table A-1). For example, while some client records had very precise language, such as “twice per week,” others utilized phrases such as “occasionally” or “as much as possible.” From a qualitative perspective, such records viewed linearly, along with supporting information, often revealed authorial intent; however, for a more reliable quantitative analysis, I created a rubric to sort these into the coding matrix:
Table A-1: Coding Matrix for Frequency of Use

| Level                          | Data                                                                 |
|-------------------------------|                                                                     |
| Less than once per month      | “Rare,” “minimal,” “not at all much,” “very little,” “seldom”      |
| Once per month                | “Occasionally,” “sporadically,” “recent relapse,” “a few,” “every  |
|                               | one in a while,” “just socially,” “not often,” “not much,” “       |
|                               | infrequent,” “varies,” “not frequently”                            |
| More than once per month      | “A little a few days,” “binge use depending on finances,” “if it’s |
|                               | around,” “less than once a week,” “quite often,” “whenever I am  |
|                               | relapse”                                                             |
| More than once per week       | “Whenever I have the chance,” “as much as possible,” “current       |
|                               | relapse”                                                             |
| Daily                         | “Daily if able”                                                     |

When determining these codes, I sought more conservative measures so as not to overstate results—for example, while “occasionally” may indicate a rate far higher than once per month, once per month seemed a reasonable measure that allowed me to retain data while avoiding the risk of overrating use. However, if the use of the word was clarified elsewhere in the observation, the clarified definition was utilized.

The next variable was based on the provided date of last use (Table B). While this was a far clearer measure for recording purposes, it also conveys less understanding of an individual’s pattern of use. For example, an individual may only use a substance once a month now, as opposed to daily last year; however, if her one day of the month happened to be the day before the assessment took place, the respondent would likely be categorized the same as the year in which she used daily, along with individuals of much higher frequency. But for those who ultimately reach abstinence or significantly lesser patterns of use, this becomes less likely, particularly considering the size of the sample and number of observations (325 in total). This measure, due to the near non-existence of the vague terminology occasionally present in the last measure, does have a higher reliability, however, even if ultimately slightly less validity.

Table B: Time Since Last Use

| 1   | More than one year ago                  |
| 2   | Within the last year (including “one year ago”) |
| 3   | Within the last six months (including “six months ago”) |
| 4   | Within the last month (including “one month ago”) |
| 5   | Within the last week (including “one week ago”) |
| 6   | Within the last 24 hours (including “yesterday”) |

If only a month was given, and timing within the month affected coding, the 15th—the midpoint for
the majority of months—was selected as the definitive date. The same rationale was used for a year, with July 1\textsuperscript{14} serving as midpoint, in an attempt to balance out possible conservative or liberal biases. Seasons were coded as following: summer (June, July, August), fall (September, October, November), winter (December, January, February), and spring (March, April, May), with the middle month and middle day serving as definitive date if necessary. On some occasions, assessments were completed over a range of time; in such cases, the final date was selected to be the substance abuse baseline. (It deserves noting that these rules were not necessary for the vast majority of the coding, but they were developed for consistency’s sake in the rare instances they did occur.)

For both substance abuse measures, “I don’t know,” “reluctance to divulge,” “unknown,” and similar answers were left as missing data. Where any severe inconsistency between the two measures was noted, a flag variable was utilized to drop cases or approach certain cases with greater caution. For example, where the listed frequency was significantly higher than the given amount of time elapsed since last use—i.e., daily frequency, but a last use of six weeks ago—the observation was dropped for inconsistency.\textsuperscript{14} Additionally, if the current frequency was “none” but the date of last use was within the last month, frequency was changed to once per month, as a low estimate of pattern of use.\textsuperscript{15}

For mental health, I utilized the Global Assessment of Functioning, included in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). This 100-point scale (Table C) is a subjective measure utilized by clinicians, and reflects psychological, social, and occupational functioning of adults. It specifically omits any impairment caused by physical or environmental factors—making it particularly appropriate for evaluating homeless individuals. The scale ranges from superior functioning in all areas with no adverse mental health symptoms (91-100) to persistent danger of self-harm or a complete inability to care for one’s self (1-10). Functionality that generally requires no care is considered to be at 65-70 or above; generally, a score below the 30-40 range would be considered to require inpatient care (MBHN 2011).

\textsuperscript{14} If the frequency listed was daily, more than weekly, weekly, more than monthly, or monthly, and the date of use was over one month ago, the case was flagged to be dropped. If the frequency was monthly and the date of last use was more than three months ago, the case was also dropped.

\textsuperscript{15} “Last use” was utilized to clarify all “none” answers where the pattern of the last year indicated more, to clarify what “none” may mean to the recording caseworker or to the respondent (none at the moment, none recently, none with intent to use again, none with intended sobriety, etc.)—a weakness of non-standardized responses, but one with which I could ably deal with some precautions.
Table C: Global Assessment of Functioning\textsuperscript{16}

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-100</td>
<td>Superior functioning in a wide range of activities; life's problems never seem to get out of hand; is sought out by others because of his or her many qualities. No symptoms.</td>
</tr>
<tr>
<td>81-90</td>
<td>Absent or minimal symptoms; good functioning in all areas; interested and involved in a wide range of activities; socially effective; generally satisfied with life; no more than everyday problems or concerns.</td>
</tr>
<tr>
<td>71-80</td>
<td>If symptoms are present, they are transient and expectable reactions to psychosocial stresses; no more than slight impairment in social, occupational, or school functioning.</td>
</tr>
<tr>
<td>61-70</td>
<td>Some mild symptoms or some difficulty in social, occupational, or school functioning, but generally functioning pretty well; has some meaningful interpersonal relationships.</td>
</tr>
<tr>
<td>51-60</td>
<td>Moderate symptoms or any moderate difficulty in social, occupational, or school functioning.</td>
</tr>
<tr>
<td>41-50</td>
<td>Serious symptoms or any serious impairment in social, occupational, or school functioning.</td>
</tr>
<tr>
<td>31-40</td>
<td>Some impairment in reality testing or communication or major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood.</td>
</tr>
<tr>
<td>21-30</td>
<td>Behavior is considered influenced by delusions or hallucinations or serious impairment in communications or judgment or inability to function in all areas.</td>
</tr>
<tr>
<td>11-20</td>
<td>Some danger of hurting self or others or occasionally fails to maintain minimal personal hygiene or gross impairment in communication.</td>
</tr>
<tr>
<td>1-10</td>
<td>Persistent danger of severely hurting self or others or persistent inability to maintain minimum personal hygiene or serious suicidal act with clear expectation of death.</td>
</tr>
</tbody>
</table>

The GAF entered the revised third edition of the manual in 1987, and was recently removed with the publication of the DSM-V in the spring of 2013, only a few months before the data for this study was collected. However, this was one of the most reliably and consistently collected data points, year to year, within the data available to me. It presented as the best measure available for the area I sought to measure and one that had been generally considered acceptable by the clinical community for over a quarter of a century, albeit with some growing reservations in recent years in the lead-up to its removal from the latest edition.\textsuperscript{17}

Data in each of the aforementioned areas was gathered from 2008 to 2013 to maximize the


\textsuperscript{17} Given its 26-year history in the manuals (and existence in various forms before that) and extent of use worldwide, it was considered a reliable measure for some time. However, I do acknowledge the challenges that exist; most specifically, its subjective nature (including potential issues with inter-rater reliability and the need for evaluators to be specially trained—the extent of this is debated in the literature) and its enmeshing of psychological symptoms and other types of functioning, which may not perfectly co-vary (Woldoff 2004, APA 2014; the chief rationale for its removal from the DSM-V was to encourage independent evaluations of each of these sectors).
ability to measure changes over time, recognizing that any gains or losses in recovery may not be a
strict trajectory, while also recognizing the differences in data collection over the longer time period
and attempting to minimize deviation in recording practices and available information.\textsuperscript{18} I first
utilized basic descriptive statistics to measure changes in substance abuse and the Global
Assessment of Functioning. In order to accomplish this, I tracked positive and negative changes in
each scale year to year. For each calendar year and for each program year (intake, year one, year
two, and so forth, up to year nine), I tracked the number of individuals who increased, decreased,
or remained the same\textsuperscript{19} in each measure. Missing mid-range data was interpolated for both
measures within this method to better assess the trend. While this could be construed as
problematic, given the variable patterns of recovery and the ever-changing lives of homeless
individuals, several of the models were also tested without interpolation, receiving very similar
results. Interpolated values were dropped for the computation of means and medians, which were
also utilized to assess trends year-to-year, as well as for tallying the number of responses in certain
categories.

Following the initial trend assessment, I sought to verify my findings via regression analysis.
I utilized ordinal logistic regression for panel data to retest the substance abuse variables and
ordinary least squares to retest the Global Assessment of Functioning, examining the effects of time
housed within the program alongside key control variables. Interpolated values were utilized for the
Assessment, but not for substance abuse, given its ordinal nature. Rigorous testing of each model
was completed to ensure that they held up to their respective regression assumptions.

\textit{Qualitative analysis: quality of life and factors of improvement}

This study also involved a qualitative dimension, with two purposes: 1) to illustrate the
mechanisms by which change did (and did not) occur, and 2) to explore change and transition in
less-quantifiable concepts, such as self-care, relationships, and personal goals. As Patterson et al.
(2013) described in their study on trajectories of recovery, a “whole person” approach over a
clinical approach may be more desirable given the volatility of the life patterns of chronically

\textsuperscript{18} Different forms were developed and utilized for this assessment over time. While many of the questions were
identical in both wording and recording options, not all questions carried forward year to year and new questions
were continually being developed, which limited my choice of variables for some models. However, enough
consistency existed to create a reliable dataset for the measures in this paper.

\textsuperscript{19} For the substance abuse measures specifically, “no change” was divided into two categories: continued drug use
with no change and sobriety with no change, in order to better assess effects (for example, separating continued weekly use from continued sobriety as very different outcomes).
homeless individuals and the fragility of positive gains made in substance abuse or mental health, and changes in these more non-quantifiable and non-clinical areas are highly worthy of consideration.

Twenty-six cases were selected for this analysis. They were distributed between improved cases, unimproved cases (including both stable results and actively falling results), and cases of extreme variation, in terms of both the Global Assessment of Functioning and substance abuse levels. Some cases met these criteria via the GAF, others via substance abuse, and some through both. GAF cases were initially identified by having a greater than 10 point change during the studied time period for any individual, while hard drug cases were identified as those having a level change of three or more (moving from a 6 to a 3 on the scale, for example). Unimproved cases with no change were identified among the highest levels of use in the hard drug cases—those who had entries of 4, 5, or 6 (weekly, more than weekly, or daily) for the entirety of their time in the program.

Of these, cases deemed to have an excessive amount of missing data that would make piecing together a qualitative narrative difficult were dropped; balance was also sought between short-term change (one-year major rises or drops) and longer-term trajectories. For the drug measures, agreement was sought where possible between the time and frequency variables—significant rises/falls in each. Where multiple cases were contenders, random selection was used to determine which cases would be utilized. Once cases were identified, the resident’s personal background and case notes were thoroughly reviewed, with attention to common themes present underlying each category (improvement, no improvement/getting worse, major variations) and to previously-unmeasured changes in the aforementioned quality of life areas.

Results

Describing the population

The population is largely white, male, and middle-aged—but not as “white” as the Portland area at large, reflecting an overrepresentation of minorities in this population, along with a high overrepresentation of males (75%) and older individuals (Table E). Median educational attainment is a high school diploma or GED, while the range runs from less than 8th grade to having attended graduate school. Slightly less than 5% were employed at last reporting. 98% have a history of some
type of personal trauma, with half of cisgender\textsuperscript{20} males, two-thirds of other-gendered individuals, and a full 96\% of cisgender women having experienced sexual trauma. At last reporting, 90\% were in permanent housing, while 8\% were in shelters or on the streets and 2\% were in transitional housing or a hotel. As described earlier, housing is not fully guaranteed; while substance abuse will not disqualify someone, the consequences of that use or difficulties living in community (severe property damage, fights with other residents, etc.), can lead to eviction, and efforts are subsequently made to rapidly rehouse. Eighty-six percent suffered from some type of medical issue, with 51\% having a severe or chronic medical condition. Twenty-six percent had used hard drugs within 30 days of last reporting, 36\% cannabis, and 54\% alcohol.

\textbf{Table D: Descriptive Statistics (n=112)}\textsuperscript{21}

\begin{tabular}{|l|l|l|}
\hline
\textbf{Category} & \textbf{Sub-category} & \% of population \\
\hline
Age at last reporting & 18-29 & 8.0\% \\
& 30-39 & 20.5\% \\
& 40-49 & 32.1\% \\
& 50-59 & 28.6\% \\
& 60-69 & 9.8\% \\
& 70+ & 0.9\% \\
& Mean and median ages at last reporting & 46 and 47 \\
& Range of ages, 2008-2013 & 21 to 73 \\
\hline
Legal gender & Male & 75\% \\
& Female & 25\% \\
\hline
Self-identified gender & Male & 73.2\% \\
& Female & 23.2\% \\
& Transgender & 1.8\% \\
& Other & 0.9\% \\
& Declined & 0.9\% \\
\hline
Sexual orientation & Heterosexual & 87.5\% \\
& Homosexual & 7.1\% \\
& Bisexual & 2.7\% \\
& Other & 1.8\% \\
& Missing data & 0.9\% \\
\hline
Marital status at last reporting & Single & 51.8\% \\
& Married & 0.9\% \\
& Separated or divorced & 21.4\% \\
& Widowed & 1.8\% \\
& Not reported & 24.1\% \\
\hline
Highest education completed & Eighth grade or less & 11.6\% \\
& Some high school & 16.1\% \\
& High school diploma or GED & 44.6\% \\
& Some college and/or associate’s degree & 22.3\% \\
& Undergraduate degree & 3.6\% \\
& Some graduate school and/or graduate degree & 0.9\% \\
& Unknown & 0.9\% \\
\hline
\end{tabular}

\textsuperscript{20} Cisgender refers to those whose self-identified gender matches their birth sex, as opposed to transgender or other-gendered individuals.

\textsuperscript{21} For variables with theoretically low to no variation where some variation did exist (for example, changing self-reported race or gender), the last given answer was utilized.
Race
White  64.3%
Hispanic/Latino22  4.5%
Black  17.0%
Alaskan Native or Native American  6.3%
Asian  0%
Pacific Islander  0%
Multiracial  7.1%
Declined  0.9%

Military service  9.8%
Employed at last reporting  4.5%

Legal involvement
Previous incarceration  35.7%
Under legal supervision at last reporting  7.1%

Housing status at last reporting
Homeless or living in an emergency shelter  8.0%
Transitional housing or hotel  1.8%
Private residence (including all host organization housing, intended as temporary or otherwise)  90.2%

Substance use within 30 days of last reporting
Hard drugs  25.9%
Cannabis  35.7%
Alcohol  53.6%

Active medical issue at last reporting  85.7%

Risk factors at last reporting
Lack of outside social support  57.1%
Family history  52.7%
Chronic or severe illness  50.9%

History of compulsive behavior
Gambling, sex, eating, shoplifting, etc.  54.5%

History of trauma reported  98.2%

History of sexual trauma reported
Total population  62.5%
Cisgender females  96.2%
Cisgender males  51.2%
Other-gendered  66.7%
Declined  0.9%

GAF scores at last reporting
1-30  5.4%
31-40  11.6%
41-50  33.9%
51-60  29.5%
61-70  14.3%
71+  4.5%

LOCUS scores at last reporting
Median total score  21 (Level 4)24
Risk of harm sub-index: median score  3 (moderate)24

22 I suspect that there is underreporting in this category. Hispanic/Latino was included as both a race and an ethnicity option. While I acknowledge this is problematic, I chose only to include it where it was indicated in race, due to great variation in the ethnicity column for individuals year to year that implied potential reporting issues that made it difficult to effectively estimate the real numbers.

23 There are six levels in the Level of Care Utilization System, with six being the most intensive level of care required. The composite score is the sum of all sub-index scores (risk of harm, functional status, medical/addictive/psychiatric comorbidity, level of stress in environment, level of support in environment, treatment and recovery history, and engagement), and places the client at one of the six treatment levels. This result is congruent with the assertive community treatment team model frequently utilized by Housing First programs—a level 4 “refers to services provided to clients capable of living in the community either in supportive or independent settings, but whose treatment needs require intensive management by a multi-disciplinary treatment team” (AACP 2000), and includes making clinical services available on a daily basis, assistance with life skills, and coordination with support networks and other programs, all of which are provided by this program.

24 The risk of harm scale represents the degree to which a client has suicidal or homicidal behaviors, or behaviors that may place themselves or others in danger in general (impaired judgment or ability, etc.). On a scale of 1 to 5, a 3 represents moderate risk of harm, although not severe or extreme (AACP 2000).
Substance abuse: trend analysis

The first area of exploration is hard drug abuse—a compilation of substances excluding marijuana, prescription drugs, and alcohol, measured by frequency of use and time since last use. The following (Figure A) is a depiction of changes in hard drug use over time in the program\textsuperscript{25}, displayed as the percentage of individuals who either sustained recently-attained sobriety\textsuperscript{26} or decreased their use, relative to the year before.

**Figure A: Sustained Sobriety and Decrease of Use, by Program Year**

When utilizing both substance abuse measures (frequency of use and time since last use), the trends remain parallel, but frequency of use states the change occurring at a higher level. Depending upon which measure one examines, we can state that approximately 40 to 60\% of individuals had decreased their use by the end of their first year, and that approximately 70 to 80\% of individuals had decreased their use or sustained sobriety by year 8, relative to the previous year. The overall trends are positive from year to year, but with some variation—an effect which will be explored at greater length in the discussion portion of this paper.\textsuperscript{27}

\textsuperscript{25} Year 9 was omitted for insufficient data—less than 10 observed values.

\textsuperscript{26} To ensure that I was analyzing the effects of the program alone, I removed cases that had never used drugs or that had achieved sobriety before entering this program.

\textsuperscript{27} If including sustained, but not increased, drug use from year to year, this trend becomes even stronger. Sustained, but not increasing, use is a positive outcome in its own right, disproving the enabling hypothesis; however, I sought the most rigorous measure of success possible in choosing to focus solely upon sobriety gained within the program or decreasing use.
One caveat is that this method ignores the degree of variation within the scale—how much did individuals decrease their usage? Thus, another way to visually depict the results is to consider how many individuals ranked at different levels of the drug use scale, year to year, as a percentage of total observations.\(^{28}\) (For easier interpretation, I collapsed some of the coding in the scale to better show trends.) The following is by frequency of use.\(^{29}\) The number of those using less than once per month experienced a slight rise in year 1, followed by a decrease until year 3, at which point a steady trend upward began, with increasing numbers of individuals decreasing their use (Figure B). For all but year 3, the number of those using less than once per month remained at 50% or higher, approaching 70% by year 7.

**Figure B: Frequency of Use, by Program Year**

The results sorted by time since last use are very similar—a rise until year 2, a large drop in year 3, and then a consistent rise in the number of those who are actively decreasing their use throughout the following years (Figure C). In year 3, nearly 60% had used within the last week; a few years later, that number had decreased to just over 15%, while those who had not used for over a month approached 75%.

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\(^{28}\) Once again, I removed cases that had never used drugs or that had achieved sobriety before entering the program.

\(^{29}\) Years 8 and 9 were omitted for insufficient data.
In all of these visual representations, year 3 seems to have been difficult for many. This invites further study into long-term recovery patterns for this population (which the qualitative component of this paper will speak to in part), as well as any patterns or events within program delivery that may cause such an effect. However, after that difficult year, we do see a definite trend of decreasing use resuming once again.

These previous graphs looked at changes over time for each individual, according to their number of years within the program—one year, two years, three years, etc. I also examined the cohort as a whole by calendar year for the years studied. Figure D shows a very similar trend as experienced when examining program years—a steady increase in those either sustaining sobriety or decreasing their use, relative to the year before, with almost no variation in the trend.
Figure D: Sustained Sobriety and Decrease of Use, by Calendar Year

![Graph showing percent of individuals who sustained sobriety from or decreased use of hard drugs, by calendar year.]

The starting point of 2009 is substantially low, with between 10 and 40% having decreased use or sustained sobriety relative to the year before, as opposed to 60 to 70% in 2013. When considering what may have happened, we can also consider effects external to the program. In this case, the current economic recession began between 2008 and 2009. The repeated impact of the 2008-2009 interval in this study prompts consideration of what effects this may have had on program outcomes. This trend was echoed when examining the levels of use during these years. When examining the specific levels of frequency of use by calendar year (Figure E), a dramatic rise in use is seen between 2008 and 2009. Those using once per month or more increased from just over 20% to over 60% of the population, with a subsequent sharp decline thereafter. While the implications of this external event are beyond the scope of this paper, we might briefly consider what such an occurrence may mean for Housing First program outcomes, and for its target population at large. In an economic recession widely considered first in terms of homeownership and employment impact, along with stock market volatility, why would a population already subject to long-term unemployment and homelessness, with arguably no investment portfolios or 401(k)s, feel the effects so strongly? One may advance a “trickle-down” economics argument of another sort—that as economic harms befall higher economic classes, they, perhaps, increasingly rely on social services once utilized solely by the extremely low-income or homeless, creating a services “crunch” over
Another explanation may involve more of a general “mood” or atmosphere—the anxiety caused by being in an environment of fear and uncertainty. This phenomenon certainly merits further consideration, and I would suggest that studies investigating the effects of large-scale recessions on the lowest economic strata, such as the homeless, are worthy of further research.

Sorting outcomes by time since last use (Figure F), the trend looks different than what has been presented thus far. It does display a small increase in use for 2009. However, the turnaround is slower, not beginning to improve again until 2012, at which time sobriety begins to steadily rise. Thus, while a decrease among the highest level of use is still observed, we do not see an increase in those whose last use was greater than one month ago until 2012. (However, the very highest level of use, at one week ago or less, did quickly begin to decline after 2009—perhaps representing a more casual level of use for a time for many residents.) It is notable that, for each year, over 50% of residents had not used within the last month—a significant number, considering that all of the individuals included in this assessment have used at some point during their tenure in the program.

30 An article on this precise subject was published by myself and a supervising faculty member in 2009 for a politics column in a national magazine. For more, see Mickelson, Shannon and Amy Black. 2009. “Washington Watch: Crisis Opportunity,” *Prism*, May/June, p. 32.
In short, even while displaying some variation over time, no major declines were seen beyond the year 3 and the 2009 effects, and change often ultimately trended positively. A major caveat for this method of analysis is the lack of control variables, such as demographics or independent factors that frequently contribute to improvement or lack thereof. However, for the purposes of program evaluation, it does provide a practical description and helpful visual presentation of emerging trends. These results also held up under a number of different methods of computation, such as using and removing interpolated values in different models and both excluding and including individuals with sobriety that extended earlier than the program period.

Substance abuse: regression models

I also utilized several panel regression models to retest the results and apply control variables, in an attempt to achieve a more robust measure of the effects the program may have had on these individuals. There were a large number of control variables available for these analyses. Valuing parsimony while seeking the best specification possible, I selected the following variables for the hard drug use models: continuous year in the program (from intake to year nine) and calendar year variables, to represent the effects of time spent within the program; type of residence (constructed as dummy variables for private residence, transitional housing/hotel residence, or emergency shelter/homelessness); the demographic variables age (continuous), gender (dummy based on being male), race (dummy based on minority status), and education (constructed as an ordinal scale); employment status (dummy); and external social support (a
dummy variable indicating lack of support, which is an important factor in the qualitative findings as well). Motivation and ability to change were existing variables I could have utilized that are highly important in the literature, but were not recorded consistently year-to-year and inclusion caused over one-half of the cases to be dropped from analysis. The same issue existed for engagement with treatment, included within the LOCUS tool. Mental health is also an important factor, due to the impulse to self-medicate. However, I did not include the Global Assessment of Functioning scale, due to its representation of general functioning over mental health diagnosis, per se. The relationship direction also had a high possibility of being confounded, as drug use can arguably hurt functioning and mental health symptoms alike, just as mental health symptoms and lower functional abilities may encourage drug use as a coping mechanism. Employment certainly also has the potential of a confounded relationship, but the types of employment seen for many residents was nonprofit- or work program-based, which may arguably have a lower threshold of requirements that could be violated by drug use or the effects thereof. It was included primarily as a proxy for daily structure or purpose, an important component of the qualitative findings.

As mentioned earlier, frequency of use is more valid for the purpose of this study, but time since last use is more reliable. In an effort to reduce the possibility of error, I analyzed both variables side by side, in the hope that the results would lead to similar conclusions. Due to heavy overrepresentation issues in both of the dependent variables for one outcome, I collapsed the coding for these models prior to analysis to avoid a key assumption violation that would affect the model. Hard drug frequency was changed to have three outcomes: less than once per month, once per month to weekly, and more than weekly to daily. Time since last use was changed to more than a year ago, within the last year, within the last month, and within the last week.

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31 The importance of motivation and belief in one’s ability to change, as well as social support and structure/purpose to one’s day (in this model, represented by employment), were firmly established in the qualitative component of this research.
Table E: Predictors of Substance Abuse

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3(^a)</th>
<th>Model 4(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Model 1 Original coefficient</td>
<td>Model 2 Original coefficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(odds ratio)</td>
<td>(odds ratio)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numeric program year (0-9)</td>
<td>-0.18(^b) (0.04)</td>
<td>-0.20 (0.82)</td>
<td>-0.26**</td>
<td></td>
</tr>
<tr>
<td>Calendar year (2008-2013)</td>
<td>-0.65 (0.52)</td>
<td>-0.94 (0.39)</td>
<td>-0.47</td>
<td>-0.81(^c)</td>
</tr>
<tr>
<td>Private residence</td>
<td>-0.65 (0.52)</td>
<td>-0.94 (0.39)</td>
<td>-0.47</td>
<td>-0.81(^c)</td>
</tr>
<tr>
<td>Transitional housing or hotel</td>
<td>-22.00*** (2.80e-10)</td>
<td>-22.64*** (1.47e-10)</td>
<td>-0.72</td>
<td>0.97</td>
</tr>
<tr>
<td>Age</td>
<td>0.01 (1.01)</td>
<td>0.00 (1.00)</td>
<td>-0.02</td>
<td>-0.03(^b)</td>
</tr>
<tr>
<td>Male</td>
<td>0.65 (1.92)</td>
<td>0.65 (1.91)</td>
<td>0.59</td>
<td>0.52</td>
</tr>
<tr>
<td>Minority</td>
<td>-0.76 (0.47)</td>
<td>-0.53 (0.59)</td>
<td>-0.64</td>
<td>-0.27</td>
</tr>
<tr>
<td>Highest grade completed</td>
<td>-0.39 (0.68)</td>
<td>-0.38 (0.68)</td>
<td>-0.60**</td>
<td>-0.59*</td>
</tr>
<tr>
<td>Employed</td>
<td>-0.57 (0.56)</td>
<td>-0.73 (0.48)</td>
<td>-1.66(^a)</td>
<td>-2.05**</td>
</tr>
<tr>
<td>Lack of social support</td>
<td>0.67 (1.95)</td>
<td>0.69 (2.00)</td>
<td>0.90*</td>
<td>0.87*</td>
</tr>
<tr>
<td>Prob &gt; chi2:</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0305</td>
<td>0.0547</td>
</tr>
<tr>
<td>N/n:</td>
<td>75 cases/161 observations</td>
<td>73 cases/156 observations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.10  ** p < 0.05  *** p < 0.01
\(^a\) Failed proportional odds test
\(^b\) Came close to significance (p < 0.2)

Use of the Brant test showed that the proportional odds assumption was not met for the time since last use models; however, it was met for both of frequency of use models. Under frequency of use, only transitional housing or hotel residence, relative to homelessness or emergency shelter (the omitted dummy variable), was significant, showing a higher likelihood of being in lower categories of drug use than higher relative to being homeless or in emergency shelter. While we can ponder why private residence—a step up the housing ladder, so to speak—did not yield a similar effect, it may suggest that the move from homelessness to housing—any

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32 Ordinal logistic regression for panel data was used to estimate the model (xtologit). Robust standard errors were utilized to control for any heteroskedasticity (vce(robust)), and variance inflation factors showed no problematic multicollinearity amongst any of the independent variables (vif). No autocorrelation was present in any of the models, utilizing David Drukker’s xtserial command for panel modeling (Drukker 2003)—a difficult assumption to fulfill in time-series. Random effects were chosen over fixed effects, given that demographic controls were included in the model, as well as several variables with low variation.
housing—provides the greatest immediate impact, although this says nothing of the sustainability of such positive changes over time, or of this form of housing’s long-term efficacy next to sustained permanent housing.

I utilized odds ratios for the frequency of use outcomes to better understand the magnitude of the impact of each of these variables. The results for transitional housing—the only variable with significance in this model—were negligible; while the direction of the relationship was negative, fulfilling the original hypothesis, it was barely discernible in terms of magnitude. Program year was near-significant, but did not cross the threshold into the 90% confidence level and also represented a very small effect. These models showed no particular influence, positive or negative, of the program on substance abuse outcomes.

However, this was not the case for the second set of models. Because the proportional odds assumption was not met for Models 3 and 4, I cannot utilize odds ratios. Thus, the results must be interpreted more cautiously. What can be said is that the passage of time in the program, as measured by both program year and calendar year, does have a significant impact on one’s hard drug use—that more time in the program tends to decrease one’s likelihood of appearing in higher categories of drug use, as measured by the time last used. Due to the violation of the assumption, I utilized predicted probabilities for each outcome for both of these models as well. The results for Model 3 (Figure G (1-4)) showed a consistent increase in the likelihood of a 1 outcome (more than one year ago) over years in the program; an increase until approximately year 6 for a 2 outcome (within the last year), followed by a slight decline in the probability; and a consistent decrease in the probabilities of a 3 or 4 outcome (within the last month or within the last week). These show consistent decreases in the probability of higher levels of use over time in the program, with increases in those who had not used for some time.

---

33 prgen, with rest held at median.
It is also helpful to examine predicted probabilities as percentages by year (Table F). At intake (year 0), residents had a 31.3% probability of having used within the last week, and a 16.4% chance of having used over one year ago. The two highest use outcomes (within the last month and within the last week) show a steady decrease in probabilities, year to year, whereas those having used more than one year ago grows significantly over time. (Within the last month stays within a 5% range.) This demonstrates far higher probabilities of individuals decreasing than increasing as years spent in the program increase.
Table F: Hard Drug Use, by Time Since Last Use, for Program Year: Predicted Probabilities

<table>
<thead>
<tr>
<th>Year in program</th>
<th>More than one year ago</th>
<th>Within the last year</th>
<th>Within the last month</th>
<th>Within the last week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake</td>
<td>16.4%</td>
<td>33.1%</td>
<td>19.2%</td>
<td>31.3%</td>
</tr>
<tr>
<td>Year 1</td>
<td>19.0%</td>
<td>35.0%</td>
<td>18.4%</td>
<td>27.6%</td>
</tr>
<tr>
<td>Year 2</td>
<td>22.0%</td>
<td>36.5%</td>
<td>17.4%</td>
<td>24.2%</td>
</tr>
<tr>
<td>Year 3</td>
<td>25.2%</td>
<td>37.5%</td>
<td>16.3%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Year 4</td>
<td>28.7%</td>
<td>38.1%</td>
<td>15.0%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Year 5</td>
<td>32.5%</td>
<td>38.1%</td>
<td>13.7%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Year 6</td>
<td>36.6%</td>
<td>37.6%</td>
<td>12.3%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Year 7</td>
<td>40.8%</td>
<td>36.7%</td>
<td>11.0%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Year 8</td>
<td>45.2%</td>
<td>35.3%</td>
<td>9.7%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Year 9</td>
<td>49.7%</td>
<td>33.5%</td>
<td>8.6%</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

I repeated the same process for calendar year (Figure H (1-4)). The probabilities for the first two outcomes increased consistently year to year, while the third began to decline and the fourth showed a consistent decline across all years. Utilizing percentages by year (Table G), a dramatic increase is observed in those who had not used for over one year, with an accompanying dramatic decrease of those who had used in the last week. Use within the last year exhibited a slight rise, correlating with the slight decrease of those using within the last month.34

34 Referring to the original descriptive statistics of the population (Table D), 25.9% of individuals had used a hard substance in the 30 days previous to their last reporting (taking place in either 2012 or 2013, depending upon what time of year their annual assessment was taking place). This is congruent with the predicted probabilities showcased in Table G, where 35.6% of individuals in 2012 were predicted to have an outcome of 3 or 4 (last month or last week use) and 28.3% were predicted to have these outcomes in 2013. In this way, the reality actually displays a better outcome than the predictions.
Table G: Hard Drug Use, by Time Since Last Use, for Calendar Year: Predicted Probabilities

<table>
<thead>
<tr>
<th>Calendar year</th>
<th>More than one year ago</th>
<th>Within the last year</th>
<th>Within the last month</th>
<th>Within the last week</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>21.1%</td>
<td>35.3%</td>
<td>17.8%</td>
<td>25.8%</td>
</tr>
<tr>
<td>2012</td>
<td>27.2%</td>
<td>37.2%</td>
<td>15.7%</td>
<td>19.9%</td>
</tr>
<tr>
<td>2013</td>
<td>34.3%</td>
<td>37.3%</td>
<td>13.2%</td>
<td>15.1%</td>
</tr>
</tbody>
</table>

Education and lack of social support were significant in both time since last use models, with higher levels of education decreasing the chances of being in higher drug use categories and lack of social support increasing those chances, consistent with theory and the qualitative findings. Employment was also significant in the calendar year model (Model 4). Although that relationship may be two-way in nature (those with lower drug use may stand a better chance of gaining employment), I also theorize that those granted employment may benefit from the purpose and structure of that circumstance.
To summarize these results, the frequency of use model failed to show truly significant effects of any magnitude; however, neither did it display any negative effects. The time since last use model showed several highly significant effects that upheld my original hypotheses and showed steady decreases in levels of drug use over time. With this in mind, I return again to the question of reliability versus validity of the two measures. Further research with clearer recording mechanisms that measured more closely the necessary information and does so consistently across a wide range of years is needed; however, cautious optimism is not inappropriate at this stage, with the more reliable of the two measures showing significant impacts of time spent in the program. The previous trend analysis also upholds this finding under both variables, albeit without statistical controls. Time spent in the program theoretically has a statistically significant effect on decreasing levels of drug use and/or allows individuals to sustain newly-attained sobriety over time.\(^{35}\)

**Mental health and functioning: trend analysis**

I next examined trends in the Global Assessment of Functioning, via tracking both mean and average scores over time, as well as percent of individuals improving, staying the same, or declining. For context, scores of approximately 65-70 and above would be considered healthy and in little to no need of intervention—scores of 30-40 and below would be considered in need of inpatient treatment.

First, I examined the program year trend.\(^{36}\) The result was a modest but solid positive trend in score over time, with little variation—although the year 3 dip seen previously does reoccur when examining the averages. A five to ten point increase is seen across this eight-year span—representative of moving into an entirely new level on the GAF scale (more precisely, from serious to moderate functioning issues).

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\(^{35}\) While it is interesting that neither private residence or transitional housing has a significant impact, that does not necessarily mean no impact exists. This variable also had some coding discrepancies that may affect the results; for example, the most frequent occurrence of homelessness should be at intake. However, if an assessment was completed after finding the client suitable housing, they would be listed as housed, even if they had been homeless only days or weeks before.

\(^{36}\) Once again, year 9 was dropped for insufficient data, defined as less than 10 observations.
Next, as I did with substance abuse, I examined the percentage of individuals who improved or remained stable relative to the year before (Figure J).\textsuperscript{37} (Interpolated values were once again used for missing data.) While much greater variation existed, the trend was once again positive overall, although it is notable that the year one and year eight (the beginning and end points) are approximately the same at 70%. Decreases are experienced in earlier years, with rises thereafter, but overall, a variable but improving trajectory. (Once again, this variation is something that will be discussed at further length in context with the qualitative data.)

\textsuperscript{37} Unlike substance abuse, stable scores were included with these numbers alongside the improving scores.
Next, I looked at calendar year. Again, 2009 had an impact—a severe dip that year of approximately 5 to 10 points, relative to the year before, with a steady increase thereafter.
While the following graph does not visualize the 2009 dip in the same way (Figure L)—again utilizing the rate of change model—we find that only approximately 25% of individuals increased or had the same GAF score as the year before. However, more and more individuals improved from year to year following, nearing 70% by 2013—a substantial and consistent rate of improvement, with little of the variation seen previously.

**Figure L: Stable or Increasing GAF Scores, by Calendar Year**

While these graphs provide a helpful visual representation of trends over time and offer insight into the rates of change for the population, the lack of controls is problematic. I again turned to panel analysis to retest these results. Four models were created: two including hard drug use as a variable, and two excluding it; two utilizing program years as a measure of time, and two utilizing calendar years. The rest of the variables remained the same as the substance abuse models, except for the removal of employment: one of the Global Assessment of Functioning factors is occupational functioning, and thus there would likely be non-causal correlation. Chronic illness was added as an important control variable as well.

*Mental health and functioning: regression models*

While these graphs provide a helpful visual representation of trends over time and offer insight into the rates of change for the population, the lack of controls is problematic. I again turned to panel analysis to retest these results. Four models were created: two including hard drug use as a variable, and two excluding it; two utilizing program years as a measure of time, and two utilizing calendar years. The rest of the variables remained the same as the substance abuse models, except for the removal of employment: one of the Global Assessment of Functioning factors is occupational functioning, and thus there would likely be non-causal correlation. Chronic illness was added as an important control variable as well.
Tests for serial correlation yielded significant results for each of these models, suggesting that autocorrelation was, indeed, present—not uncommon in time-series data. The implication of this is that the standard errors may be underestimated, which would inflate significance. Thus, I decided to transform the dependent variable into log form. This removed the autocorrelation for the models with the hard drug variable included, but it remained for the others, which we must then treat with greater caution when interpreting significance.

Omitted variable bias is certainly a possibility once again, although I do not have the same

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38 Ordinary least squares for panel data was used to estimate the model (xtreg). Variance inflation factors (vif) were used to test for multicollinearity; no significant multicollinearity existed. Robust standard errors were used by default to correct for any heteroskedasticity present (vce(robust)).
major caveats of missing variables that were present in the substance abuse models (namely, motivation and ability to change and engagement with treatment). Hard drug use was included in two of the models as an important factor, but excluded in two others as its inclusion limited the sample to only those who had used hard drugs, and subsequently excluded a large portion of the population for whom mental health or alcohol abuse were the major factors at work. There is also the possibility, as mentioned earlier, of a two-way interaction between mental health and drug use. Consistent with the previous models, I chose to utilize random effects over fixed effects, in recognition of the desire to include time-invariant control variables such as gender and race and the fact that some of the key independent variables, such as housing type, had very low variance over time.

The models as a whole were each significant, as were several of the results. Program year was significant in the model excluding hard drug use, but lost that significance under the log-transformed version of Model 1. Calendar year was only significant in the model excluding hard drug use. Each year represented slight increases in the GAF score, although none more than three percent for every one-year increase. Private residence was highly significant in all four models, relative to living in an emergency shelter or in homelessness, representing anywhere from a 7.84 to 12.38% increase. Transitional housing was only significant in the models that included drug use as a factor, but showed increases of 14.84 to 15.12% for moving from homelessness/emergency shelter into transitional housing or a hotel. Drug use was highly significant in the first two models—moving up one level in the drug use scale decreased the functioning score by nearly three percent; not a large shift, but not unexpected. Lack of social support decreased the GAF in the drug-excluded models significantly by over 11%; the results were very near significance in the drug-included models, representing losses of 4.64 to 4.75%. Finally, chronic illness was significant across all four models, and decreased the GAF from 10.55% to 16.1%—the greatest potential impact of any of these independent variables, and yet another found to be highly important in the qualitative findings. Each of these two sets of models has theoretical reasons for its reliability—the impact of drug use on functionality versus the loss of the larger sample and the potential two-way relationship. It was with this in mind that all four models were included. However, given the limitation that the hard drug variable imposes, the third and fourth models may provide better insight into the population as a whole, even with the caveat of a small degree of serial correlation present.
In summary, time in the program and stable residence, relative to homelessness, were significant in many of the models and displayed an increasing effect on mental health and functioning, upholding the original hypothesis. Similarly positive results were also seen for substance abuse reduction. But there are areas outside of this analysis that also deserve consideration—especially in light of those who are not improving in terms of either substance abuse, mental health, or both. It was with this in mind that I undertook the qualitative component of this research.

**Describing common themes of improvement**

Twenty-six cases (ten “improved,” eight “lack of improvement,” and eight “variable”) were analyzed qualitatively to examine what factors may have led to improvement or lack thereof in individual cases, as well as what changes, if any, occurred in less-quantifiable areas such as self-care, life skills, personal goal achievement, and relationships.

The strongest common elements to success (in non-hierarchical order) are:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Definition and/or example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social support</td>
<td>Clean, sober, available support from others. (Also seen as an important variable in the regression analyses.)</td>
</tr>
<tr>
<td>Change in environment</td>
<td>Removing one’s self from past triggers, old friends with which one used to use; severing ties with unhealthy places and communities.</td>
</tr>
<tr>
<td>Removal of immediate stressors</td>
<td>Correcting lack of income, homelessness, and other daily circumstantial stressors; seen as important for both sparking initial change and for maintaining it throughout future challenges and transitions.</td>
</tr>
<tr>
<td>Strong personal motivation</td>
<td>The presence of sound internal motivators (desire to remove stressors, such as finding a job for income or improving physical health) and external motivators (supporting a family or regaining past relationships), in balance.</td>
</tr>
<tr>
<td>Belief in one’s own ability to change</td>
<td>Beyond motivation, a strong belief in one’s own personal ability to enact change.</td>
</tr>
<tr>
<td>Insight and self-awareness</td>
<td>Improved insight into cause-and-effect, consequences, and the pros and cons of one’s lifestyle, as well as self-awareness for past behavioral patterns and what one’s motivators may have been.</td>
</tr>
<tr>
<td>Structure</td>
<td>The presence of external structured activity, such as school, volunteering, or employment, which serve to combat the triggers of both boredom and loneliness. (It was this that provided the impetus for including employment in the first set of regression analyses.)</td>
</tr>
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</table>

These themes presented very strongly in cases with improvement. The themes from unimproved
cases were often the antithesis of those described in the improved cases, the most prevalent being:

| Table J: Common Factors Underlying Lack of Improvement and/or Decline<sup>39</sup> |
|---------------------------------|-----------------------------------------------|
| **Theme**                      | **Definition and/or example**                      |
| Boredom and loneliness         | Need for ability-appropriate activities and structure, such as jobs or going to group meetings. Simple self-directed recreation did not appear to be enough to fulfill this need—the missing element being structure and a sense of purpose to one’s day. |
| Continuing ties with past communities | Continued interaction with unhealthy and/or addicted friends and acquaintances. |
| The inability to imagine and/or the fear of a new life | Primarily for those with long-term substance abuse (often going back into childhood, with similarly-addicted family members): for some, this life is literally all that they know, which comes with a noted absence of life skills, coping mechanisms, et al.; no internal resources to fall back upon to cope with change. |
| Reinforcing cycles of mental health symptoms and substance abuse | While many individuals had patterns of utilizing substances for self-medication, those cases where severe mental health issues were also present were more likely to fall into the unimproved category; in other words, self-medicating for circumstances was easier to break than self-medicating for mental health symptoms, which were far more likely to become worse under the influence of substances and fuel an unhealthy cyclical pattern, which also often involved loss of cognitive abilities and the development of new problems to address. |
| Severe physical health complications | While many cases across the spectrum involved physical health issues, more severe and/or chronic issues seemed a major barrier to improvement in other parts of life. (This was also strongly observed in the regression analyses.) |
| Lack of engagement | The need for willingness to engage with services at some level, even if small. |
| Lack of self-awareness | The inability of individuals to connect behaviors with outcomes, understand how their problems (drug use, medication non-compliance, etc.) were affecting other aspects of their lives, or why they engaged in unhealthy behaviors. |

Knowledge of what factors contribute to success beyond or as part of stable housing is crucial for service providers and policymakers alike, especially as they determine how to best support individual residents without creating the type of contingencies seen in other programs. That knowledge is also crucial for researchers, as we try to accurately assess the effects of programs

<sup>39</sup> It was notable that a greater than average number of these cases had years missing where no assessments were taken. The pattern of missing years may be biased toward individuals engaging less with case managers or who have more difficulty keeping appointments or sustaining long interactions—a potentially illuminating factor to consider in all of the analysis.
and understand what other factors may be enhancing or obscuring its true impact—for example, the importance of including factors such as lack of social support or chronic illness into the regression models analyzed earlier.

It is also important to note that no single theme defined every improved or unimproved case, reminding us that these are unique individuals that require unique approaches. But identifying key factors that may be missing in individuals’ lives and attempting to build up those resources may provide strong mechanisms for change not otherwise seen, especially in the more external factors with which caseworkers can engage, such as structure or removal of immediate stressors. The internal factors may be more difficult for caseworkers to engage with, but play a particularly crucial role, as shall be discussed.

The variable cases, while in essence retaining elements of both the improved and unimproved cases, added another three factors for consideration.

<table>
<thead>
<tr>
<th>Table K: Common Factors Underlying Highly Variable Cases</th>
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<tbody>
<tr>
<td><strong>Theme</strong></td>
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<tr>
<td>One-time traumatic events</td>
</tr>
<tr>
<td>The need for structure as absolutely crucial</td>
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<tr>
<td>Physical health</td>
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</table>

Two of these have already been seen, but appeared with particular strength in this population. A new theme was also introduced, reminiscent of Patterson’s (2013) argument regarding the volatility of circumstance in the lives of those with few resources. While not unilaterally the cause of setbacks within the highly-variable cases, one-time disastrous events were major factors in sudden falls in mental health or rises in substance abuse for several, but were also more likely to be recovered from at some point. Street life, and the years immediately beyond it, was often full of loss—of significant others, friends and acquaintances, and family members with similar problems.
and issues, contributing to sudden shock and grief. But long-term resiliency was also seen—in fact, in some cases the event provided the final impetus for recovery. For example, while the loss of one client’s partner provoked a severe relapse, it also led to their cutting ties with the using community and finally pursuing sobriety; for another, the time spent recovering from a severe injury provided the necessary time for self-reflection that led to considerable change. Considering the highly variable trends we observed over clients’ time in the program in substance abuse reduction and mental health improvement earlier in this paper, this theme is particularly important to consider. And perhaps as an unspoken counterpoint to these disruptions, structure was mentioned time and again as a crucial element on the road to recovery—be it something small, such as work, or something larger, such as inpatient treatment. Caring for others was also significant in this way, as a provider of purpose, which caseworkers described as another important element behind improvement for several clients. For example, caring for children or pets can be construed as not only an excellent motivator for sobriety, but also to give one structure and purpose in one’s day. The presence of purpose for a number of these cases was life-changing.

Physical issues also played a larger role in these cases than the others, echoing the need to consider the “whole person” argument as advanced by Patterson in her arguments regarding trajectory. Physical health was another complicating factor in giving up addictions (self-medicating), developing self-care and life skills (literal inability to do so, in some cases) and even relationships and mental health (for example, keeping one housebound and encouraging depression), and yet physical health is not often spoken of in public discourse, relative to substance abuse and mental health. This may be related to the fact that physical health problems do not often bear the same stigma as mental illness or addiction, and “fault” is less easy to ascribe. To refer back to the policy history of Housing First, chronic homelessness was, in large part, defined by its “pathologies,” which may have made it easier for national discourse to avoid more difficult discussions about the structural causes of homelessness and the realities of thousands of individuals living without their basic needs being met. However, physical health does play a serious role in the lives of the chronically homeless.

Several of the elements of improvement or lack thereof are internal or personally-driven, such as self-awareness, personal insight, and belief in one’s ability to change. These are theoretically foundational traits that many take for granted, but are not unilaterally present in this population. Coupling these “personal resource” types of elements with the fear of or inability to
imagine a new life, another important element listed above, we can observe an important process occurring within this population—what I have termed the “institutionalization effect” of long-term homelessness. I utilize this term in reference to discussions on the institutionalization of prisoners in the penal system. The idea is that a certain environment can strip a person of his or her life skills and ability to thrive in an alternative setting as they adapt over the long term to a more restrictive environment; i.e., prison. A similar effect was noted in many of the cases studied. Many expressed fear at living a life other than what they had known, particularly those with substance abuse issues. But the issue goes beyond that. Chronic homelessness—arguably a sustained trauma—itself seems to yield its own significant effect on one’s ability to survive and then thrive within housing or community. The personal resources and life skills necessary for a solitary life on the streets are very different than what is required to live with neighbors, pay bills, or engage with a caseworker. The simple acts of cleaning apartments or keeping appointments that the stably housed conduct daily were observed to be a struggle for many within this population. Likewise, when basic physical survival is paramount, there is little space for further emotional development or problem-solving, and this carries forward into the early days of housing. Ultimately, this contributes to a cycle of instability. While participants in this Housing First model did not lose housing over the simple act of taking drugs or drinking to excess, private landlords could choose to evict tenants based on other types of actions, such as severe property damage or inability to get along with one’s neighbors. Long-term homelessness may thus, in and of itself, create a cycle where people even find it difficult to maintain even housing offered with few contingencies and end up homeless once again. With this in mind, there may be a greater need than prompting changes in the more measurable outcomes I have pursued in this paper. There may, in fact, be pre-change processes that must first occur before higher-level changes can be seen (reminiscent once again of Maslow’s hierarchy), and it may be necessary that attention must be diverted to these first before “higher-level” outcomes.

In that vein, beyond the elements of success listed above, caseworkers emphasized how housing had provided a stable base to work on one’s issues, find relief from stressors, and summarily avoid the need for self-medication. To return to the underlying theory of the model, housing without requirement may serve as a safe space for individuals to come to their own

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40 For a more colloquial example, consider the character of Brooks in *The Shawshank Redemption*, who attempts to stay in prison rather than being released and does not understand or know how to cope with the outside world after a lifetime behind bars.
realizations, which may be construed to have a more powerful impetus for later change. This speaks to not necessarily a model of strict linear trajectory, but of more complex, holistic self-improvement over time that addresses the needs of the entire person; the entire pyramid, if you will, to utilize Maslow once again. What Housing First may best offer is not necessarily an instant remedy, but a safe place to work things out for one’s self. Even among the few individuals who strongly desired recovery from the moment they entered the program, it was still construed as a process, and not instantaneous—affirming the value of having a safe, non-pressured environment.

Something else seen in a number of these cases is that, despite their chronic nature, some individuals simply seemed to require a little extra outside help—someone to believe in them and to help them navigate when they have lost all else. The value of the supportive services that exist alongside that housing thus cannot be underestimated, but may often leave the conversation when comparing the program with more traditional models, where service utilization is required. Housing First residents are not alone, however. Tsemberis and Eisenberg, in discussing some of the most common frustrations for the chronically homeless population, note that many mentally ill and otherwise-in-need individuals may actively reject services because they “distrust and are frustrated with the fragmented mental health, drug treatment, and medical care systems, which are unable to coordinate services to meet their needs, especially the need for housing” (2000:488). Navigating these complex services on one’s own can be daunting for anyone, let alone those without finances, a permanent address, or perhaps even identification. The centralized coordination of care available in this model is thus a strength.

An interesting question arose from a very small number of these cases—when we discuss recovery, is it more important that the harmful behaviors cease, or that attitudes and ability to function in life are changed? (This is a question that also goes to the very core of the Housing First/Treatment First distinction, although not often addressed.) If an individual gives up their addiction of choice due to some external motivator—whether that is to find a job, in the case of one of the residents, or to retain housing, as in Treatment First—and still lacks self-awareness as to the harm it does to themself and others, is that truly recovery? This is a question worthy of further exploration not just from researchers, but also among service designers and providers as they

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41 Padgett (2007), in her exploration of the meaning of home for Housing First residents, discovered something similar—that residents saw their homes as havens from stress, which promoted greater self-reflection and an increased eagerness to determine their next step in life. This space is crucial for such determinations.
weigh the merits of different models and approaches and contemplate the outcomes desired.

Harm reduction was the original core purpose of the Housing First model, and has not been addressed at length in the results up to this point. Beyond questions of self-improvement, some of these cases involved high levels of suffering or impairment, and clearly laid out the role of harm reduction that stable housing plays, previous to being a place for improved self-awareness or personal improvement. For those who have yet to arrive at a true desire for change, or who are in early contemplative phases but are still raising the necessary internal personal resources, this approach can help protect individuals from the worst of the possible outcomes in terms of health and well-being that may otherwise befall them. For many, survival itself may be paramount over developing self-awareness and other necessary personal resources while homeless, and this ingrained pattern may continue well past the provision of housing. There were a small handful of cases in this analysis that mentioned close brushes with mortality or other seriously harmful circumstances, where the role of the support team instantly turns to harm mitigation, even while working with the client in the hopes that sufficient insight and self-awareness will develop to address the issues at hand. Interestingly, a small number of these cases had done well in more structured treatment environments, such as mandatory inpatient treatment or even prison treatment programs. The handful of cases where caseworkers noted that such approaches had greater success tended to be cases where individuals were seemingly unable, due to the severity of their mental health and substance abuse interactions, chronic medical conditions, and/or length of time homelessness, to form their own life skills and had no personal coping resources. A couple clients had even voluntarily chosen this approach for themselves. This reinforces the idea that unique approaches may be necessary for unique individuals, and that Housing First may serve as but one tool in a larger toolbox of interventions for the homeless.

Daily quality of life

The question of quality of life has been partially addressed in the preceding section, but as the final research question, deserves a closer investigation. What types of change, beyond substance abuse and mental health, occurred in this population (if any)? How prevalent were these changes? And how do they connect to the themes just described? This was analyzed for all three groups within the subsample. I looked specifically for changes in relationships, self-care and life skills, and personal goal achievement, but allowed the common themes gathered earlier to inform my search as well. As one may expect, such improvements were higher in the “improved” sub-
population, but even those who had achieved improvement in substance abuse and mental health were seen to have other changes they needed to make—for example, learning to move past relapse triggers or accept difficult emotions were ongoing journeys. Many of these cases did, however, improve in a variety of areas, and ultimately displayed higher functionality, greater independence, higher self-awareness, improved relationships, and a better ability to take care of one’s own needs over time. As specific examples, clients in this group joined work programs, reestablished relationships with estranged family members and sober friends, learned to work through difficult emotions and cope more successfully, overcame legal obstacles (such as obtaining identification), started taking part in recreational activities, began working out regularly, adopted pets, and successfully managed their own money. Each individual within this group showed some level of progress. For one client suffering from crippling anxiety, gathering the courage to join a work program was a major step early on. Over time, caseworkers recorded their slowly changing beliefs and each barrier that was overcome to eventually enter the job market once again. These occurred even while substance abuse continued, although their last caseworker expressed the hope that the client’s growing confidence and responsibilities would soon help decrease that as well. For another client, the steps may seem smaller—learning to better handle their emotions and obtaining insurance were the two main success points, among many other areas in need of improvement—but are no less significant.

But perhaps more interesting than the improvements of those already improving in other areas are those who were not. These trends also existed for those who did not improve in substance abuse or mental health. About one-third of the cases showed significant improvement in the studied areas. Improvements were seen in such areas as achieving small personal goals, remembering to attend appointments, managing one’s own medications, improving self-care, and increased hope for the future. One individual, even while using substances, had managed to reestablish family contact and achieve all of their personal legal goals, as well as start managing their own medications and appointments. Another one-third showed smaller, yet still promising, glimmers of future change—for example, while one individual had not showed improvements in any of these areas for some time, they had agreed to engage more with counselors and group sessions in the future and had begun casually speaking with a close relative once again. These types of shifts do not register in either the quantitative results or the original areas of qualitative inquiry, but emerged throughout many of the cases. They comprise what I call “pre-change” processes,
alongside the external behavioral changes and internal thought process changes occurring. Referring once again to the institutionalization effect described earlier, these types of changes are also highly important when considering how the process of recovery may come about and adopting a more holistic approach.

Improvements were also seen for several of the variable cases, such as improved relationships and physical health, along with the pre-change and internal change processes of heightened awareness, coping skills, and engagement with recovery. The examples were very similar to the other two groups, although some of the cases demonstrated more extremity in their circumstances often attributable to sudden devastating events (deaths, illnesses, and injuries being the most common) or, in the case of a few, severe relapses. Some of the positive changes witnessed throughout these cases were very significant, however; “against all odds” in a few of the more extreme cases. This speaks not only to the value of a safe place, per se, but also the resiliency of this population. As mentioned earlier, sometimes a little well-timed help may be what is most necessary, in collaboration with individuals with extreme strength of spirit. However, the theme was reiterated once again that this is not a linear process to be rushed—the leeway to allow people to move slowly and on their own terms is a vital component of this process.

It is notable that, out of all these cases, very few declined or failed to make positive changes in some fashion. The majority experienced positive changes in at least one of the aforementioned areas. It must also be noted that I created a type of “qualitative collinearity” in the cases I studied, given that one of my methods of determining which cases to examine relied upon changes in the Global Assessment of Functioning, the proxy for mental health. The GAF also includes social and life skills functioning as elements within in its assessment, alongside the psychological, and thus individuals are more or less likely to be improved in these areas as that rises and falls. However, it is notable that, even so, individuals did diverge in these areas. (This is one of the reasons that the Global Assessment has been replaced in the DSM-V—the ability of these factors to vary apart from one another, as witnessed in this study.)

Overarching themes

I have already introduced the idea of the “institutionalizing effect” of homelessness. Given this effect, stable housing may provide a safe place to slowly develop the personal resources necessary to move forward. As further evidence, of the three types of cases studied in this analysis, those who had the highest improvements were those who tended to start at a higher threshold of
self-care and life skills, among other factors. While no causal chain can be established, it is not unreasonable to assume that those skills also contribute to a stable foundation that allows for the easier addressing of other issues. If individuals can develop these skills, even without improvements elsewhere, that is not only a success, but may prove an important stepping stone for the future, as illustrated by many caseworkers’ written hopes in the files.

In the previous trend analyses, we saw some variation in both substance abuse and mental health, year to year. In fact, it often dipped in the first few years before improving. While the percentages of those improving were generally growing overall, why did it take a few years, and what was happening with those who did not register as improving? Qualitative analysis can particularly aid in filling this gap. It is unrealistic to expect that any one program will ever reach a 100% success rate. However, what we may theorize is that preparation for change and internal change are also important elements in the recovery process. Movement toward engagement with others willing to help after a life of solitude, struggle, and self-reliance is a change in its own right. The development of personal coping strategies and other mental resources, improving self-awareness, and growing belief in one’s own ability to change are also important changes in their own right, but not ones that can be measured by the types of outcomes presented in the quantitative data. They are laying vital foundations for those types of improvement, but may take substantial amounts of time, especially in light of the “institutionalizing effect” described above.

Earlier in this work, I discussed the failings of only analyzing cost outcomes without sufficient regard for personal life outcomes. Here, I mention the problems of examining even specific types of life outcomes without sufficient context. We must ensure that our research truly captures the processes occurring within programs, and affirm the spectrum of changes that may be occurring. Research into the human impact of Housing First has grown exponentially in the last few years. I would next suggest further inquiry into the specific quality-of-life processes over time of this population alongside the more conventional outcomes, to obtain a better understanding of the full effects of stable environment and of the injurious impact of homelessness.

Exploring what constitutes success is a vital topic for discussion, and is central to the conclusions of this project. I have deliberately avoided using the word “failure” when discussing unimproved cases in this work. What we have seen from the unimproved cases is that one form of success may not always involve immediate changes in behavior, but may be the slow process of changed mindsets and increasing self-awareness. This can also include agreement to take small
steps toward larger changes later on, such as simply going to group sessions or engaging with case managers more frequently. The value of process was seen in the improved cases as well, but is perhaps all the more valuable here as an investigation into the true nature of change within this program. In essence, the preparatory stages cannot be ignored. Changed mindsets about their addictions and other issues is a key factor in improvement, and that increased self-awareness, a major factor underlying the improved cases, should in and of itself be considered an important improvement. Likewise, belief in one’s ability to change is another crucial factor, which was another piece of “groundwork” being laid over time in some of these currently “unimproved” cases.

There are also areas for further study that emerged through this analysis, such as broader system failures to address the needs of certain populations. For example, those emerging from prison or aging out of foster care represented a significant portion of the unimproved cases with long-term problems, as did those with severe health issues who had been unable to procure insurance or basic care, subsequently leading to severe problems in other areas of life as those issues grew to interfere with basic life skills and functioning.

It must be noted once again that there is no one thematic element or formula that was constant across all cases. Unimproved cases could possess elements of success; improved cases may have some elements predisposed to decline. This disparity reflects the idea that members of the same general population are still unique entities and that, while this paper studies the Housing First model, it is not necessarily an indictment on differing models—some individuals may thrive or stagnate in different situations, which should be taken into account when designing interventions. What has emerged here are certain trends for improvement or lack of improvement that are important for service providers and researchers to consider and which may prove useful in supporting and working with clients in the future. We have also seen the inherent value of the program for providing a safe place for change and pre-change processes that may be lacking in other programs. This safe place can also serve as a “launching pad” for clients who need more intensive environments, as some mentioned desiring, but who choose them more willingly after having been given the space to self-reflect and decide.

**Discussion, policy recommendations, and further research**

This study was partly inspired by a sincere curiosity into how the removal of treatment requirements would affect long-term outcomes, and partly by the unlikely political ascent of Housing First from the early 2000s to the present with the subsequent dearth of life-outcomes
literature at the time. Even with laudable social justice aims, continuing a policy without full investigation into its human impact, apart from the economic, is not advisable. This study thus did not set out to prove again the benefits to municipalities (which have been solidly established elsewhere). What it sought to explore was the benefit to human participants. If there is evidence that this approach provides significantly positive outcomes for participants as well, there are no reasons to delay further national diffusion as a policy practice.

While these conclusions can only be drawn about the specific population studied, there is no reason that this population differs significantly from other targeted populations across the United States. The findings are largely positive—that Housing First does indeed provide an environment conducive to personal change, amplified when certain criteria are met. Positive results were found in both rates of hard drug use over time as well as mental health functioning scores under multiple methods, with both time in the program (reflecting both housing stability and exposure to support teams) and stable housing. Even the more variable of these outcomes still demonstrate positive trends that show promise for this model’s ability to fulfill its aims and provide a secure foundation for real change. Positive quality of life changes were also seen in the majority of qualitative cases analyzed in terms of relationships, self-care, life skills, employment, coping skills, and many other areas of value. The results of this study thus supported the initial hypotheses, granting further justification to this approach and to developing the environmental factors that support health and recovery within this context. Knowledge of these elements can be invaluable not only to researchers and policymakers, but also by those designing and implementing services, to maximize the opportunities for success for each client while recognizing individuals’ unique situations and contexts.

The observation of “pre-change” processes in the qualitative sub-sample, such as developing the personal resources necessary to live in community and to survive in an entirely new context, may help explain early dips in the recovery trajectories, as well as variation throughout.

42 Individuals are admitted to this program on a referral basis from other community partners, such as walk-in clinics, shelters, prison social workers, case managers from other homelessness programs, and so forth. The only criteria for admission is meeting the definition of chronic homelessness and having co-occurring mental health and addiction issues; thus, this population is likely to be completely typical of the target population of any Housing First model, and is unlikely to possess any selection criteria that would predispose the population to a greater success rate than any other location (for example, only accepting cases where individuals expressed a motivation to change, or whose addiction problems appeared less severe).

43 With the exception of one set of hard drug use regression models and one of the four Global Assessment models, which showed no significant change—also an important finding, relative to the enabling hypothesis.
These unmeasured processes are vital in considering the effects of this program, as well as increasing our understanding of how recovery and improvement may manifest itself for this specific population. This is particularly true given that these types of changes are very unlikely to be observed in program environments with little patience for relapse or lack of engagement with treatment. These changes constitute successes in their own right, overcoming the traumatic effects of long-term homelessness and encompassing serious personal growth, as well as laying the foundation for the other types of changes I and many others have sought to measure. In short, the results point toward our ability to uphold Housing First as another “tool” that can be utilized to address homelessness that is not only economical for cities, but beneficial for residents and socially just. Its adoption can be rightly encouraged under these criteria.

There are more than numbers and data at stake in any decision about policy, and the social justice implications of the unmet need for shelter, separate from a sense of outcome, should be addressed. Per the United Nations Declaration on Human Rights, a home is a human right, as is the opportunity to work to meet one’s needs and have access to adequate resources, and this should not be obscured in any conversation. To return to the discussion on evidence-based policy, “research informs but does not answer value questions” (Stanhope and Dunn 2011:281). Human rights and social justice must also play a role in our public policy, and serious consideration should be given by policymakers to the more structural causes of poverty and homelessness within our society. However, seeking to measure client outcomes is not out of line with human rights considerations. If an intervention led to a decline in quality of life, it would be rightly questioned. What I propose is caution in deciding upon the outcomes that will be associated with success or failure. Even cost-savings is not out of place in policy conversations, and solutions must certainly be sustainable, but there are other considerations at stake. Likewise, improvements in, say, substance abuse are certainly a mark of individual success, but lack of improvement in one numerical outcome may not mean that the individual is not benefiting in any other way from the intervention, and we should be cautious in ascribing terms like “failure.” We must seek to balance the desired outcomes

44 I emphasize the term “tool” because this is not a comparative study. In fact, some discoveries in this study suggest that different structures may be more helpful to some individuals, and that is an important factor to consider. Unique beings require unique interventions based upon their own needs, not upon statistical models. This also resonates with Milby et al’s (2005) study referenced earlier, which described the concurrent gains in three very different models. There may not be one “best” solution, per se, but the findings presented in this paper highly support giving clients sufficient space to adapt and change on their own terms, which is a particular strength of Housing First.
in ways that respect all levels of change, including those not as easily captured.

In that vein, more mixed-methods approaches in agency and funding reporting, academic research, and policy investigations could be invaluable toward this end. Each provides substantial benefits to our understanding. Quantitative analysis offers a standardized examination that can be easily compared between individuals and programs and gives a sense of real, measured change over time. It also holds less room for individual bias or interpretation (although, as discussed earlier and in literature about methodology specifically, decisions on which outcomes to measure and how we do so are subjective and value judgments in and of themselves, and thus subject to bias). The qualitative approach helps us see what we may be missing between the numbers, giving context and understanding where other outcomes fail to adequately describe the whole story. This project has shown the need for both. In fact, the most unique asset of the Housing First model, relative to others, appears to be its ability to provide residents the space to self-reflect, develop personal resources, prepare better coping mechanisms, foster belief in their own abilities, learn new survival skills, and experience the environment and support necessary to begin the process of change, all without penalty in the interim. It is these skills that can lead to the types of future change I initially set out to measure, as seen by their commonality among those that did improve. This process does not register on the more conventional outcome scales, nor will it be observed in programs that require compliance with strict regulations from the beginning, but it is no less vital, and failure to incorporate this idea may result in understating improvements and failure to truly understand the effects of this program and the lives of these individuals. Recovery processes are not always a straight line of trajectory, as other scholars have also pointed out, and we must seek to understand the full scope of the recovery process, including the smaller meaningful steps required to move toward successful outcomes. These ideas are worthy of serious consideration for service providers, policymakers, and researchers, as we ensure that our investigations capture as fully as possible the full range of experiences of those being studied. Toward that end, future research would also do well to include more resident perspectives—an area still lacking in existing literature.

Caveats and limitations

A serious problem endemic to any research of this nature is the unreliability of self-reporting, as well as observational biases recorded in the material. These assessments were created from information volunteered by the subjects to a caseworker. As mentioned in similar studies, clients in Housing First and other harm reduction programs have far less reason to under-report
than those in Treatment First settings, but the possibility still exists. However, caseworkers also noted several cases where, due to severe mental health issues or dementia, the resident appeared to have poor recall, and other cases where individuals appeared to avoid questions regarding substance abuse. These notations were for a small minority of residents, but are still a consideration. Another issue is differences or bias in caseworker reporting. As existing data was utilized across a range of clients over many years, it is only natural that the people conducting the assessments varied as well, and where measures were graded by caseworkers, this may account for some variation. It may also affect the narrative data—while the qualitative inquiry was the nearest I could come to hearing from the residents themselves, it was, in reality, the voice of the caseworker recording their conversations, and any differences in perception or bias among these intermediary voices could potentially change the results. However, given that I was seeking overarching themes, the likelihood of significant changes to the results in this area is minimal.

Observations are missing, both within records and for certain years in individual trajectories. While a strength of this study is the longevity of the data—up to five years for some cases; more than many comparable studies—there are gaps. The assessment forms, while consistent in substance, differed over the years as the forms were updated to current best practices. Individuals were also “tracked” into substance abuse or mental health categories, and subsequently given different assessments. While the majority of the questions overlapped, this accounts for some of the missing data for individual observations over the years. Additionally, some years’ records for select individuals, skewed toward earlier years, were archived and inaccessible. Finally, some years were skipped—during qualitative review, I noted that some of the more extreme mental health or substance abuse cases tended to have more missing years, although I cannot assert with any uncertainty that holds true for the entire population. However, it is possible that assessments were missed where it was more difficult for the client to keep appointments or to discuss matters with their case manager for any extended period. There is no reason to suspect any more systematic bias.

The missing data also restricted some levels of analysis. Given that observations are dropped from a regression model where any one variable is missing, intermittent missing variables can be problematic for analyzing a sufficient sample. This was found to be the case for two models I sought to analyze on chronic illness and risk of harm. (Employment was omitted due to severe underrepresentation for logistic regression—at last reporting, less than 5% of individuals were
employed.) This was also the reason that I added N/n to each regression model, in order to give a sense of what proportion of the population was represented.

The measures are imperfect. The substance abuse scales were created specifically for this project, with the best available information. I sought to be conservative in my estimates and to present as consistent and accurate a picture as possible. However, there is always a possibility that change has been over- or underreported. The Global Assessment of Functioning is a subjective measure, and has recently been removed from the new DSM-V, which was released during the course of this research. However, as a part of the DSM-III and DSM-IV and consistently utilized for many years, it was the best available measure of the time, and was also consistently taken every year. The areas I sought to investigate do not lend themselves easily to objective measurement, and I accept that limitation and have controlled for it as best I can.

Occasionally, initial assessments were not completed immediately at intake—an issue also seen in other studies (Nelson et al. 2007). While I still have confidence in those records, given the relative proximity to enrollment, intakes were sometimes completed as much as several months after housing was achieved, and thus, in my regression models, the impact of homelessness versus private housing may have been understated. However, considering that several of the results showed positive significant impact, and a more timely intake assessment is likely to enhance that relationship (and perhaps move insignificant positive results into significance), I do not have major concerns about this.

The program studied is one of several hundred utilizing the Housing First model, which, while unified by certain principles, has no oversight or governance to ensure model compliance. While I have no reason to suspect severe deviation from the tenets of Housing First laid out in this paper, it should be noted that every program has the ability to approach model compliance in different ways. Some pseudo-deviations were noted for this particular program, such as residents who specifically chose drug-free housing or entered inpatient treatment. (I say “pseudo” because the Housing First model is ultimately about the individuals’ choice; while not all Housing First projects will have alcohol- or drug-free housing, given their intent to provide a safe haven for all and not create sobriety-based contingencies, providing it is not beyond the scope of the model. An individual choosing this type of housing is exercising their own personal agency, or “consumer choice.”) However, it remains that this program still provides an important safety net emblematic of Housing First—that, even if these housing options were to be lost, the program stands ready to help
clients find another without judgment, and to provide services to those who request them (of which many clients never avail themselves).

Given the somewhat cross-sectional nature of the data—while longitudinal in scope, all data was gathered from individuals actively enrolled in the program as of September 2013—there is no comparative data for individuals who left the program to compare outcomes. Thus, there may be some bias in the population—for example, if the population remaining is that which possesses greater levels of need, in comparison to those who no longer needed services and were able to graduate, or if this population is most motivated to remain in housing or committed to change, in comparison to others who simply walked out, passed away, or left for some other reason. The answer is most likely mixed between those outcomes, but there is no other data I can utilize to answer these population-based questions. The clinical supervisor of the program estimated an approximately 60% graduation rate, with 40% leaving for other reasons, which would uphold that the outcomes for incoming residents are fairly evenly distributed. Given that new individuals were entering every year, there is hope then that this potential bias is at least partially controlled for. The proportion of “younger” residents is fairly high within this population sample, and if we can venture that these residents have the same proportional odds of staying, graduating, or leaving for other reasons as any other cohort, it is possible that any “staying” bias may be rather small, confined to a smaller subset of “older” residents who have not yet fallen into either “leaving” category. It is also a weakness that there was no control group. It was beyond the time and resources available (and of course, a randomized trial would raise many ethical flags), and thus these conclusions can truly only be made about this specific population’s change relative to itself.

Finally, as described by previous research and within this study, it is difficult to predict or define trajectories within the chronically homeless population (Patterson et al. 2013, Pearson et al. 2009). While the results I have presented do show trends and statistical impact of time spent in this particular program and in stable housing, it should be noted that the outcomes for this population are likely to be highly variable, and thus may cause us to understate the less noticeable, but still very real, changes that are occurring over time. That significant trajectories do appear in these results should thus be highly encouraging to practitioners, funders, and researchers, and surviving through such variations is worth celebrating.
Sources


Nelson, Geoffrey, John Sylvestre, Tim Aubry, Lindsey George, and John Trainor. 2007. “Housing Choice and Control, Housing Quality, and Control over Professional Support as Contributors to the Subjective Quality of Life and Community Adaptation of People with Severe Mental Illness.” *Administration and Policy in Mental Health and Mental Health Services Research* 34:89-100.


APPENDIX A

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Acknowledgments and dedication

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