# Case Study: Evaluating a Rental Assistance Program

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## Summary

Homelessness is one of the more extreme outcomes of poverty and inequality. In the United States in 2019, more than 500,000 people experience homelessness on a given night and 1.4 million people pass through emergency shelters each year.[[1]](#footnote-0) Each year, significant US federal and local financial resources are devoted to combating homelessness, with direct federal expenditures totaling around $6.1 billion annually and local jurisdictions spending billions more. Many states have set up programs to provide cash assistance to help reduce homelessness and promote housing stability. If these programs are proven effective, they may be a highly cost-effective way to address homelessness. Traditional survey-based research may face important methodological problems because attrition in populations at risk of homelessness is very high. Therefore, administrative data (e.g., employment and tax records) is the best way to get a great answer to these questions.

For households facing eviction, foreclosure, or other housing emergencies, the Massachusetts Residential Assistance for Families in Transition (RAFT) program provides up to $10,000 per household to preserve current housing or move to new housing.[[2]](#footnote-1) Researchers at the Harvard Kennedy School (HKS) partnered with the Massachusetts Department of Housing and Community Development (DHCD) to evaluate the effect of RAFT on housing outcomes (housing status, eviction, and others) as well as a broader range of outcomes including employment, income, public assistance receipt, and potential downstream effects such as those on the education of children in families.

Administrative data is key both to identifying the population of interest (those potentially facing housing instability) and measuring the variety of outcomes listed above. Critically, each of these steps requires administrative data that the DHCD (which runs the RAFT program) does not own. In Massachusetts, each agency holds its own data. Therefore, even to share data with other agencies, a data use agreement (DUA) must be established for each instance of sharing. This structure is not unique to Massachusetts, and similar difficulties in sharing data can be found in many other states and countries.

J-PAL North America works with state and local governments and researchers to develop and support randomized evaluations. Often, a key part of this support is setting up DUAs between multiple stakeholders (researchers and agencies as well as between multiple agencies). One of the main goals of the Innovations in Data and Experiments for Action Initiative (IDEA) is to support the ongoing development of partnerships with governments and other data providers that successfully use administrative data for decision-making and evaluation. HKS professors Will Dobbie and Desmond Ang and their partner Adam Schaffer at the DHCD received support from IDEA to develop a pilot evaluation and solidify a strategy to establish the required data-sharing agreements.

Beyond solving these challenges for a single study, the goal of the North America IDEA pilot projects is to work toward building longer-term partnerships with data providers and implementing partners by developing frameworks and public goods that will make not only this project possible but also future research with the same partner more feasible. Given the desire to build long-term research partnerships, J-PAL North America identified Massachusetts as a high-value partner given the Commonwealth’s significant programmatic and data responsibilities, interest from multiple J-PAL-affiliated professors in doing research with the state (including two ongoing projects that J-PAL North America [has](https://www.povertyactionlab.org/evaluation/impact-text-message-nudges-churn-supplemental-nutrition-assistance-program-united-states) or [is currently](https://www.empathways.org/direct-services/amp-up-boston) supporting), and real but solvable challenges to using data for research. Amanda Lee, a research manager at J-PAL North America, provided support during this process, primarily around strategy to ensure access to necessary administrative data.

This case study highlights generalizable lessons for data sharing across government agencies, as well as with researchers, to conduct a randomized evaluation. It will explore the benefits of partnering with a state agency, lessons learned about how agencies in Massachusetts have previously succeeded in sharing data with each other, the importance of the legal context, and design challenges as they relate to data access and sharing.

## 1 Introduction

### 1.1 Motivation and Background

**The conception of this project was largely driven from within the DHCD.** The DHCD was, and has remained, one of the main driving forces behind this evaluation. It was already working with J-PAL-affiliated researchers through a technical assistance relationship. To further develop this partnership into a randomized evaluation, the DHCD applied to J-PAL North America’s [Housing Stability Evaluation Incubator](https://www.povertyactionlab.org/initiative/housing-stability-evaluation-incubator), a practitioner-facing program designed to develop housing stability–related research ideas into feasible evaluations. As part of the incubator, the DCHD, Ang, and Dobbie worked to further develop an evaluation, and because administrative data access was a primary challenge for conducting the evaluation, J-PAL selected the project to receive IDEA support, funded by the Alfred P. Sloan Foundation. Even with this outside support, continued internal agency leadership would prove important, both in defining the type of project and in opening doors for initial discussions with other state agencies.

When the research team (the DHCD, researchers, and J-PAL staff) began designing the evaluation, if someone applied to RAFT and was eligible, they received funds. That is, funding for the program was not a constraint. The research team recognized that it would be unethical to design a randomized evaluation in which RAFT-eligible households would be randomized into a group that did not receive RAFT. Therefore, to proceed with a randomized design that allows for estimating causal effects of the program, the team decided to use a randomized [encouragement design](https://www.povertyactionlab.org/sites/default/files/research-resources/2017.04.14-Real-World-Challenges-to-Randomization-and-Their-Solutions.pdf),[[3]](#footnote-2) where the treatment group was provided additional encouragement to sign up for the program and the control group could sign up for the program based on existing information. Both groups could sign up for services.

In an encouragement design, the research team first identified a group of people likely eligible for RAFT based on their income. In Massachusetts, households who receive benefits through the Department of Transitional Assistance (DTA) have incomes that would likely make them income-eligible for RAFT. From this pool of eligible participants from the DTA, the research team randomized them into two groups: the treatment group would receive information about RAFT and support in completing the application, and the control would not receive any additional information about RAFT. Households in both groups could apply for RAFT, but the encouragement, if effective, was supposed to produce higher levels of enrollment into RAFT in the treatment group.

To simplify the initial data-sharing process and to develop the encouragement mechanism, the research team decided to try and run a pilot study that would measure whether and how much the encouragement increased enrollment in RAFT (the “first stage”) before designing an evaluation of the effect of RAFT on downstream outcomes, such as income, employment, and housing. This was done because in an encouragement design, it is important for there to be a large enough difference in RAFT enrollment rates to allow a comparison between groups. In other words, the pilot would help determine whether the full study had sufficient statistical power.[[4]](#footnote-3) As of October 2021, the pilot has not started. If the information about the program and application assistance do not help more people enrolled in RAFT, then the research team will want to consider changing the encouragement before attempting a comprehensive study.

### 1.2 Data Use Examples

**Administrative data needs differed between the pilot and the full study. These differences drove the prioritization of conversations and the structure of agreements.** Running the pilot meant the study team only needed immediate access to some data and could defer some of the more complex data discussions. For the pilot, the DTA held data critical for targeting the intervention: a list of households receiving DTA services who were likely eligible for RAFT. Pilot outcome data about whether participants enrolled in RAFT is held internally at the DHCD.

For the full study looking at the impacts of RAFT, the DTA, along with multiple other agencies, hold outcome data of interest. For example, the research team was interested in receiving wage and employment information from the Department of Revenue (DOR) and Department of Unemployment Assistance, student test scores from either Boston Public Schools or the Department of Elementary and Secondary Education, and health outcomes from the Department of Public Health, in addition to public assistance receipt from the DTA.

Splitting the work into these two phases meant that the pilot was a much easier lift in terms of administrative data-sharing requests. Still, although the additional outcome data sources are not needed until later, an understanding of what will be feasible for the later study is helpful now since the pilot is designed to inform that future work and would be less impactful on its own. Splitting the work led to a strategy of developing an initial agreement for data sharing with the DTA while having concurrent conversations with agencies about future data needs, as discussed in more detail below.

## 2 Legal and Institutional Framework

### 2.1 Institutional Setup

**Data sharing across agencies and with researchers occurs on a project-by-project and agency-by-agency basis.** While there are multiple instances of Massachusetts agencies sharing data with each other and with researchers, aside from several narrower use cases, there is not a statewide system or agreement to share it. Instead, each agency has multiple separate agreements with other agencies to share data for various programs or purposes. Getting permission to use this data for a new project usually requires a new and separate agreement. For example, the DHCD already receives some data from the DOR to confirm income eligibility for DHCD programs, including RAFT. Existing instances of data sharing suggest agencies have a precedent for sharing data, but it does not automatically mean it will be easy to use similar data for another project.

The research team found focusing on immediate data needs while getting general agreement on longer-term data needs enabled faster movement on the pilot. No DUAs have been signed as of October 2021, though the DTA’s legal and analytics teams were willing partners. At the same time, the team began general discussions about the use of additional data, such as longitudinal data on public assistance receipt, which will be critical for the full study. However, this data were not included in the proposed DUA. This can be a useful strategy to be able to move forward on initial needs (e.g., starting a pilot study) with assurance that the receipt of other long-term outcomes seems feasible.

Massachusetts agencies were generally receptive to sharing data to further policy research and program improvement as well as potentially sharing de-identified data with researchers. The DTA stipulated that the DHCD treat and protect the DTA data the same way it would treat its own data. In having initial discussions, agencies and researchers seemed open to discussing various ways of sharing and housing data. Given that the agreements for outcome data have not been arranged, the final mechanisms used for this study are yet to be determined. In this instance, as in others, general interest and agreement to sharing data for the study seemed like the bigger hurdle. With agreement to the big picture, finalizing logistical details, while it might take longer, seems feasible.

### 2.2 Legal Context for Data Use

**Sharing data for research purposes is easiest if clearly allowed in existing consent forms or agreements.** The research team found that agencies understood the value of sharing data for research, but some were hesitant to agree to share outcome data if such a process was not already built into existing procedures. The clearest legal avenues for sharing data originate in legislative mandates, direct program need, or clear existing individual consent language. In general, agencies have a web of existing different agreements in place to allow data sharing.

In exploring previous instances in which agencies could share data, we found that the most common instances occurred when sharing data was built into the program from the beginning (e.g., [Learn to Earn](https://www.mass.gov/service-details/learn-to-earn-initiative), in which agencies stipulated what data they would share from the beginning of the program). Specific DUAs were created across agencies to enable this sharing of data specifically for this program. We explored whether it would be possible to either amend an existing DUA or copy the structure for our project. Amending an existing DUA was not feasible in our case, but the current version of the DUA between the DHCD and the DTA is based on a template used by the DHCD in other data-sharing agreements.

When participants sign up for certain DHCD programs, including RAFT, the consent form they sign allows the data being collected to be used for research purposes. Therefore, it is more straightforward for the team to acquire information on whether participants have received RAFT. It also means it is generally easier for the DHCD to share data with other agencies (or researchers) for research purposes because all their participants have consent to this use of data when they sign off for a DHCD program. This type of consent to use data for research was only observed within the DHCD consent forms.

Given that the DHCD has an existing consent process allowing research, the research team is also considering an alternative research design where assistance in filling out applications is given to those who have started, but not finished, filling out an application for RAFT. These participants would have already signed a DHCD consent form, which would cover both the treatment and control groups.

The DHCD could alter the consent form as needed, say for additional outcome data collection. This is an option if multiple agencies feel that informed consent is needed (discussed in the section below), although this would change the research question by shifting the target population.

### 2.3 Legal Framework for Granting Data Access

**Massachusetts has various regulations about data sharing and access without any explicit mention of research. This requires a separate DUA in each instance with terms discussed individually for each project.**  In early conversations with multiple agencies, the research team asked about various methods of sharing data with researchers. For example, is it easier if data is stored at an agency or stored on Harvard University servers? Does it make it easier if researchers become classified as “special employees”? In most cases there was not a strong preference about these questions, further supporting the idea that if an agency expresses initial interest or agreement to a particular project, working out the details is possible.

Not sharing identified data with researchers was important for some agencies, though others were more willing to discuss sharing identified data so that the research team could handle the matching of data. Given that the research team has flexibility here, and the DHCD has some internal capacity to perform matching, this project is viable with either identified or de-identified data.

**It was not clear how important having informed consent from participants would be for this project.** In having discussions with other agencies, it was not immediately clear if informed consent (i.e., asking participants in both the treatment and control groups for permission to access their data from various agencies) would make this process easier. While an encouragement design is easiest without needing consent—since these designs typically involve only contacting individuals in the treatment group—it is still possible to create a design where participants provide active consent to receive notifications and for data collection. However, not knowing the relative importance of consent to different agencies made knowing how to design the experiment ambiguous.

## 3 Protection of Sensitive and Personal Data

### 3.1 Safe Projects: Evaluating Data Analysis Projects for Appropriateness

The DHCD does not have its own institutional review board (IRB) or research review process. The decision around whether to share data was focused around (1) whether it could be used for research, (2) some discussion of data safety, and (3) whether the work and resources required fit within an agency’s current priorities and resources.

Harvard University’s (where the researchers are based) IRB determined the pilot to be exempt from IRB review because it was for program improvement of RAFT, one of the DHCD’s own programs.For the pilot, identified data will not need to leave DHCD servers, researchers will not need to see identified data, and the person doing the encouragement will be a DHCD employee. In addition, for the pilot, the research team is not requesting outcome data from any other agencies and expects the full study to require IRB approval through Harvard University.

While the IRB determination may not have influenced decisions to share or not share data in this instance, this type of reasoning could be useful in allowing agencies to share data. Sometimes, sharing data across agencies for “program improvement” can make it easier to share data rather than for “research.” In fact, demonstrating some benefit of the research to program administration is often a requirement for data access even among government agencies that have established research data access procedures.

### 3.2 Safe People: Evaluating Researchers Who Seek Data Access

As discussed above, state agencies did not appear to have preferences or requirements as to whether researchers needed to be “special employees,” which would essentially allow them to be government employees for the purpose of data access. Moreover, there appears to be no standardized vetting process for researchers wanting to partner on research projects with the state or access data. In our particular case, the researchers had an existing relationship with the DHCD through a longer-term technical assistance partnership, external to J-PAL, that predates this research engagement.

In all discussions we have made it clear the project would limit access to researchers and agency staff who are necessary to perform data transfer and analysis (i.e., “safe people”). This group of people may vary depending on where the matching and linking of data occurs (e.g., if agencies allow researchers to link data, they will view de-identified data, but if the agencies perform the matching, researchers will only view de-identified data).

### 3.3 Safe Settings: Accessing Data

Data access and sharing procedures have not been finalized. The researchers plan to use secure data storage and access procedures in accordance with their institution and any additional requirements from the DHCD and other data partners whose data may be used as part of this study. In early discussions with agencies, it seems likely that Harvard University’s requirements[[5]](#footnote-4) for data security and access are as stringent if not more stringent than those required by various agencies. In discussions for the full study, we anticipate that the university’s security measures will help reassure agencies that researchers would treat data appropriately. Data access procedures will be outlined in the IRB protocol and in DUAs, and access to data will be limited to safe people, as defined above.

### 3.4 Safe Data: Verifying and Mitigating Disclosure Risk

Researchers will minimize disclosure risk by using de-identified data when possible, and perform linking or matching in the safest way possible, in this case in accordance with [Harvard’s Research Data Security Policy](https://research.harvard.edu/2020/06/26/research-data-management/). For example, if a data agency has internal capacity, it can perform the link itself and share de-identified data with the researchers for analysis. This type of setup has lower disclosure risk since it prevents any identified information from leaving the agency. If agencies do not have the capacity to perform the match, then researchers can set up secure data transfer methods. Harvard classifies types of data [based on level](https://policy.security.harvard.edu/view-data-security-level); with each higher level comes more identified information shared and more protection protocols in place. There are many different data linking and sharing scenarios depending on researcher and agency capabilities; researchers will explore and choose the safest possible feasible approach to answer the research question.

### 3.5 Safe Outputs: Verifying and Mitigating Disclosure Risk in Statistical Analysis, Results, and Tabulations

The exact review processes for disclosure risk will be determined when the full study begins. Researchers will follow rules agreed upon in DUAs and follow standard practices such as suppressing results from small cells and not publishing identifiable information.

## 3.6 Data Life Cycle and Replicability

Researchers have not yet gained access to data, and therefore the preservation and reproducibility of both researcher-accessible and researcher-generated files has not been established. Given that the primary researcher-accessible files we are interested in are based on benefit eligibility and receipt across various programs, which is something agencies calculate on an ongoing basis, the reproducibility of these types of files seems high. This will be a topic of future discussion. Researcher-generated files will follow best practices (e.g., writing code to automate and ensure the reproducibility of data cleaning and analysis).

## 4 Sustainability and Continued Success

### 4.1 Outreach

The project to date demonstrates successful outreach on the part of the DHCD, HKS researchers, and J-PAL to generate this research partnership. The partnership between the DHCD and Ang and Dobbie began as a technical assistance engagement through the Government Performance Lab at the HKS. The team continued to look for additional support in applying to J-PAL North America’s Housing Stability Evaluation Incubator, which ultimately led to support through IDEA. Both the DHCD and the researchers have shown commitment to bringing in additional collaborators and working together to achieve shared research objectives. In addition, a better understanding of how data is created, stored, and shared at Massachusetts agencies allowed the research manager to reach out to the DTA and DOR regarding a separate research project. Successful research partnerships require commitment from multiple parties and offer the hope that lessons learned will be beneficial in repeat interactions and longer-term relationships.

### 4.2 Revenue

The data access mechanism, the number and type of data sets used, and the length of time for access have not been established. Therefore, we are unable to comment on the financial stability at this time.

### 4.3 Metrics of Success

**Data access is still in progress.** A DUA for the pilot—with reassurances for the full study—is in the process of being developed. It has not been signed as of October 2021. Pending the DUA’s execution, gaining access to data so far appears at least partially successful. Signed agreements, launching the pilot, and agreements for data use for a full study are the next measures of success for this project.

## About the Author

Amanda Lee is a research manager at J-PAL North America. She provides research support across multiple randomized evaluations and manages the [Catalog of Administrative Data Sets](https://www.povertyactionlab.org/catalog-administrative-data-sets).

This case study reflects the experiences of the author on this particular project and does not necessarily represent the views of the DHCD or any other agency of the Commonwealth of Massachusetts.

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1. <https://www.povertyactionlab.org/publication/reducing-and-preventing-homelessness-lessons-randomized-evaluations> [↑](#footnote-ref-0)
2. <https://www.mass.gov/info-details/emergency-housing-assistance-during-covid-19>. During the pandemic, Massachusetts also operated the Emergency Rental Assistance Program, which provides up to 18 months of support for rent arrears and future rent stipends. [↑](#footnote-ref-1)
3. See Heard et al. (2017, p. 12) for a definition and discussion of use cases for an encouragement design. [↑](#footnote-ref-2)
4. Because participants in both groups can enroll in RAFT, conducting a randomized evaluation requires a sufficiently large, randomly-= induced difference in participation as a result of the encouragement in order to be able to detect effects. This “first-stage” relationship between encouragement and enrollment is critical to having a sufficiently powered study. Differences in outcomes are estimated by comparing the entire treatment group to the entire control group regardless of enrollment. RAFT, however, can only help those who enroll. Estimates of its impacts are diluted by individuals who are treated by the encouragement but do not enroll and by a lack of difference in enrollment between the treatment and control groups. Thus, conducting the study requires that the program be undersubscribed at baseline (which is true) and the encouragement sufficiently increases enrollment (which we will learn from the pilot). How much the encouragement increases enrollment will be used to calculate the sample size needed for the full study. Power considerations for encouragement designs are discussed in Heard et al. (2017), and a guide to power is available in this [J-PAL Research Resource](https://www.povertyactionlab.org/resource/quick-guide-power-calculations). [↑](#footnote-ref-3)
5. <https://policy.security.harvard.edu/view-data-security-level> [↑](#footnote-ref-4)