# The Massachusetts PFS Story: Social Innovation Financing as a Catalyst for Change?

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## Introduction

If you ask Mike, Massachusetts' Pay for Success (PFS) initiative was a complete success. For years Mike was living in shelters or on the street as he battled the twin disabilities of serious and persistent mental illness and substance use disorder. After years of bouncing around various homeless providers, one finally offered him something that would fix his homelessness: a place to live. Now, not only has Mike been able to maintain his sobriety, but he is also in a place to seek the regular treatment he requires to address those issues associated with his mental illness. "It's definitely night and day in terms of having your own place," Mike says.

Mike is in a good place because of PFS, but it is unlikely that he could understand how the convergence of resources came to be that were necessary to achieve his successful outcome. In fact, there were moments in the process of constructing the first PFS for the homeless in the country that we at the Massachusetts Housing and Shelter Alliance (MHSA), who won the right to negotiate a contract with the Commonwealth of Massachusetts, thought it might never come to be. Now, with over 700 persons housed to date, we have only just come to appreciate the utility of PFS, not only in providing private resources for innovative approaches for specific problems, but in its ability to realign and repurpose public resources to achieve public goals.

In this article, we examine our history and experience within the Massachusetts' social innovation experiment, the PFS program for homeless persons. We will examine not only the programmatic results, demonstrating the successful reduction in utilization of emergency medical services, but we will also reflect on the systemic impact by the reshaping of the delivery of public services in the face of a seemingly intractable problem. Social finance was used not only to supplement scarce public resources but also to incentivize public private reform in addressing a specific problem. The "innovation" is not only a new financing model, but a new way of governmental agencies and nonprofit providers working together to

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provide outcome-based solutions consistent with public objectives. Finally, the article discusses lessons learned, briefly addresses arguments about the cost-benefit of PFS initiatives, and stresses that complex social problems demand collaborative outcome based initiatives founded on both fiscal and social metrics.

## Social Innovation Financing: Pay for Success

What is PFS? It is a form of social innovation financing that refers to the concept of performance-based contracting between government and the organizations responsible for implementing a given intervention. Under this model, impact is measured rigorously and government makes "success payments" based on results, not activities. This focus on paying for positive social impact, rather than paying for services performed, helps ensure that incentives are properly aligned to achieve social impact and will provide a mechanism for government to ensure it pays only for what works.[1] Social Impact Financing in Massachusetts is backed by the Commonwealth's full faith and credit. It allows non-profit organizations to access the upfront working capital required to implement an intervention that is proven to save money over time but requires a significant start-up investment. This upfront capital investment can be provided by philanthropic sources as well as institutional investors, which typically receive a modest return on investment attained through success payments tied to the intervention's performance. Others considering PFS have pointed to three main overall merits.[2] First, PFS shifts the focus of government service provision from inputs to outputs. By focusing on payment for delivery of results, the focus of government funding becomes output-based. Secondly, PFS transfers risk for failure of programs from the government to private investors and providers. If the program does not produce results, government can refuse to pay the investors and service providers as agreed in the contract. Finally, PFS has potential to increase accountability and evidence-based decision-making in government.

## The Massachusetts Pay for Success program

With our collaborative partners and investors, United Way of Massachusetts Bay and Merrimack Valley (UWMB), the Corporation for Supportive Housing, and our major investor, Santander Bank, N.A., we created the

1. Moser, Ryan. 2014. The first American social innovation financing ending homelessness. Boston: Massachusetts Alliance for Supportive Housing.

2. Carrillo, O. 2017. *Pay for Success: Opportunities and challenges in housing and economic development. A paper submitted to the Harvard Joint Center for Housing Studies of Harvard University*. Cambridge, Massachusetts: Joint Center for Housing Studies at Harvard University.

Fox, C. and Albertson, K. 2011. "Payment by results and social impact bonds in the criminal justice sector: New challenges for the concept of evidence-based policy?" *Criminology and Criminal Justice* 1–19. doi:10.1177/1748895811415580.

Massachusetts Alliance for Supportive Housing (MASH). With MASH, private capital was used to leverage the capacity of a robust network of housing and service providers to help people move from the streets and shelters into affordable housing with services to build stability and independence. The program aligned public resources to a proven solution in line with the Commonwealth's plan to end homelessness. Supportive housing reduces inappropriate use of emergency rooms, inpatient hospitalization, and behavioral and correctional services. This saves public resources and creates a rare opportunity for return on investment tied to achieving the impact of transitioning the most vulnerable homeless into stable, supported housing.

However, the Massachusetts' experiment would from the beginning present itself as a hybrid of the standard model of Pay for Success. Prior to the development of PFS in Massachusetts, when social investment financing and social impact bonds[3] first hit Massachusetts, they did so with a wave of enthusiasm accompanied by little empirical evidence to indicate their effectiveness. Some nonprofits believed that their fundraising woes were over. From the beginning, MHSA had taken a "wait and see" approach that saw the possibility of engaging private capital in our work as an enticing possibility, but a complex one nonetheless, given the already entitled community we served within the framework of a host of public services.

Once we were aware of the Commonwealth's intention to seek proposals for a PFS that focused on bringing to scale our model of low-threshold permanent housing for unaccompanied chronic/long-term homeless persons,[4] we became more aggressively engaged in the new world of intermediaries, evaluators, and investment.[5] Thanks to a great number of meetings, particularly with our consulting partner, Third Sector Capital,

3. In general, Social Innovation Financing (also known as SIF or "Pay for Success") is a creative approach to program implementation that allows governments to pay for programs that demonstrate success. SIF contracts are targeted at innovative social service programs with financing arrangements where third party investors give service providers—typically non-profits—upfront funding to allow them to enter into pay for success contracts with the government. The government contracts with an intermediary that is responsible for operating the program. The intermediary then establishes partnerships with private sector investors. In these partnerships, investors provide a portion of the program funds up front to the intermediary. Then the Commonwealth will reimburse the intermediary if the program is successful, which in turn will repay the investors with a small return. See https://www.huduser.gov/portal/pdredge/pdr_edge_inpractice_030813.html for more details.

4. MHSA had been operating a program called Home & Healthy for Good (HHG) for a decade. See https://www.mhsa.net/HHG for more details on HHG.

5. Final Rule on Defining "Chronically Homeless," Fed. Reg., Dec. 4, 2015, 75791–806. A chronically homeless individual is defined as an individual with a disability who lives in a place not meant for human habitation and has lived in such conditions continuously for at least 12 months, or has had four episodes in which he/she has spent at least seven nights living in such conditions in the last three years with a combined length of 12 months. PFS houses chronically homeless

what became apparent to us was that the network of service delivery that MHSA and its member agencies had formed was the entity best positioned and best qualified to amplify the scale of this innovative housing program. As PFS was first being presented, it was framed around the concept of "cost savings." Metrics for success were determined by money saved. Although there was data to suggest housing chronic homeless persons saved money, particularly in Medicaid savings due to changes in utilization of care after housing, it was still a tough case to make that private investment could cover the full cost of housing and the requisite services and save money while providers would also continue to utilize a host of public resources available to this population. If a PFS was to be cost efficient, it had to be a leveraged model that took other sources into account. This being the case, collaboration of private and public resources was critical. Also, with great credit to the Commonwealth and Governor Deval Patrick, it was established that the primary metric for success would be a "social" one and not a "fiscal" one: the successful tenancies of homeless persons.[6]

The development of a PFS for unaccompanied homeless adults in Massachusetts fostered an opportunity for change. It brought various state departments and agencies around the same table to focus upon the problem of chronic homelessness and the best way to address it. Driven by the Secretariat of Administration and Finance, the immediate need for leveraging of resources also brought the Department of Housing and Community Development (DHCD), Mass Health, (Massachusetts Medicaid program), and Health and Human Services together to see how infusion of private dollars might best be utilized to effect an appropriate housing solution for a distinct population with a unique set of needs. The PFS dollars, inadequate in themselves to cover the cost of housing the homeless, resulted in the repurposing of public resources in order to leverage the necessary housing across the Commonwealth.[7] The expansion of a Medicaid reimbursement program, Community Support Program for Persons Experiencing Chronic Homelessness (CSPECH) that MHSA had piloted with one managed care entity, the Massachusetts Behavioral Health Partnership (MBHP), was expanded to be covered by all of the managed care entities in Massachusetts. This alone leveraged $10 million dollars in supportive services.

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or individuals who are the highest utilizers of emergency medical services, a most vulnerable sub-population among the homeless.

6. Pay for Success Contract by and between the Commonwealth of Massachusetts and Massachusetts Alliance for Supportive Housing LLC Dated as of December 3, 2014.

7. Repurposing took place in three ways. Medicaid dollars prior to the PFS were covered only by a single managed care entity. Under PFS, all the MCEs had to provide such a resource to tenants. DHCD shelter dollars were allowed to be converted into dollars to support permanent supportive housing. Massachusetts Rental Voucher Dollars were converted into a "Sponsor-based" type program in order to meet the unique needs of chronic homeless persons.

The infusion of Medicaid dollars to finance supportive services was the most significant infusion of public resources that drew housing providers to the PFS. It would not have happened without the opportunity the Pay for Success program provided.[8] On top of this coveted service support, the Commonwealth, through DHCD, provided 145 rental vouchers that could be utilized to leverage other existing housing and service resources. Finally, participating agencies were also allowed to convert existing shelter resources toward permanent supportive housing. MASH worked closely with 20 supportive housing providers across the Commonwealth to implement the PFS. These providers brought some additional resources into the mix[9] to accomplish our goal of housing some of the most challenging citizens. In the end, the overall deal resulted in $28.5 million dollars, targeting new permanent supportive housing opportunities for the poorest and most disabled homeless people in the Commonwealth. Most importantly, it created the structure necessary to administer a statewide housing program committed to the same objective outcomes of successful tenancy and funded the evaluative component to gauge the validity of the outcomes.

Additionally, MASH was required to engage with an independent evaluator, Root Cause, a specialist organization focused on planning, non-profit service delivery, and evaluation. The independent evaluator is tasked with assessing and reporting on the initiative's performance outcomes. The evaluator's role includes quarterly reviews of MASH'S Periodic Report, attendance as requested at quarterly oversight meetings, provider agency interviews, tenant unit visits, and the development of an annual report on performance outcomes.

## Program Performance

The program performance model for the MASH PFS was rooted in the evidence-based practice of "Housing First." The Commonwealth desired to develop a housing model, based on the low-threshold "Housing First" model first pioneered in Massachusetts by MHSA, which targeted those most likely to be "high utilizers" of costly emergency and acute medical services. Although the primary objective was to house homeless persons, the assumption was made that targeting a scarce resource to those most in need would result in greater savings and efficiencies. Such savings, if appropriately recaptured, could help to pay private investors.

8. Our participation in PFS was conditioned upon the expansion of Medicaid. The PFS alone did not provide sufficient resources and services to house our population. The PFS became the structure to integrate CSPECH Medicaid dollars from a wider array of health plans, to a greater number of housing providers, and the resources to measure the implementation and the outcomes of such housing.

9. Additional resources included HUD McKinney lease up dollars, local vouchers from local housing authorities, converted DHCD resources, and other state based housing development resources.

To implement targeting, MHSA and Boston Health Care for the Homeless Program created a triage and assessment tool to assess participants' health issues and current use of emergency services.[10] The tool is used to compute a triage score, which ranks individuals based on their diagnoses to predict their frequency of utilization of emergency medical services. The score is made up of six domains: homelessness history, use of emergency services, physical health, mental health, substance use disorder (SUD), and dual diagnosis of mental health and SUD. The triage assessment assigns a score to each domain and a total score, that is, the sum of the component scores and dual diagnosis score. MHSA uses the total score to rank people based on their likelihood of being frequent users of emergency health services and returns the ranked list to providers. As housing units become available, providers use the list to determine to whom to provide housing. This ensures that housing has the greatest impact in terms of stabilization and use of services.

As an evidence-based practice, the "Housing First" model has a track record as a successful intervention. Studies examining the effects of "Housing First" on the cost of health and correctional services have been observed in recent years, although rudimentary forms of the intervention can be seen in scholarly studies on psychiatric health from as early as 1980.[11] These early studies demonstrated that treating individuals with severe and persistent mental illnesses while they were based in their homes and communities had better health benefits. They reduced the number of hospitalizations and length of re-hospitalizations and had a modest cost benefit over inpatient services. Several studies that followed[12]

10. See Mabli, James and Hande Inanc. 2017. *The Massachusetts Homeless Triage Assessment*. Cambridge, Massachusetts: Mathematica Policy Research; a report of a study by Mathematic Policy Research titled *The Massachusetts Homeless Triage Assessment*. MHSA contracted Mathematica to conduct a study as to whether the tool predicts those who will be high utilizers. The study found that the tool does indeed predict high utilizers.

11. Test, M.A. 1992. "Training in community living." In *Handbook of Psychiatric Rehabilitation*, by R.P. Liberman, 153–170. New York: MacMillan Publishing Company.

Test, M.A. and Stein, L. 1980. "Alternative to mental hospital treatment III: Social cost." *Archives of General Psychiatry* 37(1): 409–412.

12. Hoult, J., I. Reynolds, M. Charbonneau-Powis, P. Weekes, and J. Briggs. 1983. "Psychiatric hospital versus community treatment: The results of a randomized trial." *Australian and New Zealand Journal of Psychiatry* 17(1): 160–167.

Mulder, R. 1985. *Evaluation of the Harbinger Program*, 1982–1985. Lansing, Michigan: Department of Mental Health.

Olfson, Mark. 1990. "Assertive Community Treatment: An evaluation of the experimental evidence." *Psychiatric Services* 41(6): 634–641.

Test, M.A. 1992. "Training in community living." In *Handbook of Psychiatric Rehabilitation*, by R.P. Liberman, 153–170. New York: MacMillan Publishing Company.

Test, M.A. and Stein, L. 1980. "Alternative to mental hospital treatment III: Social cost." *Archives of General Psychiatry* 37(1): 409–412.

were in agreement with the earlier findings. Burns and Santos[13] further confirmed these positive findings. In 1992, Columbia University professor Sam Tsemberis consolidated these ideas in relation to homeless, mentally ill individuals and developed what is referred to as the "Housing First" model. After Tsemberis established his Pathways to Housing Inc., the term "Housing First" came into prominent use. At the turn of the century, evaluations of programs among non-profit organizations that address homelessness aimed to demonstrate effects of the model on retention and healthcare. From 1994 to 1998, Martinez and Burt[14] evaluated the cost of supportive services for individuals with dual psychiatric and substance use disorders, demonstrating that support services led to a reduction in cost. Beginning in 1999, O'Connell and Swain[15] followed up with a study of a group of 119 homeless people in Boston, whom they referred to as the "Rough Sleepers." The study tracked the "Rough Sleepers" for five years and demonstrated a reduction in costs of healthcare after housing. From the start of the new millennium onwards, a plethora of program evaluation reports by nonprofits and research centers emerged[16] (Culhane, 2002 in New York; Moore, 2006 in Portland, Oregon; Massachusetts Housing & Shelter Alliance, 2007 in Massachusetts; Mondello, 2007 in Maine; Linkins

13. Burns, B.J. and Santos, A.B. 1995. "Assertive Community Treatment: An update of randomized trials." *Psychiatric Services* 46(7): 669–675.

14. Martinez, T.E. and Burt, M. 2006. "Impact of permanent supportive housing on the use of acute care health services by homeless adults." *Psychiatric Services* 57(7): 1–8.

15. O'Connell, J.J. and Swain, S. 2005. "Rough sleepers: A five year prospective study in Boston, 1999–2003." *Tenth Annual Ending Homelessness Conference*. Waltham, Massachusetts: Massachusetts Housing and Shelter Alliance.

16. Culhane, Dennis P., Stephen Metraux, and Trevor Hadley. 2002. "Public service reductions associated with placement of homeless persons with severe mental illness in supportive housing." *Housing Policy Debates* 13(1): 107–163.

Moore, T.L. 2006. *Estimated cost savings following enrollment in the community engagement program: Findings from a pilot study of homeless dually diagnosed adults*. Portland, Oregon: Central City Concerns.

Massachusetts Housing and Shelter Alliance. 2007. *Home and Healthy for Good: A statewide pilot "Housing First" program. Preliminary Report*, Boston: MHSA.

Mondello, Mellany, Anne B. Gass, Thomas McLaughlin, and Nancy Shore. 2007. *Cost of homelessness: Cost analysis of permanent supportive housing*. Portland Maine: State of Maine.

Hirsch, Eric, Irene Glasser, Kate D'Addabbo, and Jessica Cigna. 2008. *Rhode Island's Housing First program evaluation*. Providence: United Way of Rhode Island and State of Rhode Island.

Bamberger, Joshua and Considine-Cortelyou. 2008. "Changes in the lives of formerly homeless individuals in supportive housing." *136th APHA Annual Meeting and Exposition 2008.*

Nogaski, Alyssa, Amy Rynell, Amy Terpstra, and Helen Edwards. 2009. *Supportive housing in Illinois: A wise investment*. Illinois: The Heartland Alliance Mid-America Institute on Poverty.

et al., 2008 in California; Hirsch, 2008 in Rhode Island; Bamberger and Considine-Cortelyou, 2008 in San Francisco; and Nogaski et al., 2009 in Illinois). These evaluations all demonstrated reductions in the utilization of services and costs.

The Massachusetts Housing & Shelter Alliance (MHSA) was a leader in this movement in the Commonwealth of Massachusetts with its Home & Healthy for Good (HHG) program, which established the model foundation for PFS.

Like many of the studies discussed above, PFS uses program data. Data are collected during four types of assessments: Triage, Entry, Monthly follow-up, Quarterly follow-up and Exit. Outcome performance metrics include housing retention rate, hospitalization nights, medical respite, days in a detox facility, number of days in detention, emergency shelter, incarceration, and emergency room visits. The data are self-reported. At the triage assessment stage, providers administer the triage tool to assess potential clients for high utilization and housing. Providers then enter the data into Clienttrack, the PFS online database with real time updating capabilities. Once a client is housed, data is collected at housing entry. The data include demographics, homelessness history, income sources, health insurance, quality of life, disability, and health history and service usage six months before housing. Monthly follow up data is collected following housing. The data fields are the same ones collected at housing entry. Finally, after 12 monthly follow up interviews the quarterly follow up stage begins. Although the intervals between follow-up and quarterly follow-up interviews differ, the data fields are the same.

To analyze the data, we use survival analysis to compute housing retention[17] and a pre-post study design—that is, compare utilization six months before and after program enrollment and the six months from the seventh to the twelfth month after enrollment—to measure impact.

The pre-post part of our analysis consists of clients who have been in the program for at least six months—clients who have at least six follow up interviews. This is the main focus of the before and after analysis because it covers a significant portion of the total number of clients in the program. The Wilcoxon Signed-Rank test[18] is employed to test for the significance of differences between use before and after housing entry.

17. Survival analysis is a statistical method also referred to as time to event analysis. It is used where the interest is in finding out how long it takes for an event to take place, and for predicting the likelihood that it will take place. See https://stats.idre.ucla.edu/stata/seminars/stata-survival/.

18. The Wilcoxon Signed-Rank test is a form of a dependent samples t-test used when data do not satisfy parametric assumptions (data are not normally distributed). In other words, it is a test employed when the data show concentration of a specific service-use among a few individuals while the majority use fewer services. We follow up this analysis with a robustness check by analyzing data only on clients who have been in the program for at least one year. See https://stats.idre.ucla.

Since the commencement of the program in June 2015 through May 31, 2018, 710 clients were enrolled in the program. Of these, 571 had been in the program for at least six months and 409 for a year. The average age of all clients was 49 years, showing that the typical client is about to become an elder adult. Most clients were between the ages of 45 and 64 (466), indicating that most are older adults. Two thirds of the clients are male. Four-fifths identify as non-Hispanic. Two-thirds identify as white, a quarter as black or African American, and 5 percent as multi-racial.

*Retention*

At the two-year mark, the retention rate was 93 percent, above the 85 percent threshold. This means that 93 percent of the clients had each accumulated at least 365 days in the program, moved on to other permanent housing options, or died while living in program housing. There were altogether 181 exits, 117 of which were successful and 64 unsuccessful. Among the successful exits, 37 reunited with family, 31 moved on to other permanent housing, 34 died after housing, 11 were transferred to long term service and supports and 3 moved to a skilled nursing facility and 1 was hospitalized in a mental health institution. Among the unsuccessful exits, 19 were discharged due to criminal activities, 17 went to an unknown destinations, 14 returned to street or shelter homelessness, 10 were incarcerated. Three were dissatisfied with services and one was dissatisfied with housing.

*Utilization of Emergency Medical and Corrections Services*

Collectively, the 571 PFS clients who had been in the program for at least six months spent 44,244 nights in emergency shelters across the state in the six months before entry into PFS housing. In the six months after, the same individuals spent 300 nights. This translates to 43,944 fewer days than would have been spent in the shelter system. Accounting for the 300 nights are some clients who spend nights in shelter after being housed because they wish to move into a different unit from the unit that they have been allocated. They temporarily move into shelter before moving into their preferred apartment.

Clients spent a total of 2,667 hospitalization days prior to housing. This means that at the time they were chronically homeless, each client spent an average of six days. In the six months after entering permanent supportive housing, clients spent 937 days, or an average of two days each. Clients spent 1,730 fewer inpatient hospitalization days after housing entry. The fact that the evidence shows a reduction of this magnitude supports the theory that permanent supportive housing reduces utilization of inpa-

edu/stata/whatstat/what-statistical-analysis-should-i-usestatistical-analyses-using-stata/ for more details.

tient hospitalizations. This result is consistent with what other programs using the "Housing First" model find.

In the six months before housing entry, clients spent 744 days in substance use detox facilities. In the six months after, clients spent 247 days. The difference translates to 497 fewer days. This may mean that after housing entry, fewer chronically homeless individuals needed detox. We see that the number of days in detox does not reduce completely as expected, which we attribute to the fact that many clients are starting to access services and still dealing with the challenges of substance use and addiction.

Turning to medical respite days, clients utilized 1,053 days in the six months before housing entry. In the six months that they were in PFS housing, clients spent 80 days, a large difference of 973 fewer days. The National Health Care for the Homeless Council[19] defines medical respite as "acute and post-acute medical care for homeless persons who are too ill or frail to recover from a physical illness or injury on the streets, but who are not ill enough to be in a hospital." This means that while under PFS, clients experienced fewer days requiring acute medical care. Clients had fewer days of exposure to the elements and health hazards that go with living on the streets and lacking shelter as a result of PFS housing.

An important and high cost service regularly utilized by chronically homeless individuals is the emergency department. While many clients visit emergency rooms for medical emergencies, many also use it as a place of shelter, especially when emergency shelters are full and during severe weather conditions. During the six months prior to entering PFS housing, clients made 983 visits to the emergency room. Six months after entering the program, the number of visits dropped to 461. In the time they were housed, clients made 522 fewer visits.

There were also reductions in the number of times that clients were transported to the hospital by ambulance. Clients used an ambulance 467 times in the six months prior to entry into PFS. In the six months after, they used the service 256 times, representing 211 fewer times. This means clients had fewer medical emergencies that required ambulance transportation in the six months they were in PFS.

Another public service that is over utilized by chronically homeless individuals is the corrections system. Altogether, clients spent 859 days incarcerated in the six months prior to entry into PFS. In the six months after, they spent 150 days. The difference was 709 days. Once clients were housed, they had fewer incidences and encounters with the corrections system as their primary need was met.

We tested the statistical significance of the differences in service usage before and after housing entry. There are statistically significant reduc-

19. National Health Care for the Homeless Council. 2012. Medical Respite Care and Homelessness. 2018. https://www.nhchc.org/wp-content/uploads/2011/09/2012-Medical-Respite-Policy-Statement-doc.pdf (last visited June 13, 2018).

tions in average utilization of health services but not in days incarcerated. All reductions are statistically significant at the one percent level, indicating that we can be 99 percent confident that the reduction is not by chance. The reduction in incarceration days is not statistically significant because the large number of days incarcerated is shared among a very small number of individuals (27). We cannot claim for sure that the significant differences are caused by entry into PFS because our analysis does not control for any factors. However, we are confident in advancing the hypothesis that entry into PFS housing plays an important role based on the theory and results of empirical studies that continue to provide evidence from across the nation.

As a robustness check, we tested for the significance of the difference in service usage between six months prior and seven to twelve months after housing for the 409 clients who have been in the program for at least twelve months. Results are consistent with the findings for the six-month analysis. The tests show that clients had significantly less utilization of medical services and shelter but no significant differences in incarceration. In addition, we examined whether there were improvements in satisfaction with average health scores reported by the clients. Individuals who had been in the program for at least six months reported that before entry into the program, they were dissatisfied with their health on average. Six months after, they reported being satisfied. Similarly, those who had been in the program for at least twelve months reported being dissatisfied on average prior to housing and reported being satisfied six to twelve months after.

*Estimated Cost Savings to State Medicaid System*

In terms of cost savings, comparison of collective service usage six months before and six months after housing indicates that savings were made on each service. Total use of services amounted to $11.8 million prior to housing entry and $3.7 million after, a difference of $8 million. Program costs over six months amounted to $4.8 million, bringing the savings to $3.2 million. This translates to about $6,000 per person for six months, a potential saving of $12,000 per person per year. In terms of the breakdown, emergency shelter use was reduced by about $1.4 million. The cost of hospitalization dropped by $5 million. The cost of detox use, medical respite, and emergency department visits was reduced by $300,000, $390,000, and $645,000, respectively. A saving of $230,000 was made based on reduced ambulance use.

Overall, the performance evaluation indicates that since the PFS program commenced, there have been significant reductions in the use of public services among clients after housing. The data shows *prima facie* evidence of an association between housing and utilization of services, allowing us to make the claim that PFS housing was a highly plausible determinant of the observed utilization outcomes. The design and evidence, however, is that of

an observational study using program data, which cannot provide the evidence that housing is the cause of these utilization outcomes.

There are some limitations with the overall design and data that the reader ought to be aware of. First, the evaluation uses an observational design and therefore does not control for any unobserved factors. Typical of program data, this data is self-reported, leaving it susceptible to recall bias. In the triage and assessment and housing entry stages, clients recollect events of the previous six months. During the monthly and quarterly follow up interviews, clients recall events of the previous month and three months respectively. Additionally, self-reported data can be susceptible to social desirability bias. For example, typically, homeless clients avoid the social stereotype that mental disability is socially undesirable, leading to underreporting. The results are interpreted and presented with these design and data limitations in mind.

## Lessons Learned

PFS in Massachusetts has once again pointed to the value of permanent supportive housing based on a low-threshold model of service. However, we also believe that our experience of PFS has taught us some basic lessons about the relationship between nonprofit service providers and governmental funders:

### *PFS and Cost Savings*

Are there greater cost savings to the public as a result of PFS? Long before MHSA was engaged in a PFS, we would argue that there is a tremendous cost associated with "doing nothing" in the face of any serious social problem. We think it has been well established that homelessness is costly to the state and federal government. Prolonged exposure to the elements is associated with ill health that is reflected in public expenditure on the "chronically homeless." In a well-known article in *The New Yorker Magazine*,[20] Malcolm Gladwell talked of "Million-Dollar Murray," who had cost the state of Nevada up to a million dollars over the course of ten years in medical and corrections services because of his chronic homeless status. Study after study would demonstrate the incredible direct and indirect costs associated with chronic homelessness.

The question being posed as the PFS came into being has been: can housing impact those costs? PFS in Massachusetts provided the opportunity to bring a housing initiative to scale and a system in place to collect the necessary data to make answering such a question possible. Although fiscal savings is not the success metric, it is still one of the primary questions of concern to the governmental agencies as well as to providers of such housing. The data we are collecting can be later compared and ana-

20. Gladwell, Malcolm. 2006. "Million-Dollar Murray." *New Yorker*, Feb. 13–20: 96–107.

lyzed using other administrative data bases, such as actual Medicaid claims.[21] Propensity scoring studies and other forms of alternative control could be constructed to test the effectiveness of such housing in reducing cost. The private investment of PFS dollars made such scale possible by incentivizing participation and supporting the necessary infrastructure to test outcomes. Although the initial investment of the Commonwealth of Massachusetts was so significant as to question the value of PFS investment as limiting the liability of risk, the Commonwealth felt it was leveraging private investment, in a time of scarcity, in order to build an experiment necessary to assess the value and importance of housing high utilizers of care.

An argument is made that a downside to PFS arrangements is that they have high transaction costs.[22] This is a legitimate concern and if public entities are to adopt PFS as a financing service model, they will need to streamline the processes for procurement and contracting under such models. It should be noted that all public interactions with nonprofits have some type of "transaction" costs both on the procurement and particularly on the administrative side. There is, should be, some solace in the fact that at least with PFS there is far greater certainty that the public objectives are being met. If public entities were to shift suddenly toward more performance-based contracting apart from PFS as a financing tool, these too would likely come with significant transaction costs.

### *Intermediaries Work*

There are over 33,000 nonprofits in the Commonwealth of Massachusetts. Those responding to homelessness range from the small community-based organization that throws birthday parties for homeless children in shelters to mega-million dollar sophisticated human service agencies providing an extensive range of shelter, housing, and services. Many of these agencies are contracted by state government to address a wide array of homeless issues. Surprisingly, or maybe not, there is a deficit of structures in place to regulate, measure, or determine the effectiveness of any of these efforts. The intermediary represents a new tool for governmental agencies in effecting serious measurable social change as well as possible cost savings.

21. With a grant from the Blue Cross Blue Shield of Massachusetts Foundation, MHSA is working with Commonwealth Medicine at the University of Massachusetts Medical School and Analysis Group to study the effect of "Housing First" on utilization and claims for emergency medical services. We will utilize propensity score analysis to show the linkage between "Housing First" and utilization and claims for emergency medical services.

22. Carrillo, O. 2017. *Pay for Success: Opportunities and challenges in housing and economic development. A paper submitted to the Harvard Joint Center for Housing Studies of Harvard University*. Cambridge, Massachusetts: Joint Center for Housing Studies at Harvard University.

PFS was a disruption to the status quo of public funding and nonprofit service delivery. One of its most positive outcomes was the creation of a mediating structure between the public agencies and community-based providers. This provided a framework where a public objective, "successful tenancies" could be accomplished, measured, and evaluated to assess if it indeed was achieving such an outcome. It moved private non-profits away from their past culture of describing "Outputs" to measuring "Outcomes" in a manner that could be independently evaluated and validated by a professional intermediary familiar with the challenges of its task.

While it seems apparent that intermediaries could be effectively utilized to address a wide array of social ills, we appreciate these could be threatening to existing groups of providers delivering critical resources and services. That is why it is critical that such agencies themselves consider the value of forming collaborative intermediaries and that governmental agencies make certain that those proposing such a role are able to demonstrate the experience, qualifications, and skills related to any issue before consecrating an organization for such a role. Simply the ability to raise money should not be the sole criteria for being an intermediary organization.

### *The Importance of Service Delivery Networks*

Apart from housing over 700 people, our greatest satisfaction from PFS has been the formation, the operation, and the sustaining of a critical delivery of service system to both achieve and measure the impact of housing.

Homelessness is the result of total system failure. The mainstream systems of care have not been able to meet the needs of a significant number of persons. Those with serious and persistent mental illness, those with serious substance use disorder issues, and even those poor crippled for years by progressive and debilitating illness oftentimes find themselves shut out of more traditional care systems. As a result, they seek services in those areas that cost the most: emergency rooms, acute care settings, and mental health hospitals, all of which cost a great deal in Massachusetts.

PFS has demonstrated the incredible things that can happen when separate agencies are gathered together with a carefully defined mission and model. At MHSA, we have called this a fidelity-based model of contracting. All providers agree to an outcome-based model of service provision, a common set of outcomes to be measured, and a willingness to be open to evaluation and auditing to ensure the social objectives are being met.

These organizations, joined in a unified collaborative effort and coordinated venture, can together learn, improve, and modify approaches to the problem they address. One of the incredible experiences of the PFS in Massachusetts as noted by the providers has been the learning collaboratives that have been formed. Designed and operated with the assistance of CSH, these provide opportunities to gather to discuss experience, share best practices, and receive technical assistance related to "Housing First." This is not limited to gatherings of providers but also includes webinars

and other on-line forms of assistance. This provides a sense of solidarity for those in the trenches. None of this would have happened without the resources of the PFS.

*Public and Private Stakeholders Can Work Together*

We have learned that complex social problems demand collaborative outcome-based initiatives founded on both fiscal and social metrics. It may seem a statement of the obvious, but the public and private sector should work together to solve the tough problems like homelessness, unemployment, or severe substance use disorder. Too often, however, we do not. The paradigm we too often choose on the private-sector side is institutional self-survival. We struggle to keep afloat in the midst of an ever declining availability of resources. And so, the allure of working together to come up with different solutions to perplexing problems is faint, if at all. Instead, single agencies advocate for funding existing services or systems as opposed to solutions.

Agencies need demonstration that this is a defeatist strategy. We are playing a dangerous zero-sum game to risk it all on self-preservation. This is particularly true as government is beginning to seek a return on investment to justify any increase in budgets. What made Massachusetts' experience with PFS so unique was that it brought all the stakeholders around the same table to discuss how we could solve what to many seemed to be an intractable problem. This was not just the non-profit community, but public agencies as well that often approach the problem of homelessness from their very narrow and closed silo.

This spirit is alive and well with Oversight Meetings and Stakeholder sessions all negotiated within the contract. Both of these allow for intermediary, investors, and governing agencies to receive and study outcomes, understand the fiscal operation of the project, and raise any questions they may have. From MHSA's view as advocates, it has become a great platform for us to promote better approaches to policy. Whether PFS is an effective financing tool or not, all participants have agreed that the operating structure in place could serve as a model for how publicly funded programs could better meet critical public needs.

## Conclusion

The Commonwealth and MHSA's Social Innovation Financing Pay for Success program has successfully met its targets for housing retention and demonstrated a reduction in utilization of medical services by clients as well as a cost-benefit. The program has reduced the number of nights spent in emergency shelters, inpatient hospitalizations, and days spent in detox during the first six months and one year of housing for chronically homeless and high utilizers of health services. It has also brought much needed services to clients who could not otherwise have accessed services. In terms of cost-benefit analysis, the program made cost savings after housing services were subtracted.

Aside from these incredible outcomes, it also foreshadows, if not a new way of financing, a new way for public entities to promote social change. The greatest achievement of our PFS is the new way it broke down siloes and brought multiple agencies together to work on what had previously been thought an intractable problem. Aside from adding additional financial resources, it became a way of re-directing existing resources to more effectively address the problem.

Our experiment in Massachusetts has represented a new way for public agencies and private non-profits to work in collaboration on a specific problem, utilize metrics to gauge our success, and engage private capital to leverage resources to scale for appropriate evaluation. For us at MHSA, all of this is great. But most important of all, over 700 people like Mike got a place to call home.

## References

Bamberger, Joshua and Considine-Cortelyou. 2008. "Changes in the lives of formerly homeless individuals in supportive housing." *136th APHA Annual Meeting and Exposition 2008.*

Burns, B.J. and Santos, A.B. 1995. "Assertive Community Treatment: An update of randomized trials." *Psychiatric Service* 46(7): 669–675.

Carrillo, O. 2017. *Pay for Success: Opportunities and challenges in housing and economic development. A paper submitted to the Harvard Joint Center for Housing Studies of Harvard University.* Cambridge, Massachusetts: Joint Center for Housing Studies at Harvard University.

Culhane, Dennis P., Stephen Metraux, and Trevor Hadley. 2002. "Public service reductions associated with placement of homeless persons with severe mental illness in supportive housing." *Housing Policy Debates* 13(1): 107–163.

Final Rule on Defining "Chronically Homeless, Fed. Reg., Dec. 4, 2014, 75791–75806.

Fox, C. and Albertson, K. 2011. "Payment by results and social impact bonds in the criminal justice sector: New challenges for the concept of evidence-based policy?" *Criminology and Criminal Justice* 1–19. doi:10.1177/1748895811415580.

Gladwell, Malcolm. 2006. "Million-Dollar Murray." *New Yorker*, February 13–20: 96–107.

Hirsch, Eric, Irene Glasser, Kate D'Addabbo, and Jessica Cigna. 2008. *Rhode Island's Housing First program evaluation.* Providence: United Way of Rhodes Island and State of Rhode Island.

Hoult, J., I. Reynolds, M. Charbonneau-Powis, P. Weekes, and J. Briggs. 1983. "Psychiatric hospital versus community treatment: The results of a randomized trial." *Australian and New Zealand Journal of Psychiatry* 17(1): 160–167.

Linkins, Karen W., Jennifer J. Brya, and Daniel W. Chandler. 2008. *Frequent Users of Health Services Inititive: Final evaluation report.* Oakland, California: The Lewin Group.

Mabli, James and Hande Inanc. 2017. *The Massachusetts Homeless Triage Assessment.* Cambridge, Massachusetts: Mathematica Policy Research.

Martinez, T.E. and Burt, M. 2006. "Impact of permanent supportive housing on the use of acute care health services by homeless adults." *Psychiatric Services* 57(7): 1–8.

Massachusetts Housing and Shelter Alliance. 2007. *Home and Healthy for Good: A statewide pilot "Housing First" program.* Preliminary Report, Boston: MHSA.

Mondello, Mellany, Anne B. Gass, Thomas McLaughlin, and Nancy Shore. 2007. *Cost of homelessness: Cost analysis of permanent supportive housing.* Portland, Maine: State of Maine.

Moore, T.L. 2006. *Estimated cost savings following enrollment in the community engagement program: Findings from a pilot study of homeless dually diagnosed adults.* Portland, Oregon: Central City Concerns.

Mulder, R. 1985. *Evaluation of the Harbinger Program, 1982–1985.* Lansing, Michigan: Department of Mental Health.

National Health Care for the Homeless Council. 2012. *Medical Respite Care and Homelessness.* https://www.nhchc.org/wp-content/uploads/2011/09/2012-Medical-Respite-Policy-Statement-doc.pdf (last visited June 13, 2018).

Nogaski, Alyssa, Amy Rynell, Amy Terpstra, and Helen Edwards. 2009. *Supportive housing in Illinois: A wise investment.* Illinois: The Heartland Alliance Mid-America Institute on Poverty.

O'Connell, J.J. and Swain, S. 2005. "Rough sleepers: A five year prospective study in Boston, 1999–2003." *Tenth Annual Ending Homelessness Conference.* Waltham, Massachusetts: Massachusetts Housing and Shelter Alliance.

Olfson, Mark. 1990. "Assertive Community Treatment: An evaluation of the experimental evidence." *Psychiatric Services* 41(6): 634–641.

Test, M.A. 1992. "Training in community living." In *Handbook of Psychiatric Rehabilitation*, by R.P. Liberman, 153–170. New York: MacMillan Publishing Company.

Test, M.A. and Stein, L. 1980. "Alternative to mental hospital treatment III: Social cost." *Archives of General Psychiatry* 37(1): 409–412.

Weisbrod, Stein and Test, M.A. 1980. "Alternative to mental hospital treatment I: Conceptual model, treatment program, and clinical evaluation." *Archives of General Psychiatry* 37(1): 392–397.